

SAFETY DATA SHEET (SDS) according to Regulation (EC) No. 830/2015 amending 1907/2006

1.1a Other m 1.1b 1.1c 1.1d 1.2 Releval mixture 1.2a Brief de intende 1.3 Details 1.3a 1.3b 1.3c 1.3d 1.3e 1.3f 1.3g 1.3h 1.4 Emerge 2.1 Classific (CLP): 2.1a Product 2.1b Classific (CLP): 2.1c The mone health, 2.2 Label e 2.2a GHS lat stateme 2.2b 2.2c Labeling 2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2g Precaut 2.2g Precaut 2.2h Suppler 2.3 Other h 2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 3.1c Co other u 3.1g Chemico or indivi	ict identitier.			/I/
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1.2a Brief de intende 1.3 Details 1.3a 1.3b 1.3c 1.3d 1.3e 1.3f 1.3g 1.3h 1.4 Emerge Section 2: Hazz 2.1 Classific (CLP): 2.1a Product (CLP): 2.1b Classific (CLP): 2.1c The monealth, 2.2 Label e 2.2a GHS lastateme 2.2b 2.2c Labeline 2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 3.1c Co other L	Product number/C		682	
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1.3 Details 1.3a 1.3b 1.3c 1.3d 1.3d 1.3e 1.3f 1.3g 1.3h 1.4 Emerge 2.1 Classif 2.1a Product 2.1b Classifi {CLP}: 2.1c The mo health, 2.2 Label e 2.2a GHS lal stateme 2.2b 2.2c Labelin 2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3 Other h 2.3a Does th 2.3b Other h 3.1a Ch 3.1b Co 3.1c Co other u 3.1g Chemic or indivi		substance or mixture is	Caspase enzyme in	hibitor and apoptosis detection reagent.
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2.1 Classifi 2.1a Product 2.1b Classifi {CLP}: 2.1c The moo health, 2.2 Label e 2.2a GHS lat stateme 2.2b	Contact person at ICT: Emergency telephone number:		ICT hours are 9 am (excluding holidays)	tion Department 04 (USA & Canada) or 952-888-8788 world wide; -5 pm central time USA, Monday through Friday 1. Chemtrec 24-hour access within USA and 19300 or +1 703-527-3887. Collect calls accepted.
2.1a Product 2.1b Classific {CLP}: 2.1c The mone health, 2.2 Label e 2.2a GHS last stateme 2.2b Labeling 2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3 Other h 2.3a Does th 2.3b Other h 3.1a Ch 3.1a Ch 3.1b Co 3.1c Co other L 3.1g Chemic or indivi	zards identification			
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health, 2.2 Label e 2.2a GHS la stateme 2.2b 2.2c Labelin 2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3 Other h 2.3a Does th 2.3b Other h 3.1a Ch 3.1b Co other u 3.1g Chemic or indivi	Classification according to (EC) No. 1272/2008 {CLP}:		Does not meet the o	criteria for classification.
2.2a GHS la stateme 2.2b 2.2c Labelin 2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3 Other h 2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Cc 3.1c Cother u 3.1g Chemic or indivi	The most important adverse physiochemical, human health, and environmental effects:		Refer to Sections 9-	-12.
stateme 2.2b 2.2c Labelin 2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3a Does th 2.3a Does th 3.1a Ch 3.1b Co 3.1c Co other u 3.1g Chemic or indivi	Label elements:		None.	
2.2c Labelin 2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3 Other h 2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 0ther u 3.1g Chemic or indivi	GHS label elements, including precautionary statements:		None.	
2.2d Hazard 2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3a Does th 2.3a Does th 3.1a Ch 3.1b Co 3.1c Co other u 3.1g Chemic or indivi	Contains:	(FO) N = 4070/0000	None.	
2.2e Signal v 2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3a Other r 2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 3.1c Co other u 3.1g Chemic or indivi	ing in accordance with		None.	
2.2f Hazard 2.2g Precaut 2.2h Suppler 2.3 Other h 2.3a Does th 2.3b Other h 3.1 Substa 3.1a Ch 3.1b Co 3.1c C other u 3.1g Chemic or indivi	d Pictograms (Hazard	Symbols):	None.	
2.2g Precaut 2.2h Suppler 2.3 Other I 2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 3.1c Co other u 3.1g Chemic or indivi			None.	
2.2h Suppler 2.3 Other h 2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 3.1c Co other L 3.1g Chemic or indivi			None.	
2.3 Other h 2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 3.1c Co other L	utionary statements:	tatamanta	None.	
2.3a Does th 2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 3.1c Co other L 3.1g Chemic or indivi	ementary precaution s	iaiemenis.	None.	action available
2.3b Other h Section 3: Con 3.1 Substa 3.1a Ch 3.1b Co 3.1c Co other L 3.1g Chemic or indivi		criteria for PBT or vPvB?	No additional inform Not applicable.	ialiuri avallable.
Section 3: Con 3.1 Substa 3.1a Cr 3.1b Co other L	hazards which do not		No information avai	loblo
3.1 Substa 3.1a Ch 3.1b Cc 3.1c Co other u 3.1g Chemic or indivi			No information avai	iable.
3.1a Chemic or individual 3.1a Chemic or ind	omposition/information	on on ingrealents	Itom is a sub-t	
3.1b Co 3.1c Co other L			Item is a substance	
3.1c Cother uses 3.1g Chemic or individual of the control of the c	Chemical identity:	uma ata i	FAM-AEVD-FMK	
3.1g Chemic or indivi	CAS number and	yms, etc.:	None.	2 of Classification apparding to (EO) No
3.1g Chemic or indivi	CAS number and	2 1d EC 2002	3.1e %	3.1f Classification according to (EC) No.
or indiv	r unique identifiers:	3.1d EC number:	Concentration:	1272/2008 {CLP}:
or indiv	None.	None.	100%	Not classified.
contribu identifie	Chemical identity of any impurity, stabilizing additive, or individual constituent other than the main constituent, which is itself classified and which contributes to the classification (such as product identifier, trade name, identification numbers):		None known.	
	information on the sub		None.	

FAM-AEVD-FMK SDS; Doc# F17-637-9-F; Effective: 01/06/2020; Supersedes: F17-637-9-E; Page 2 of 6

Soction		
4.1	n 4: First aid measures Description of first aid measures:	If concerned, get medical attention/advice and provide physician with
4.1	Description of mist all measures:	If concerned, get medical attention/advice and provide physician with SDS information. Wash contaminated clothing before reuse. Never
		give anything by mouth to an unconscious person.
4.1a	Inhalation:	Due to the small packaging the risk of inhalation is minimal. Remove to
4.1α	milation.	fresh air and keep at rest in a comfortable position for breathing. If not
		breathing, give artificial respiration. Rinse nose and mouth with water.
		Get medical attention if any discomfort continues.
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes;
		continue to rinse for at least 15 minutes. Remove any contaminated
		clothing and shoes and wash thoroughly before reuse. Get medical
		attention if any discomfort continues.
4.1c	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make
		sure to remove any contact lenses from the eyes before rinsing.
		Continue to rinse for at least 15 minutes. Get medical attention if any
		discomfort continues.
4.1d	Ingestion:	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK
		FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without
		advice from poison control center or medical professional. Get medical
4.0	Mantibus artest assessment and offerto both and	attention if any discomfort continues.
4.2	Most important symptoms and effects, both acute	•
4.2a	and delayed: Inhalation:	None known.
4.2a 4.2b	Skin contact:	None known.
4.2c	Eye contact:	None known.
4.2d	Ingestion:	None known.
4.3	Indication of any immediate medical attention and	No additional information available.
4.0	special treatment needed:	TVO additional information available.
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal
	Treates to projection with a respective or	protective equipment.
Section	n 5: Firefighting measures	
5.1	Extinguishing media:	Use fire-extinguishing media appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide.
5.1b	Unsuitable extinguishing media:	None known.
5.2	Special hazards arising from the substance or	Product is not explosive. No dangerous reactions known under normal
	mixture:	conditions of use.
5.2a	Hazardous combustion products:	In case of fire, toxic gases may be formed of carbon monoxide (CO),
		carbon dioxide (CO ₂ ; CO _x). None under normal conditions.
5.2b	Unusual fire & explosion hazards:	No unusual fire or explosion hazards noted.
5.2c	Protective measures in fire:	Use protective equipment appropriate for surrounding materials.
5.3	Advice for firefighters:	No appoific firefighting propedure given
5.3a	Special firefighting procedures:	No specific firefighting procedure given.
5.3b	Special protective equipment and precautions for	Wear full protective clothing, including self-contained breathing
	firefighters:	apparatus, if necessary. The product presents no special fire hazards
		in normal use.
Section	n 6: Accidental release measures	
6.1	Personal precautions, protective equipment, and	Use protective equipment appropriate for surrounding materials.
	emergency procedures:	and the second of the second s
6.1a	General release measures:	No specific emergency measures are required other than good
-		laboratory hygiene and safety practices for small spills. Wear suitable
		protective clothing, gloves and eye or face protection. Consult
		professional emergency personnel if concerned (see Section 8).
6.1b	Advice for non-emergency personnel; personal	No specific emergency measures are required other than good
	precautions, protective equipment and emergency	laboratory hygiene and safety practices. Wear suitable protective
	procedures:	clothing/gloves/eye/face protection to avoid contact with skin, eyes,
		and personal clothing; use an approved supplied-air respirator, in case
		of emergency (also refer to Section 8). Ensure adequate ventilation
		and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate
		personnel to safe areas. Wear suitable protective clothing, gloves and
		eye or face protection to prevent any contamination. Consult
		professional emergency personnel if concerned.
6.1c	Advice for emergency responders; personal	Wear suitable protective clothing, gloves and eye or face protection to
	precautions, protective equipment and emergency	avoid contact; use an approved supplied-air respirator, in case of
	procedures:	emergency (also refer to Section 8).
6.2	Environmental precautions:	Do not allow to enter drains, sewers, or watercourses.
6.3	Methods and materials for containment and	Contain any spills with dikes or absorbent materials to prevent
	clean up:	migration and entry into sewers or water sources. Place in a suitable
		container for disposal in accordance with local waste regulations (see

FAM-AEVD-FMK SDS; Doc# F17-637-9-F; Effective: 01/06/2020; Supersedes: F17-637-9-E; Page 3 of 6 Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapor. 6.4 Reference to other sections: Refer to Sections 8 and 13 for additional information. Section 7: Handling and storage Do not handle until all safety precautions have been read and 7.1 Precautions for safe handling: understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. 7.1a Prevent handling of incompatible substances or Avoid contact with strong acids and strong oxidizers. 7.1b Advice on general occupational hygiene: Do not eat, drink, or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices. 7.2 Conditions for safe storage, including any Refer to product label. Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened incompatibilities: must be carefully resealed and kept upright to prevent leakage. Avoid spills and release into the environment; keep away from watercourses. 7.3 Specific end use(s): For research use only. Not for use in diagnostic procedures. Section 8: Exposure controls/personal protection 8.1 **Control parameters:** 8.1a Occupational exposure limits, such as chemical Not available. identity, standard, TWA-8 hours (time weighted average). STEL-15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin. 8.1b Appropriate engineering controls: 8.1c Individual protection measures, such as personal Wear gloves, protective goggles, and lab coat. protective equipment: 8.1d Safety symbols: 8.2 **Exposure controls:** 8.2a Process conditions: Provide eyewash station. Ensure that eyewash stations and safety showers are proximal to the 8.2b Engineering controls: workstation location. 8.2c Ventilation controls: Provide adequate ventilation. Reference to other sections: Refer to Section 5 for additional information. 8.2d Wear approved chemical safety goggles where eye exposure is 8.2e Eye/face protection: reasonably probable or face shield if risk of splashing. Skin protection: 8.2f Wear apron or protective clothing in case of contact. Hand protection: Use suitable protective gloves if risk of skin contact. 8.2g 8.2h Respiratory equipment: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 8.2i Wear appropriate clothing to avoid skin contact. Other protection: 8.2j DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift Hygiene measures: and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated. 8.2k Thermal hazards: None known under normal conditions of use. 8.21 Environmental exposure controls: Not determined. Section 9: Physical and chemical properties Information on basic physical and chemical 9.1 properties: 9.1a Appearance (physical state, color, etc.): Powder, dust. 9.1b Odor: No specific data. 9.1c Odor threshold: Not determined.

Not determined.

9.1d

pH:

FAM-AEVD-FMK SDS; Doc# F17-637-9-F; Effective: 01/06/2020; Supersedes: F17-637-9-E; Page 4 of 6

9.1e		ctive: 01/06/2020; Supersedes: F17-637-9-E; Page 4 of 6
	Melting point/freezing point (°C):	Not determined.
9.1f	Initial boiling point and boiling range:	Not determined.
9.1g	Flash point (°C):	Not determined.
9.1h	Evaporation rate:	Not determined.
9.1i	Flammability (solid, gas):	Not determined.
9.1j	Upper/lower flammability or explosive limits:	Not determined.
9.1k	Vapor pressure:	Not determined.
9.11	Vapor density (Air =1):	Not determined.
9.1m	Relative density:	Not determined.
9.1n	Solubility(ies):	Insoluble in water; soluble in organic solvents.
9.10	Partition coefficient (N-octanol/water):	Not determined.
9.1p	Auto-ignition temperature (°C):	Not determined.
9.1q	Decomposition temperature (°C):	Not determined.
9.1r	Viscosity:	Not determined.
		Not determined.
9.1s	Explosive properties:	
9.1t	Oxidizing properties:	Not determined.
9.2	Other information:	None.
9.2a	Other physical or chemical parameters:	None.
0.24	Other physical of chemical parameters.	140110.
Section	10: Stability and reactivity	
10.1	Reactivity:	No data available.
10.2	Chemical stability:	Stable under normal temperature conditions.
10.3	Possibility of hazardous reactions:	Hazardous polymerization: no data available.
	POSSIBILITY OF HAZAFOOUS FEACTIONS:	
10.4	Conditions to avoid:	To avoid product degradation, avoid exposure to high temperatures or
		direct sunlight or light.
10.5	Incompatible materials:	No data available.
10.6	Hazardous decomposition products:	None under normal conditions.
10.6	nazardous decomposition products.	None under normal conditions.
Section	n 11: Toxicological information	
11.1	Information on toxicological effects:	
11.1a	Name:	FAM-AEVD-FMK
11.1b	Acute toxicity:	Not determined.
11.1c	Skin corrosion/irritation:	Not determined.
11.1d	Serious eye damage/irritation:	Not determined.
11.1e		
	Respiratory or skin sensitization:	Not determined.
11.1f	Germ cell mutagenicity:	Not determined.
11.1g	Carcinogenicity:	Not determined.
11.1h	Reproductive toxicity:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1j	STOT-repeated exposure:	Not determined.
11.1k	Aspiration hazard:	Not determined.
11.11	Information on the likely routes of exposure	
		•
	(inhalation, ingestion, skin and eye contact):	
11.1m		
	Ingestion:	None known.
11.1n		
11.1n 11.1o	Inhalation:	None known.
11.1o	Inhalation: Skin contact:	None known. None known.
11.1o 11.1p	Inhalation: Skin contact: Eye contact:	None known. None known. None known.
11.1o	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and	None known. None known.
11.10 11.1p 11.1q	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics:	None known. None known. None known. No specific symptoms noted.
11.10 11.1p 11.1q	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics:	None known. None known. None known. No specific symptoms noted.
11.1o 11.1p	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic	None known. None known. None known.
11.10 11.1p 11.1q	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure:	None known. None known. None known. No specific symptoms noted. Not determined.
11.10 11.1p 11.1q	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute	None known. None known. None known. No specific symptoms noted.
11.10 11.1p 11.1q	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates):	None known. None known. None known. No specific symptoms noted. Not determined.
11.10 11.1p 11.1q 11.1r	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates):	None known. None known. None known. No specific symptoms noted. Not determined. Not determined.
11.10 11.1p 11.1q 11.1r 11.1s	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects:	None known. None known. None known. No specific symptoms noted. Not determined. Not determined.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data:	None known. None known. None known. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable. Not applicable.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable.
11.10 11.1p 11.1q 11.1r 11.1s 11.1s 11.1u 11.1v 11.1w 11.1x	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP):	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not applicable. Not classified.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable.
11.10 11.1p 11.1q 11.1r 11.1s 11.1s 11.1u 11.1v 11.1w 11.1x 11.1y	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC):	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not applicable. Not classified.
11.10 11.1p 11.1q 11.1r 11.1s 11.1s 11.1u 11.1v 11.1w 11.1x 11.1y	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC):	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified.
11.10 11.1p 11.1q 11.1r 11.1s 11.1s 11.1u 11.1v 11.1w 11.1x 11.1y	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x 11.1s	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1x 11.1s 11.1s 11.1d 11.1d 11.1d 11.1d 11.1d 11.1d 11.1d 11.1d	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1x 11.1y 11.1z 11.1ab Section 12.1	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1x 11.1y 11.1z 11.1ab Section 12.1	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified. Not classified. Not classified. None.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1x 11.1s 11.1s 11.1d 11.1z 11.1ab Section 12.1 12.1a	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified. Not classified. Not classified. None.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1x 11.1s 11.1ab Section 12.1 12.1a 12.1b	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information: 12: Ecological information Toxicity: Name: Ecotoxicity (aquatic and terrestrial, where available):	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified. Not classified. Not classified. Not classified. None.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1x 11.1s 11.1z 11.1ab Section 12.1 12.1a 12.1b 12.2	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information: 12: Ecological information Toxicity: Name: Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not classified. Not classified. Not classified. Not classified. There are no data on the degradability of this product.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1x 11.1s 11.1z 11.1ab Section 12.1 12.1a 12.1b 12.2 12.3	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information: 12: Ecological information Toxicity: Name: Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not classified. Not classified. Not classified. Not classified. There are no data on the degradability of this product. No data available on bioaccumulation.
11.10 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1x 11.1s 11.1z 11.1ab Section 12.1 12.1a 12.1b 12.2	Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information: 12: Ecological information Toxicity: Name: Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability:	None known. None known. No specific symptoms noted. Not determined. Not determined. Not applicable. Not applicable. Not classified. Not classified. Not classified. Not classified. There are no data on the degradability of this product.

,		ective: 01/06/2020; Supersedes: F17-637-9-E; Page 5 of 6
12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	No data available.
Section	13: Disposal considerations	
13.1	n 13: Disposal considerations Waste treatment methods:	When handling waste, consideration should be made to the safety
10.1	Waste treatment methods.	precautions applying to handling of the product.
13.1a	Description of waste residues and information on	Dispose of waste and residues in accordance with local authority
	their safe handling and methods of disposal,	requirements. For the safety of persons conducting disposal, recycling
	including the disposal of any contaminated	or reclamation activities, please refer to the information in Section 8
	packaging:	(exposure controls and personal protection) of the SDS.
	, ps. community	(
Section	n 14: Transport information	
14.1	UN number:	Not applicable.
14.2	UN proper shipping name:	Not applicable.
14.3	Transport hazard class(es):	Not applicable.
14.4	Packing group:	Not applicable.
14.5	Environmental hazards:	N-
14.5a	Is it environmentally dangerous according to UN	No.
	Model Regulations (IMDG Code, ADR, RID, and	
44.56	ADN)?:	Ne
14.5b	Is it a marine pollutant according to the IMDG code?:	No.
14.6	Special precautions for user:	None known.
14.7	Transport in bulk according to Annex II of	Not applicable.
	MARPOL and the IBC code:	
14.7a	Other information:	The product is not considered a dangerous good for transport.
14.7b	Classification for other modes of transport:	Contact supplier.
	15: Regulatory information	
15.1	Safety, health and environmental	
	regulations/legislation specific for the substance	
	or mixture:	
15.1a	Regional safety, health and environmental	None known.
45.41	regulations specific for the product in question:	Not listed
15.1b	USA SARA Components (such as 302/311/313):	Not listed.
15.1c	USA Massachusetts Right to Know:	Not listed.
15.1d	USA Pennsylvania Right to Know:	Not listed.
15.1e	USA New Jersey Right to Know:	Not listed.
15.1f 15.1g	USA California Prop. 65 Components: EU Regulation 1907/2006 {REACH}:	Not listed.
15.1g	Annex XIV substances subject to authorization:	Not listed.
15.11i	Substances of very high concern:	Not listed.
15.1i	Approved code of practice:	Classification and labeling of substances and preparations dangerous
10.1	Approved code of practice.	for supply. Safety data sheets for substances and preparations.
15.1k	Guidance notes:	Workplace exposure limits EH40.
15.11	EU legislation references:	(EC) No. 1272/2008 on the classification, labelling and packaging of
10.11	Lo logislation references.	substances and mixtures (CLP Regulation). EC 830/2015. Regulation
		(EC) No 1907/2006 of the European Parliament and of the Council of
		18 December 2006 concerning the Registration, Evaluation,
		Authorisation and Restriction of Chemicals (REACH), establishing a
		European Chemicals Agency, amending Directive 1999/45/EC and
		repealing Council Regulation (EEC) No 793/93 and Commission
		Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC
		and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and
		2000/21/EC, including amendments.
15.2	Chemical safety assessment:	Not required.
15.2a	Other regulatory information:	Substance is not considered hazardous for Health Canada WHMIS
<u></u>		2015.
_		
	16: Other information	
16.1	Other information:	
16.1a	Date of revision:	01/06/2020
16.1b	SDS number and revision:	F17-637-9-F
16.1c	Supersedes SDS number and revision:	F17-637-9-E
16.1d	Changes made to the previous version of the SDS:	Reviewed and updated information; updates for Health Canada;
16.1e	Key/legend to abbreviations and acronyms used in	updated document control numbers. ACGIH American Conference of Governmental Industrial Hygienists.
10.16	the SDS:	ADN European Provisions concerning the International Carriage of
	uic odo.	Dangerous Goods by Inland Waterway.
		ADR The European Agreement concerning the International Carriage
		of Dangerous Goods by Road.

		FAM-AEVD-FMK SDS; Doc# F17-637-9-F; Effe	ective: 01/06/2020; Supersedes: F17-637-9-E; Page 6 of 6
			ATE Acute Toxicity Estimate.
			BCF Bio Concentration Factor. CAS Chemical Abstracts Service.
			CLP Classification, Labelling and Packaging.
			CMR Carcinogen, Mutagen or Reproductive toxicant.
			COD Chemical Oxygen Demand. EC European Commission.
			EC50 Half maximal effective concentration.
			EH40 Resource containing the list of workplace exposure limits for use
			with the Control of Substances Hazardous to Health Regulations.
			EINECS European Inventory of Existing Commercial chemical
			Substances.
			ELINCS European List of Notified Chemical Substances.
			EU European Union.
			GHS Globally Harmonized System of Classification and Labelling of
			Chemicals. H Statement GHS Hazard statement.
			IATA International Air Transport Association. IBC Intermediate Bulk Container.
			IC50 Half maximal inhibitory concentration.
			IMDG International Maritime Dangerous Goods.
			LC50 Median lethal concentration.
			LD50 Median lethal dose.
			LogPow logarithm of the octanol/water partition coefficient.
			MARPOL 73/78 International Convention for the Prevention of
			Pollution From Ships, 1973 as modified by the Protocol of 1978.
			OEL Occupational Exposure Limit.
			OSHA Occupational Safety and Health Administration (USA).
			PBT Persistent, Bioaccumulative, and Toxic.
			PEL Permissible Exposure Limit.
			RID The Regulations concerning the International Carriage of
			Dangerous Goods by Rail.
			SADT Self-Accelerating Decomposition Temperature.
			SARA Superfund Amendments and Reauthorization Act.
			SCBA Self-Contained Breathing Apparatus.
			SDS Safety Data Sheet.
			STOT Specific Target Organ Toxicity.
			STOT-RE Specific Target Organ Toxicity - Repeated Exposure.
			STOT-SE Specific Target Organ Toxicity - Single Exposure.
			UN United Nations.
			USA United States of America.
			vPvB very Persistent very bioaccumulative.
			WHMIS Workplace Hazardous Materials Information System.
16.1f	Full text	of hazard statements and/or precautionary	All statements were written out in full.
		ents not written out in full elsewhere:	
DISCLA	AIMER:		fic material designated and may not be valid for such material used
			or in any process. Such information is, to the best of the company's
			ole as of the date indicated. However, no warranty guarantee or
		representation is made to its accuracy, re	eliability, or completeness. It is the user's responsibility to satisfy

himself as to the suitability of such information for his own particular use.

END OF SDS



SAFETY DATA SHEET (SDS) according to Regulation (EC) No. 830/2015 amending 1907/2006

Section	on 1: Identification of the substance/mixture and of th	e company/undertaking
1.1	Product identifier:	10X Apoptosis Wash Buffer
1.1a	Other means of identification:	
1.1b	Alternative product name(s)/ synonyms:	10X AWB, AWB, Apoptosis Wash Buffer
1.1c	Product number/Catalog #(s):	535, 634, 635
1.1d	Internal identification:	10X AWB, AWB, Apoptosis Wash Buffer
1.2	Relevant identified uses of the substance or	For research use only. Not for use in diagnostic procedures.
	mixture and uses advised against:	
1.2a	Brief description of what the substance or mixture is	A buffered diluent for use in research laboratory techniques.
	intended to do:	
1.3	Details of the supplier of the SDS:	
1.3a	Name:	ImmunoChemistry Technologies, LLC (ICT)
1.3b	Address:	9401 James Avenue South, Suite 155
1.3c	City, State, Zip, Country	Bloomington, MN 55431-2500 USA
1.3d	Phone number:	1-800-829-3194 and 952-888-8788
1.3e	Fax number:	952-888-8988
1.3f	Website:	www.immunochemistry.com
1.3g	Email:	help@immunochemistry.com
1.3h	Contact person at ICT:	Quality Documentation Department
1.4	Emergency telephone number:	ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide;
		ICT hours are 9 am-5 pm central time USA, Monday through Friday
		(excluding holidays). Chemtrec 24-hour access within USA and
		Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.
	on 2: Hazards identification	
2.1	Classification of the substance or mixture:	
2.1a	Product is a:	Mixture.
2.1b	Classification according to (EC) No. 1272/2008	Does not meet the criteria for classification.
	{CLP}:	
2.1c	The most important adverse physiochemical, human	Prolonged skin contact may cause redness and irritation. Refer to
0.0	health, and environmental effects:	Sections 4, 9-12.
2.2 2.2a	Label elements:	None.
2.2a	GHS label elements, including precautionary statements:	•
2.2b	Contains:	Contains ≤0.1% sodium azide.
2.2c	Labeling in accordance with (EC) No. 1272/2008:	Contains 20.1 // Soulum azide.
2.2d	Hazard Pictograms (Hazard Symbols):	None.
2.2e	Signal word:	None.
2.2f	Hazard statements:	None.
2.2g	Precautionary statements:	None.
2.2h	Supplementary precaution statements:	None.
2.3	Other hazards:	No additional information available.
2.3a	Does the chemical meet the criteria for PBT or vPvB?	Not applicable.
2.3b	Other hazards which do not result in classification:	Contains sodium azide (NaN ₃ , CAS #26628-22-8; EC #247-852-1) at
2.50	Other riazards which do not result in classification.	≤0.1%, sodium chloride (NaCl, salt), and phosphates which are below
		the threshold for hazard classification, but may cause redness and
		irritation after prolonged exposure.
	<u></u>	Timation altor prolonged expedition
Section	on 3: Composition/information on ingredients	
3.1	Substance:	Item is a mixture therefore Section 3.1 is not applicable; see Section
		3.2.
3.2	Mixture:	Item is a mixture.
	The chemical identity and concentration or	
	concentration ranges of all ingredients which are	
	hazardous and are present above their cut-off levels:	No ingredients identified for reporting in this section.
		No ingredients identified for reporting in this section.
Section	hazardous and are present above their cut-off levels: 3.2a Chemical identity:	No ingredients identified for reporting in this section.
Section 4.1	hazardous and are present above their cut-off levels: 3.2a Chemical identity: on 4: First aid measures	
	hazardous and are present above their cut-off levels: 3.2a Chemical identity:	No ingredients identified for reporting in this section. If concerned, get medical attention/advice and provide physician with SDS information. Wash contaminated clothing before re-use. Never

10X Apoptosis Wash Buffer SDS; Doc# F17-535-2-C; Effective: 5/19/17; Supersedes: F17-535-2-B; Page 2 of 6

		5; Effective: 3/19/17; Supersedes: F17-335-2-b; Page 2 01 6
4.1a	Inhalation:	Remove to fresh air and keep at rest in a comfortable position for
		breathing. If not breathing, give artificial respiration. Rinse nose and
		mouth with water. Get medical attention if any discomfort continues.
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes;
7.10	Okin contact.	continue to rinse for at least 15 minutes. Remove any contaminated
		clothing and shoes and wash thoroughly before reuse. Get medical
		attention if any discomfort continues.
4.1c	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make
		sure to remove any contact lenses from the eyes before rinsing.
		Continue to rinse for at least 15 minutes. Get medical attention if any
		discomfort continues.
4.1d	Ingestion:	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK
	-	FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without
		advice from poison control center or medical professional. Get medical
		attention if any discomfort continues.
4.0	Mark to the state of the state	
4.2	Most important symptoms and effects, both acute	Contains sodium azide, sodium chloride, and phosphates which are
	and delayed:	below the threshold for hazard classification, but may cause redness
		and irritation after prolonged exposure.
4.2a	Inhalation:	May cause coughing or mild irritation.
4.2b	Skin contact:	Prolonged skin contact may cause redness and mild irritation.
4.2c	Eye contact:	May cause temporary eye irritation.
4.2d	Ingestion:	May cause discomfort if swallowed.
4.3	Indication of any immediate medical attention and	No specific first aid measures noted, but first aid may still be required
	special treatment needed:	in case of accidental exposure, inhalation, or ingestion of this product.
		If in doubt, get medical attention promptly!
4.0-	Notes to abusicion/first responden	
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal
		protective equipment.
Section	n 5: Firefighting measures	
5.1	Extinguishing media:	This product is not flammable. Use fire-extinguishing media
•	=xiiigaioiiiig iioalai	appropriate for the surrounding materials.
F 1-	Cuitable autinoviabies madie	
5.1a	Suitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide.
5.1b	Unsuitable extinguishing media:	None known.
5.2	Special hazards arising from the substance or	This product is not flammable. Product is not explosive. No dangerous
		and the second condenses and the second seco
	mixture:	reactions known under normal conditions of use.
5 2a	mixture: Hazardous combustion products:	reactions known under normal conditions of use.
5.2a	Hazardous combustion products:	None under normal conditions.
5.2b	Hazardous combustion products: Unusual fire & explosion hazards:	None under normal conditions. No unusual fire or explosion hazards noted.
5.2b 5.2c	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials.
5.2b	Hazardous combustion products: Unusual fire & explosion hazards:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other
5.2b 5.2c	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other
5.2b 5.2c 5.3	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.2b 5.2c 5.3 5.3a	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given.
5.2b 5.2c 5.3	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing
5.2b 5.2c 5.3 5.3a	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards
5.2b 5.2c 5.3 5.3a	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open
5.2b 5.2c 5.3 5.3a	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards
5.2b 5.2c 5.3 5.3a	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open
5.2b 5.2c 5.3 5.3a 5.3b	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open
5.2b 5.2c 5.3 5.3a 5.3b	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.2b 5.2c 5.3 5.3a 5.3b	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open
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5.2b 5.2c 5.3 5.3a 5.3b	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials.
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5.2b 5.2c 5.3 5.3a 5.3b Section 6.1 6.1a	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8).
5.2b 5.2c 5.3 5.3a 5.3b Section 6.1 6.1a	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of
5.2b 5.2c 5.3 5.3a 5.3b Section 6.1 6.1a	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8).
5.2b 5.2c 5.3 5.3a 5.3b Section 6.1 6.1a 6.1c	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions: Methods and materials for containment and	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses. Contain any spills with dikes or absorbent materials to prevent
5.2b 5.2c 5.3 5.3a 5.3b Section 6.1 6.1a 6.1c	Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions:	None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses.

10X Apoptosis Wash Buffer SDS; Doc# F17-535-2-C; Effective: 5/19/17; Supersedes: F17-535-2-B; Page 3 of 6 Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapour. 6.4 Refer to Sections 8 and 13 for additional information. Reference to other sections: Section 7: Handling and storage Precautions for safe handling: Do not handle until all safety precautions have been read and 7.1 understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition. 7.1a Avoid contact with halogenated hydrocarbons, strong acids, strong Prevent handling of incompatible substances or mixtures: oxidizers, and metals. 7.1b Advice on general occupational hygiene: Do not eat, drink, or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices. 7.2 Conditions for safe storage, including any Store in cool place. Keep container tightly closed in a dry and wellincompatibilities: ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid spills and release into the environment; keep away from watercourses. Specific end use(s): 7.3 For research use only. Not for use in diagnostic procedures. Section 8: Exposure controls/personal protection Control parameters: 8.1 8.1a Occupational exposure limits, such as chemical Not available. identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin. 8.1b Appropriate engineering controls: 8.1c Individual protection measures, such as personal Wear gloves. Wear protective goggles. protective equipment: 8.1d Safety symbols: 8.2 **Exposure controls:** 8.2a Process conditions: Provide eyewash station. 8.2b Engineering controls: Ensure that eyewash stations and safety showers are proximal to the workstation location. 8.2c Ventilation controls: Provide adequate ventilation. 8.2d Reference to other sections: Refer to Section 5 for additional information. Eye/face protection: Wear approved chemical safety goggles where eye exposure is 8.2e reasonably probable or face shield if risk of splashing. 8.2f Skin protection: Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 8.2g Hand protection: 8.2h Respiratory equipment: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Wear appropriate clothing to avoid skin contact. 8.2i Other protection: 8.2j DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift Hygiene measures: and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated 8.2k Thermal hazards: None known under normal conditions of use. 8.21 Environmental exposure controls: Not determined.

Section	Section 9: Physical and chemical properties		
9.1	Information on basic physical and chemical properties:		
9.1a	Appearance (physical state, color, etc.):	Liquid; colorless.	
9.1b	Odor:	No characteristic odor.	
9.1c	Odor threshold:	Not determined.	

10X Apoptosis Wash Buffer SDS; Doc# F17-535-2-C; Effective: 5/19/17; Supersedes: F17-535-2-B; Page 4 of 6

Section 12.1	12: Ecological information Toxicity:	
0	40. Facilities information	
11.100	Other information.	NOTIC.
11.1Z 11.1ab	Classification by OSHA 13: Other information:	Not classified. None.
11.1z	on Cancer (IARC):	Not classified.
11.1y	Classification by International Agency for Research	Not classified.
11.1x	Classification by National Toxicity Program (NTP):	Not classified.
11.1w	Mixture vs. substance information:	See Section 3 for any substances in the mixture.
11.1u	Mixtures:	Item is a mixture.
11.1t 11.1u	Absence of specific data:	Not determined. Not applicable.
11.1t	toxicity estimates): Interactive effects:	Not determined.
11.1s	Numerical measures of toxicity (such as acute	Not determined.
	effects from short and long term exposure:	The determined.
11.1r	toxicological characteristics: Delayed and immediate effects as well as chronic	Not determined.
11.1q	Symptoms related to the physical, chemical and	No specific symptoms noted.
11.1p	Eye contact:	Spray and vapor in the eyes may cause irritation and smarting.
11.10	Skin contact:	Liquid may irritate skin and cause redness.
		system and cause coughing.
11.1m	Inhalation:	In high concentrations, vapors may irritate throat and respiratory
11.1m	(inhalation, ingestion, skin and eye contact): Ingestion:	May cause discomfort if swallowed.
11.11	Information on the likely routes of exposure	May enter by skin and/or eye contact; inhalation of vapors/mist/dust.
11.1k	Aspiration hazard:	Not determined.
11.1j	STOT-repeated exposure:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1g 11.1h	Reproductive toxicity:	Not determined.
11.1f 11.1g	Germ cell mutagenicity: Carcinogenicity:	Not determined. Not determined.
11.1e 11.1f	Respiratory or skin sensitization:	Not determined.
11.1d	Serious eye damage/irritation:	Not determined.
11.1c	Skin corrosion/irritation:	Not determined.
11.1b	Acute toxicity:	Not determined.
11.1a	Name:	10X Apoptosis Wash Buffer
11.1	Information on toxicological effects:	
Section	11: Toxicological information	
10.6	Hazardous decomposition products:	None under normal conditions.
	•	oxidizers, and metals.
10.5	Incompatible materials:	Avoid contact with halogenated hydrocarbons, strong acids, strong
	Constitution to dividing	direct sunlight or light.
10.4	Conditions to avoid:	To avoid product degradation, avoid exposure to high temperatures or
10.2	Possibility of hazardous reactions:	Hazardous polymerization: will not polymerize.
10.1 10.2	Reactivity: Chemical stability:	No data available. Stable under normal temperature conditions.
	10: Stability and reactivity	No data available
9.2a	Other physical or chemical parameters:	None.
9.2	Other information:	None.
9.1t	Oxidizing properties:	Not determined.
9.1s	Explosive properties:	Not determined.
9.1q 9.1r	Decomposition temperature (°C): Viscosity:	Not determined. Not determined.
9.1p	Auto-ignition temperature (°C):	Not determined.
9.10	Partition coefficient (N-octanol/water):	Not determined.
9.1n	Solubility(ies):	Soluble in water.
9.1m	Relative density:	Not determined.
9.11	Vapor density (Air =1):	Not determined.
9.1j 9.1k	Vapor pressure:	Not determined.
9.1i 9.1j	Upper/lower flammability or explosive limits:	Not applicable.
9.1n 9.1i	Evaporation rate: Flammability (solid, gas):	Not determined. Not applicable.
9.1g 9.1h	Flash point (°C): Evaporation rate:	Not applicable. Not determined.
9.1f	Initial boiling point and boiling range:	<100°C @ 760 mm Hg.
9.1e	Melting point/freezing point (°C):	Not determined.
9.1d	pH:	6.7-7.1
	10X Apoptosis Wash Buffer SDS; Doc# F17-535-2-	C, Effective. 3/19/17, Supersedes. F17-333-2-B, Page 4 01 0

	10X Apoptosis Wash Buffer SDS; Doc# F17-535-2-0	C; Effective: 5/19/17; Supersedes: F17-535-2-B; Page 5 of 6
12.1a	Name:	10X Apoptosis Wash Buffer.
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	No data available.
12.2	Persistence and degradability:	There are no data on the degradability of this product.
12.3	Bioaccumulative potential:	No data available on bioaccumulation.
12.4	Mobility in soil:	The product is soluble in water.
12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	The product contains a substance (sodium azide ≤0.1%) that may cause long term adverse effects in the aquatic environment. However, at the concentrations present, this product does not need to be classified as hazardous for the environment, and the effects are not expected to be significant.
Section	n 13: Disposal considerations	
13.1	Waste treatment methods:	When handling waste, conisderation should be made to the safety
	Tradio il dallioni mollionol	precautions applying to handling of the product.
13.1a	Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.
Section	n 14: Transport information	
14.1	UN number:	Not applicable.
14.2	UN proper shipping name:	Not applicable.
14.3	Transport hazard class(es):	Not applicable.
14.4	Packing group:	Not applicable.
14.5	Environmental hazards:	The product contains a substance (sodium azide ≤0.1%) that may
		cause long term adverse effects in the aquatic environment. However, at the concentrations present, this product does not need to be classified as hazardous for the environment, and the effects are not expected to be significant.
14.5a	Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?:	No.
14.5b	Is it a marine pollutant according to the IMDG code?:	No.
14.6	Special precautions for user:	None known.
14.6	Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code:	None known. Not applicable.
	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information:	Not applicable. The product is not considered a dangerous good for transport.
14.7	Transport in bulk according to Annex II of MARPOL and the IBC code:	Not applicable.
14.7a 14.7b	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport:	Not applicable. The product is not considered a dangerous good for transport.
14.7a 14.7b Section	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport:	Not applicable. The product is not considered a dangerous good for transport.
14.7a 14.7b	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport:	Not applicable. The product is not considered a dangerous good for transport.
14.7a 14.7b Section	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental	Not applicable. The product is not considered a dangerous good for transport.
14.7a 14.7b Section 15.1	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. .
14.7a 14.7b Section 15.1 15.1a	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313):	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. . Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. . Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. . Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed. Sodium azide (CAS # 26628-22-8) is listed.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d 15.1e	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d 15.1e 15.1f	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know: USA New Jersey Right to Know: USA California Prop. 65 Components:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. . Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed. Sodium azide (CAS # 26628-22-8) is listed.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know: USA New Jersey Right to Know: USA California Prop. 65 Components: EU Regulation 1907/2006 {REACH}:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed. Sodium azide (CAS # 26628-22-8) is listed. Sodium azide (CAS # 26628-22-8) is listed. Not listed.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know: USA New Jersey Right to Know: USA California Prop. 65 Components: EU Regulation 1907/2006 {REACH}: Annex XIV substances subject to authorization:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed. Sodium azide (CAS # 26628-22-8) is listed. Sodium azide (CAS # 26628-22-8) is listed. Not listed. Not listed.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i 15.1j	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know: USA New Jersey Right to Know: USA California Prop. 65 Components: EU Regulation 1907/2006 {REACH}: Annex XIV substances subject to authorization: Substances of very high concern: Approved code of practice:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed. Not listed. Not listed. Not listed. Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1f 15.1j 15.1h 15.1i 15.1i 15.1i	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know: USA New Jersey Right to Know: USA California Prop. 65 Components: EU Regulation 1907/2006 {REACH}: Annex XIV substances subject to authorization: Substances of very high concern: Approved code of practice: Guidance notes: EU legislation references:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed. Not listed. Not listed. Not listed. Not listed. Not listed. Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations. Workplace exposure limits EH40. (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures {CLP Regulation}. EC 830/2015. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1f 15.1j 15.1k 15.1i 15.1s 15.1k	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know: USA New Jersey Right to Know: USA California Prop. 65 Components: EU Regulation 1907/2006 {REACH}: Annex XIV substances subject to authorization: Substances of very high concern: Approved code of practice: Guidance notes: EU legislation references:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed. Not listed. Not listed. Not listed. Not listed. Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations. Workplace exposure limits EH40. (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures {CLP Regulation}. EC 830/2015. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and
14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1f 15.1j 15.1h 15.1i 15.1i 15.1i	Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know: USA New Jersey Right to Know: USA California Prop. 65 Components: EU Regulation 1907/2006 {REACH}: Annex XIV substances subject to authorization: Substances of very high concern: Approved code of practice: Guidance notes: EU legislation references:	Not applicable. The product is not considered a dangerous good for transport. Contact supplier. Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313. Sodium azide (CAS # 26628-22-8) is listed. Not listed. Not listed. Not listed. Not listed. Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations. Workplace exposure limits EH40. (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures {CLP Regulation}. EC 830/2015. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

10X Apoptosis Wash Buffer SDS; Doc# F17-535-2-C; Effective: 5/19/17; Supersedes: F17-535-2-B; Page 6 of 6

Section	n 16: Other information	C; Effective: 5/19/17; Supersedes: F17-535-2-B; Page 6 of 6
16.1	Other information:	
16.1a	Date of revision:	19-May-2017
16.1b	SDS number and revision:	F17-535-2-C
16.1c	Supersedes SDS number and revision:	F17-535-2-B
16.1d 16.1e	Changes made to the previous version of the SDS: Key/legend to abbreviations and acronyms used in the SDS:	Reviewed and updated document control numbers. ACGIH American Conference of Governmental Industrial Hygienists. ADN European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway. ADR The European Agreement concerning the International Carriage of Dangerous Goods by Road. ATE Acute Toxicity Estimate. BCF Bio Concentration Factor. CAS Chemical Abstracts Service. CLP Classification, Labelling and Packaging. CMR Carcinogen, Mutagen or Reproductive toxicant. COD Chemical Oxygen Demand. EC European Commission. EC50 Half maximal effective concentration. EH40 Resource containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations. EINECS European Inventory of Existing Commercial chemical Substances. ELINCS European List of Notified Chemical Substances. ELINCS European List of Notified Chemical Substances. EU European Union. GHS Globally Harmonized System of Classification and Labelling of Chemicals. H Statement GHS Hazard statement. IATA International Air Transport Association. IBC Intermediate Bulk Container. IC50 Half maximal inhibitory concentration. IMDG International Maritime Dangerous Goods. LC50 Median lethal concentration. LD50 Median lethal dose. LogPow logarithm of the octanol/water partition coefficient. MARPOL 73/78 International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. OEL Occupational Exposure Limit. OSHA Occupational Safety and Health Administration (USA). PBT Persistent, Bioaccumulative, and Toxic. PEL Permissible Exposure Limit. RID The Regulations concerning the International Carriage of Dangerous Goods by Rail. SADT Self-Accelerating Decomposition Temperature. SARA Superfund Amendments and Reauthorization Act. SCBA Self-Contained Breathing Apparatus. SDS Safety Data Sheet. STOT-Specific Target Organ Toxicity - Repeated Exposure. UN United Nations. UN United Nations.
		vPvB very Persistent very bioaccumulative.
16.1f	Full text of hazard statements and/or precautionary	All statements were written out in full.
10.11	statements not written out in full elsewhere:	7 in statements were written out in full.
DICC		
DISCLA	AIMER: This information relates only to the speci	fic material designated and may not be valid for such material used

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

END OF SDS



SAFETY DATA SHEET (SDS) according to Regulation (EC) No. 830/2015 amending 1907/2006

1.1	on 1: Identification of the substance/mixture and of the co Product identifier:		Fixative
1.1a	Other means of identification:		
1.1b	Alternative product name(s)/ synonyms: Product number/Catalog #(s):		Fixative, Fix
1.1c			536, 636
1.1d	Internal identification:		Fixative, Fix
1.2	Relevant identified uses of the substant and uses advised against:	ce or mixture	For research use only. Not for use in diagnostic procedures.
1.2a	Brief description of what the substance or intended to do:	mixture is	Laboratory reagent to preserve cells.
1.3 1.3a	Details of the supplier of the SDS: Name:		. ImmunoChemistry Technologies, LLC (ICT)
1.3b	Address:		9401 James Avenue South, Suite 155
1.3c	City, State, Zip, Country		Bloomington, MN 55431-2500 USA
1.3d	Phone number:		1-800-829-3194 and 952-888-8788
1.3e	Fax number:		952-888-8988
1.3f	Website:		www.immunochemistry.com
1.3g	Email:		help@immunochemistry.com
1.3h	Contact person at ICT:		Quality Documentation Department
1.4	Emergency telephone number:		ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide; ICT hours are 9 am-5 pm central time USA, Monday through Friday (excluding holidays). Chemtrec 24-hour access within USA and Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.
Sectio	n 2: Hazards identification		
2.1	Classification of the substance or		
	mixture:		
2.1a 2.1b	Product is a: Classification according to (EC) No.	Mixture.	Liquids, (Category 4) (USA Only).
2.1c	1272/2008 {CLP}: H302 Acute H312 Acute H315 Skin I H319 Eye II H317 Skin s H341 Germ H350 Carci H371 Speci H371 Speci H335 Speci The most important adverse physiochemical, human health, and environmental effects: H302 Acute H312		toxicity, Oral (Category 4). toxicity, Dermal (Category 4). ritation, (Category 2). ritation, (Category 2). ensitisation (Category 1). cell mutagenicity (Category 2). logenicity (Category 1B). ic Target Organ Toxicity - Single Exposure (Category 2). ic Target Organ Toxicity - Single Exposure (Category 3) - Respiratory Tract. ct with liquid may cause immediate harm to skin, mouth, and eyes. Refer to 9-12.
2.2a	Label elements: GHS label elements, including	•	
u	precautionary statements:		
2.2b	Contains:	Formaldehyo	de <10%; and Methanol <5%.
2.2c	Labeling in accordance with (EC) No. 1272/2008:		·
2.2d	Hazard Pictograms (Hazard Symbols):	GHS07 Excl	amation mark. GHS08 Health hazard.
2.2e	Signal word:	Danger.	
2.2f	Hazard statements:	<u> </u>	
2.2g	H335 May ca Precautionary statements: P201 Obtain P280 Wear p		special instructions before use. protective gloves/ protective clothing/ eye protection/ face protection. 2 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if

Fixative SDS; Doc#F17-536-2-D; Effective: 5/12/17; Supersedes: F17-536-2-C; Page 2 of 8

	<u>Fixative 3D</u>	13, DUC#F 17-33			es: F17-536-2-C; Page 2 of 8 erned: Get medical advice/ attention.	
					ish occurs: Get medical advice/ attention.	
2.2h	Supplementary precaution s	tatements:			when using this product.	
	Cappionionially procaution of	idiomonio.		P261 Avoid breathing mist/vapors/spray.		
					g should not be allowed out of the workplace.	
				poison center or doct		
				c treatment (see on t		
			P322 Specifi	c measures (see on	this label).	
			P330 Rinse	mouth.	·	
				off contaminated cloth		
			P363 Wash	contaminated clothing	g before reuse.	
					ners in accordance with local regulations.	
					plenty of soap and water.	
					ictim to fresh air and keep at rest in a position	
				for breathing.		
					se cautiously with water for several minutes. Remove	
2.2	Other hererde		contact iense		sy to do. Continue rinsing.	
2.3 2.3a	Other hazards: Does the chemical meet the	oritorio for DDT	or vDvD2	No additional information Not applicable.	nation available.	
2.3b	Other hazards which do not			Not known.		
2.30	Other nazards which do not	result iii ciassiii	CallOH.	NOU KHOWH.		
Section	n 3: Composition/informatio	n on ingredien	ite			
3.1	Substance:	on mgreaten		Item is a mixture th	nerefore Section 3.1 is not applicable; see Section 3.2.	
3.2	Mixture:			Item is a mixture.	is: 5.5.5 Good of the first applicable, 500 Good of 5.2.	
	The chemical identity and co	ncentration or o	concentration			
	ranges of all ingredients whi					
	present above their cut-off le	evels:				
	3.2a Chemical identity:			Formaldehyde		
	3.2b Common name, synony	/ms, etc.:		CH ₂ O; Index# 605-	-001-00-5	
	3.2c CAS number and			3.2e %	3.2f Classification according to (EC) No. 1272/2008	
	other unique identifiers:	3.2d EC		Concentration:	<u>{CLP}:</u>	
	50-00-0	200-0	01-8	<10%	H301 Toxic if swallowed. H311 Toxic in contact with	
					skin. H331 Toxic if inhaled. Acute Tox. 3.	
					H314 Causes severe skin burns and eye damage.	
					Skin Corr. 1B.	
					H318 Causes serious eye damage. Eye Dam. 1.	
					H317 May cause an allergic skin reaction. Skin Sens.	
					1.	
					H341 Suspected of causing genetic defects. Muta. 2.	
					H350 May cause cancer. Carc. 1B. H335 May cause respiratory irritation. STOT SE 3.	
					H335 May cause respiratory lititation. STOT SE 3.	
3.2g	Other ingredient:					
0.29	3.2h Chemical identity:			Methanol		
	3.2i Common name, synony	ms. etc.:		CH ₄ O: Index # 603	-001-00-X	
	3.2j CAS number and			3.21 %	3.2m Classification according to (EC) No. 1272/2008	
	other unique identifiers:	3.2k EC	number:	Concentration:	{CLP}:	
	67-56-1	200-6		<5%	H225 Highly flammable liquid and vapor. Flam. Liq. 2.	
					H301 Toxic if swallowed. H311 Toxic in contact with	
					skin. H331 Toxic if inhaled. Acute Tox. 3.	
					H370 Causes damage to organs. STOT SE 1.	
	n 4: First aid measures					
4.1	Description of first aid mea	asures:			sician and provide SDS information. If exposed or	
					dical attention/advice. Wash contaminated clothing	
					er give anything to an unconscious person. First aid	
					wear gloves/skin protection to avoid contact with	
4.4	lab platica			product.	to and have at most to a construction of the	
4.1a	Inhalation:				ir and keep at rest in a comfortable position for	
					eathing, give artificial respiration. Rinse nose and mouth	
1 11-	Ckin contact:			with water. Get me		
4.1b	Skin contact:				clothing/shoes and immediately wash all exposed skin	
				hospital. Get medic	er for at least 15 minutes. Take victim immediately to	
4.1c	Eye contact:				on immediately. Promptly wash eyes with plenty of	
4.10	Lye contact.				he eyelids. Make sure to remove any contact lenses	
					re rinsing. Continue to rinse for at least 15 minutes.	
4.1d	Ingestion:				on immediately and if any discomfort continues. NEVER	
IU	ingeston.				ISCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse	
					Do not induce vomiting without advice from poison	
					edical professional.	
4.2	Most important symptoms	and effects. b	oth acute		ons 2 and 11 for most important known symptoms and	
	and delayed:	, 2		effects.	s sing sing sing sing sing	
4.2a	Inhalation:			May cause respirat	tory irritation.	
					-	

		ve: 5/12/17; Supersedes: F17-536-2-C; Page 3 of 8
4.2b	Skin contact:	Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
4.2c	Eye contact:	Causes serious eye irritation.
4.2d 4.3	Ingestion: Indication of any immediate medical attention and special treatment needed:	Harmful if swallowed. Get medical attention immediately.
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal protective equipment.
Section	on 5: Firefighting measures	
5.1	Extinguishing media:	Use fire-extinguishing media appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
5.1b 5.2	Unsuitable extinguishing media: Special hazards arising from the substance or mixture:	None known.
5.2a	Hazardous combustion products:	None under normal conditions.
5.2b	Unusual fire & explosion hazards:	No unusual fire or explosion hazards noted.
5.2c	Protective measures in fire:	Use protective equipment appropriate for surrounding materials. Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus and protective suit (see Section 8).
5.3	Advice for firefighters:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.3a	Special firefighting procedures:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.
5.3b	Special protective equipment and precautions for firefighters:	Wear full protective clothing, including self-contained breathing apparatus, if necessary. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Section	on 6: Accidental release measures	
6.1	Personal precautions, protective equipment, and emergency procedures:	Use protective equipment appropriate for surrounding materials and to avoid contamination.
6.1a	General release measures:	No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel for large spills.
6.1b	Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:	Wear suitable protective clothing/gloves/eye/face protection to prevent any contamination of skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel for large spills or if concerned.
6.1c	Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination; use an approved supplied-air respirator, in case of emergency (also refer to Section 8).
6.2	Environmental precautions:	Do not allow to enter drains, surface, and ground water, sewers, or watercourses.
6.3	Methods and materials for containment and clean up:	Contain any spills with dikes or absorbent materials to prevent migration and entry into sewers or water sources. Place in a suitable container for disposal in accordance with local waste regulations (see Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapor
6.4	Reference to other sections:	Refer to Sections 8 and 13 for additional information.
Section	on 7: Handling and storage	
7.1	Precautions for safe handling:	Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition.
7.1a	Prevent handling of incompatible substances or mixtures:	Avoid contact with strong acids and strong oxidizing substances. Incompatible with strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline.
7.1b	Advice on general occupational hygiene:	Do not eat, drink, or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices.
7.2	Conditions for safe storage, including any incompatibilities:	Refer to product label for storage. Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

	Fixative SDS; Doc#F17-536-2-D; Effective	e: 5/12/17; Supersedes: F17-536-2-C; Page 4 of 8
		Avoid spills and release into the environment; keep away from
7.3	Specific end use(s):	watercourses. For research use only. Not for use in diagnostic procedures.
	- Specime one ass(s).	To recognist and only. Her for add in alagnostic procedures.
	8: Exposure controls/personal protection	
8.1	Control parameters:	. Mathematic
8.1a	Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin.	Methanol: EH40 2005 UK Workplace Exposure Limits STEL: 333 mg/m³ 15 minutes STEL: 250 ppm 15 minutes TWA: 266 mg/m³ 8 hours TWA: 200 ppm 8 hours USA ACGIH Threshold Limit Values TWA- 200 ppm 8 hours STEL- 250 ppm 15 minutes STEL- 250 ppm 15 minutes STEL- 328 mg/m³ 15 minutes STEL- 328 mg/m³ 15 minutes US NIOSH Recommended Exposure Limits TWA- 200 ppm 10 hours TWA- 200 ppm 10 hours STEL- 325 mg/m³ 15 minutes STEL- 325 mg/m³ 15 minutes STEL- 30 ppm 8 hours TWA- 200 ppm 8 hours TWA- 200 ppm 8 hours TWA- 200 ppm 8 hours TWA- 260 mg/m³ 8 hours Formaldehyde EH40 2005 UK Workplace Exposure Limits STEL: 2.5 mg/m³ 15 minutes STEL: 2.5 ppm 8 hours TWA: 2.5 mg/m³ 8 hours USA ACGIH Threshold Limit Values C: 0.300000 ppm OSHA PEL Subpart Z Standard - OSHA Specifically Regulated Chemicals/Carcinogens TWA 0.750000 ppm 8 hours STEL - 2.000000 ppm 15 minutes US NIOSH Recommended Exposure Limits TWA: 0.016000 ppm 10 hours CEIL - 0.100000 ppm 15 minutes
8.1b	Appropriate engineering controls:	
8.1c	Individual protection measures, such as personal protective equipment:	Wear gloves, lab coat, and protective goggles.
8.1d	Safety symbols:	
8.2	Exposure controls:	Provide suggests station
8.2a 8.2b	Process conditions: Engineering controls:	Provide eyewash station. Ensure that eyewash stations and safety showers are proximal to the workstation location.
8.2c	Ventilation controls: Reference to other sections:	Provide adquate ventilation.
8.2d 8.2e	Eye/face protection:	Refer to Section 5 for additional information. Tightly fitting safety goggles. Use equipment for eye/face protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
8.2f	Skin protection:	Wear apron or protective clothing in case of contact.
8.2g	Hand protection:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only

Fixative SDS; Doc#F17-536-2-D; Effective: 5/12/17; Supersedes: F17-536-2-C; Page 5 of 8

		ective: 5/12/17; Supersedes: F17-536-2-C; Page 5 of 8
		and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of the customers' anticipated uses of the product. It should not be construed as offering an approval for any specific use
8.2h	Respiratory equipment:	scenario. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK
		(EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air
		respirator. Use respirators and components tested and approved under
8.2i	Other protection:	appropriate government standards such as NIOSH (US) or CEN (EU). Wear appropriate clothing to prevent any possibility of skin contact.
8.2j	Hygiene measures:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift
•		and before eating, smoking, and using the toilet. Promptly remove any
		clothing that becomes contaminated. Use appropriate skin cream to
		prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated.
8.2k	Thermal hazards:	None known.
8.21	Environmental exposure controls:	Not determined.
<u> </u>		
Section 9.1	9: Physical and chemical properties	
9.1	Information on basic physical and chemical properties:	·
9.1a	Appearance (physical state, color, etc.):	Liquid; colorless; clear.
9.1b	Odor:	Pungent
9.1c	Odor threshold:	Not determined.
9.1d 9.1e	pH: Melting point/freezing point (°C):	6.8-7.4 Not determined.
9.1e 9.1f	Initial boiling point and boiling range:	Not determined. Not determined.
9.1g	Flash point (°C):	85°C estimated value based on supplier data.
9.1h	Evaporation rate:	Not determined.
9.1i	Flammability (solid, gas):	Not determined.
9.1j	Upper/lower flammability or explosive limits:	Upper: 70%(V) estimated value. Lower: 7%(V) estimated value.
9.1k	Vapor pressure:	53 hPa at 39°C estimated value.
9.11	Vapor density (Air =1):	Not applicable.
9.1m	Relative density:	Not determined.
9.1n	Solubility(ies):	Readily miscible in water.
9.10	Partition coefficient (N-octanol/water):	Not determined.
9.1p 9.1q	Auto-ignition temperature (°C): Decomposition temperature (°C):	Not determined. Not determined.
9.1r	Viscosity:	Not determined.
9.1s	Explosive properties:	Not determined.
9.1t	Oxidizing properties:	Not determined.
9.2	Other information: Other physical or chemical parameters:	None.
0 0 0	Other physical of chemical parameters:	None.
9.2a		
Section 10.1	n 10: Stability and reactivity Reactivity:	Strong acids. Strong oxidizing substances.
Section 10.1 10.2	n 10: Stability and reactivity Reactivity: Chemical stability:	Stable under normal temperature conditions.
Section 10.1 10.2 10.3	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions:	Stable under normal temperature conditions. Not determined.
Section 10.1 10.2	n 10: Stability and reactivity Reactivity: Chemical stability:	Stable under normal temperature conditions.
Section 10.1 10.2 10.3	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines,
Section 10.1 10.2 10.3 10.4	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates,
Section 10.1 10.2 10.3 10.4	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline.
Section 10.1 10.2 10.3 10.4	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate:
Section 10.1 10.2 10.3 10.4 10.5	Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline.
Section 10.1 10.2 10.3 10.4 10.5	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate:
Section 10.1 10.2 10.3 10.4 10.5	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate:
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde.
Section 10.1 10.2 10.3 10.4 10.5	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate:
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde. Formaldehyde: LD50 Dermal Rabbit 270 mg/kg. LD50 Oral Rat 100 mg/kg.
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde. Formaldehyde: LD50 Dermal Rabbit 270 mg/kg. LD50 Oral Rat 100 mg/kg. Methanol:
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a	n 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde. Formaldehyde: LD50 Dermal Rabbit 270 mg/kg. LD50 Oral Rat 100 mg/kg. Methanol: LD50 Dermal Rabbit 15800 mg/kg.
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a 11.1b	Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde. Formaldehyde: LD50 Dermal Rabbit 270 mg/kg. LD50 Oral Rat 100 mg/kg. Methanol: LD50 Dermal Rabbit 15800 mg/kg. LD50 Oral Rat 5600 mg/kg.
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a	Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde. Formaldehyde: LD50 Dermal Rabbit 270 mg/kg. LD50 Oral Rat 100 mg/kg. Methanol: LD50 Dermal Rabbit 15800 mg/kg.
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e	Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde.
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f	Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde.
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e	Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde.
Section 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f	Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity:	Stable under normal temperature conditions. Not determined. Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight. Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline. None under normal conditions. High temperatures generate: Vapors/gases/fumes of: Formaldehyde.

Fixative SDS; Doc#F17-536-2-D; Effective: 5/12/17; Supersedes: F17-536-2-C; Page 6 of 8

	Fixative SDS; DOC#F17-536-2-D; Effective	e: 5/12/17; Supersedes: F17-536-2-C; Page 6 of 8
44.41	Barrier Land and Carlo	ACGIH - A2 (Suspected Human Carcinogen).
11.1h	Reproductive toxicity:	Formaldehyde: Not determined. Methanol: Not determined.
11.1i	STOT-single exposure:	Formaldehyde: Not determined. Methanol: Not determined.
11.1j	STOT-repeated exposure:	Formaldehyde: Category 3, Respiratory Tract Irritation. Methanol: Not
44.41	A	determined.
11.1k	Aspiration hazard:	Formaldehyde: Not determined. Methanol: Not determined.
11.11	Information on the likely routes of exposure (inhalation,	May enter by skin and/or eye contact; inhalation of vapors/mist/dust.
	ingestion, skin and eye contact):	
11.1m	Ingestion:	Harmful if swallowed.
11.1n	Inhalation:	May cause respiratory irritation.
11.10	Skin contact:	Harmful in contact with skin. Causes skin irritation. May cause an allergic
		skin reaction.
11.1p	Eye contact:	Causes serious eye irritation.
11.1q	Symptoms related to the physical, chemical and	May cause sensitization by skin contact.
44.4.	toxicological characteristics:	M
11.1r	Delayed and immediate effects as well as chronic	May cause cancer. Suspected of causing genetic defects. May cause
44.4.	effects from short and long term exposure:	damage to organs.
11.1s	Numerical measures of toxicity (such as acute toxicity	Not determined.
44.41	estimates):	Not be well a
11.1t	Interactive effects:	Not determined.
11.1u	Absence of specific data:	Not applicable.
11.1v	Mixtures:	Item is a mixture.
11.1w	Mixture vs. substance information:	See Section 3 for any substances in the mixture.
11.1x	Classification by National Toxicity Program (NTP):	Formaldehyde is known to be a human carcinogen. Methanol is not listed.
11.1y	Classification by International Agency for Research on	Formaldehyde is classified in Group 1: Carcinogenic to Humans. Methanol
44.4	Cancer (IARC):	is not listed.
11.1z	Classification by OSHA 13:	Formaldehyde is not listed. Methanol is not listed.
11.1ab	Other information:	Because of the small quantity of product, the health hazard is small.
	12: Ecological information	1
12.1	Toxicity:	Mixture not tested.
12.1a	Name:	Fixative.
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	No data available.
12.2	Persistence and degradability:	No data available.
12.3	Bioaccumulative potential:	No data available.
12.4	Mobility in soil:	No data available.
12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	Not determined.
12.6	Other adverse effects:	
12.6 Section	Other adverse effects: 13: Disposal considerations	Not determined.
12.6	Other adverse effects:	Not determined. When handling waste, consideration should be made to the safety
12.6 Section 13.1	Other adverse effects: 13: Disposal considerations Waste treatment methods:	Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product.
12.6 Section	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority
12.6 Section 13.1	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the	Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or
12.6 Section 13.1	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their	Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8
12.6 Section 13.1	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or
12.6 Section 13.1 13.1a	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8
12.6 Section 13.1 13.1a Section	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.
12.6 Section 13.1 13.1a Section 14.1	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable.
12.6 Section 13.1 13.1a Section 14.1 14.2	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es):	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. Not applicable.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?:	Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b 14.6	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. No. None known.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL	Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b 14.6 14.7	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. None known. Not applicable.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.7a	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code: Other information:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. None known. Not applicable. The product is not considered a dangerous good for transport.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b 14.6 14.7	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. None known. Not applicable.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.7a 14.7a	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. None known. Not applicable. The product is not considered a dangerous good for transport.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.5 14.5a 14.7a 14.7a 14.7b Section	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. None known. Not applicable. The product is not considered a dangerous good for transport.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.7a 14.7a	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. None known. Not applicable. The product is not considered a dangerous good for transport.
12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.5 14.5a 14.7a 14.7a 14.7b Section	Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. None known. Not applicable. The product is not considered a dangerous good for transport.
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12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.7a 14.7b Section 15.1 15.1a 15.1b 15.1c 15.1d	13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging: 14: Transport information UN number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?: Is it a marine pollutant according to the IMDG code?: Special precautions for user: Transport in bulk according to Annex II of MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know:	When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS. Not applicable. Not applicable. Not applicable. Not applicable. The product is not covered by these regulations. No. None known. Not applicable. The product is not considered a dangerous good for transport. Contact supplier. USDA OSHA - Formaldehyde Standard Subpart Z 1910.1048. Formaldehyde is listed on 302, 304, 313, and RCRA code U122. Methanol is listed on 313 and RCRA code U122. Formaldehyde and methanol are listed. Formaldehyde and methanol are listed.
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Fixative SDS; Doc#F17-536-2-D; Effective: 5/12/17; Supersedes: F17-536-2-C; Page 7 of 8

15.1g	EU Regulation 1907/2006 {REA	oc#F17-536-2-D; Effective: 5/12/17; Supersedes: F17-536-2-C; Page 7 of 8 CH3:
15.1g 15.1h	Annex XIV substances subject to	
15.1i	Substances of very high concern	r: Fixative is not listed.
15.1j	Approved code of practice:	Classification and labeling of substances and preparations dangerous for
		supply. Safety data sheets for substances and preparations.
15.1k	Guidance notes:	Workplace exposure limits EH40.
15.11	EU legislation references:	(EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures {CLP Regulation}. EC 830/2015. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
15.2a	Chemical safety assessment: Other regulatory information:	Not required. None.
Section	16: Other information	
16.1	Other information:	
16.1a	Date of revision:	12-May-2017
16.1b	SDS number and revision:	F17-536-2-D
16.1c	Supersedes SDS number and	F17-536-2-C
16.1d	revision: Changes made to the previous	Reviewed and updated document control numbers. Minor changes were made (corrected typos,
16.10	version of the SDS:	deleted redundant information, etc.).
16.1e	Key/legend to abbreviations	ACGIH American Conference of Governmental Industrial Hygienists.
	and acronyms used in the	ADN European Provisions concerning the International Carriage of Dangerous Goods by Inland
	SDS:	Waterway.
		ADR The European Agreement concerning the International Carriage of Dangerous Goods by
		Road.
		ATE Acute Toxicity Estimate.
		BCF Bio Concentration Factor. CAS Chemical Abstracts Service.
		CLP Classification, Labelling and Packaging.
		CMR Carcinogen, Mutagen or Reproductive toxicant.
		COD Chemical Oxygen Demand.
		EC European Commission.
		EC50 Half maximal effective concentration.
		EH40 Resource containing the list of workplace exposure limits for use with the Control of
		Substances Hazardous to Health Regulations.
		EINECS European Inventory of Existing Commercial chemical Substances. ELINCS European List of Notified Chemical Substances.
		EU European Union.
		GHS Globally Harmonized System of Classification and Labelling of Chemicals.
		H Statement GHS Hazard statement.
		IATA International Air Transport Association.
		IBC Intermediate Bulk Container.
		IC50 Half maximal inhibitory concentration.
		IMDG International Maritime Dangerous Goods.
		LD50 Median lethal concentration. LD50 Median lethal dose.
		LogPow logarithm of the octanol/water partition coefficient.
		MARPOL 73/78 International Convention for the Prevention of Pollution From Ships, 1973 as
		modified by the Protocol of 1978.
		OEL Occupational Exposure Limit.
		OSHA Occupational Safety and Health Administration (USA).
		PBT Persistent, Bioaccumulative, and Toxic.
		PEL Permissible Exposure Limit.
		RID The Regulations concerning the International Carriage of Dangerous Goods by Rail. SADT Self-Accelerating Decomposition Temperature.
		SARA Superfund Amendments and Reauthorization Act.
		SCBA Self-Contained Breathing Apparatus.
		SDS Safety Data Sheet.
		STOT Specific Target Organ Toxicity.
		STOT-RE Specific Target Organ Toxicity - Repeated Exposure.
		STOT-SE Specific Target Organ Toxicity - Single Exposure.
		UN United Nations.
		USA United States of America.
16.1f	Full text of hazard statements	vPvB very Persistent very bioaccumulative. All statements were written out in full.
	and/or precautionary	distance in the minimum out in talls
	statements not written out in	

Fixative SDS; Doc#F17-536-2-D; Effective: 5/12/17; Supersedes: F17-536-2-C; Page 8 of 8

DISCLAIMER:	This information relates only to the specific material designated and may not be valid for	
	such material used in combination with any other materials or in any process. Such	
	information is, to the best of the company's knowledge and belief, accurate and reliable as	
	of the date indicated. However, no warranty guarantee or representation is made to its	
	accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to	
	the suitability of such information for his own particular use.	
END OF SDS		



SAFETY DATA SHEET (SDS) according to Regulation (EC) No. 830/2015 amending 1907/2006

1.1	n 1: Identification of the substance/mixture and of the		
	Product identifier:	Propidium Iodide	
1.1a	Other means of identification:		
1.1b	Alternative product name(s)/ synonyms:	Propidium Iodide, PI	
1.1c	Product number/Catalog #(s):	557, 638	
1.1d 1.2	Internal identification: Relevant identified uses of the substance or	Propidium Iodide; PI	
1.2	mixture and uses advised against:	For research use only. Not for use in diagnostic procedures.	
1.2a	Brief description of what the substance or mixture is	Intercalating fluorescent red reagent that is primarily used to identify	
1.24	intended to do:	necrotic and apoptotic cells.	
1.3	Details of the supplier of the SDS:		
1.3a	Name:	ImmunoChemistry Technologies, LLC (ICT)	
1.3b	Address:	9401 James Avenue South, Suite 155	
1.3c	City, State, Zip, Country	Bloomington, MN 55431-2500 USA	
1.3d	Phone number:	1-800-829-3194 and 952-888-8788	
1.3e	Fax number:	952-888-8988	
1.3f	Website:	www.immunochemistry.com	
1.3g	Email:	help@immunochemistry.com	
1.3h	Contact person at ICT:	Quality Documentation Department	
1.4	Emergency telephone number:	ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide;	
		ICT hours are 9 am-5 pm central time USA, Monday through Friday	
		(excluding holidays). Chemtrec 24-hour access within USA and Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.	
		Canada. 1-000-424-9300 01 +1 703-327-3007. Collect calls accepted.	
Section	on 2: Hazards identification		
2.1	Classification of the substance or mixture:		
2.1a	Product is a:	Mixture.	
2.1b	Classification according to (EC) No. 1272/2008	Does not meet the criteria for classification.	
	{CLP}:		
2.1c	The most important adverse physiochemical, human	Refer to Sections 9-12.	
	health, and environmental effects:		
2.2	Label elements:	None.	
2.2a	GHS label elements, including precautionary		
0.01	statements:		
2.2b	Contains:	None	
2.2c	Labeling in accordance with (EC) No. 1272/2008: Hazard Pictograms (Hazard Symbols):	None.	
2.2d 2.2e	Signal word:	None.	
2.2e 2.2f	Hazard statements:	None.	
2.2g	Precautionary statements:	None.	
2.2h	Supplementary precaution statements:	None.	
2.3	Other hazards:	No additional information available.	
2.3a	Does the chemical meet the criteria for PBT or vPvB?	Not applicable.	
2.3b	Other hazards which do not result in classification:	PI contains a low concentration of Phenanthridinium, 3,8-diamino-5-[3-	
		(diethylmethylammonio)propyl]-6-phenyl-, diiodide (CAS 25535-16-4)	
		which is below the threshold for reporting. PI is a suspected mutagen	
		at high concentrations. Prolonged skin contact may cause redness and	
		irritation. Because of the small quantity of product, the health hazard is	
		small.	
Cont!	n 2. Composition/information on in the literature		
Section 3.1	n 3: Composition/information on ingredients Substance:	Itam is a mixture therefore Section 2.1 is not applicable; and Castian	
J. I	Jupatance.	Item is a mixture therefore Section 3.1 is not applicable; see Section 3.2.	
3.2	Mixture:	Item is a mixture.	
J. <u> </u>	The chemical identity and concentration or	Nomino a minitaro.	
	concentration ranges of all ingredients which are		
	hazardous and are present above their cut-off levels:		
	3.2a Chemical identity:	No ingredients identified for reporting in this section.	
	n 4: First aid measures		
4.1	Description of first aid measures:	If concerned, get medical attention/advice and provide physician with	
		SDS information. Wash contaminated clothing before re-use. Never	
	I.	give anything by mouth to an unconscious person.	

Propidium Iodide SDS; Doc# F17-557-2-D; Effective: 05/12/2017; Supersedes: F17-557-2-C; Page 2 of 6

		tive: 05/12/2017; Supersedes: F17-557-2-C; Page 2 of 6
4.1a	Inhalation:	Remove to fresh air and keep at rest in a comfortable position for
		breathing. If not breathing, give artificial respiration. Rinse nose and
		mouth with water. Get medical attention if any discomfort continues.
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes;
4.10	Skin contact.	
		continue to rinse for at least 15 minutes. Remove any contaminated
		clothing and shoes and wash thoroughly before reuse. Get medical
		attention if any discomfort continues.
4.1c	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make
0	Lyo comacu	sure to remove any contact lenses from the eyes before rinsing.
		Continue to rinse for at least 15 minutes. Get medical attention if any
		discomfort continues.
4.1d	Ingestion:	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK
		FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without
		advice from poison control center or medical professional. Get medical
		attention if any discomfort continues.
4.0	Most important symptoms and effects both south	
4.2	Most important symptoms and effects, both acute	PI is a suspected mutagen at high concentrations. Prolonged skin
	and delayed:	contact may cause redness and irritation. Because of the small
		quantity of product, the health hazard is small.
4.2a	Inhalation:	May cause coughing or mild irritation.
4.2b	Skin contact:	Prolonged skin contact may cause redness and mild irritation.
4.2c	Eye contact:	May cause temporary eye irritation.
4.2d	Ingestion:	May cause discomfort if swallowed.
4.3	Indication of any immediate medical attention and	No specific first aid measures noted, but first aid may still be required
	special treatment needed:	in case of accidental exposure, inhalation, or ingestion of this product.
	•	If in doubt, get medical attention promptly!
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal
1 .5a	Notes to physician/ilist responder.	
		protective equipment.
Sectio	n 5: Firefighting measures	
5.1	Extinguishing media:	This product is not flammable. Use fire-extinguishing media
		appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide.
5.1a 5.1b		
5 1h	Unsuitable extinguishing media:	None known.
5.10	Special hazards arising from the substance or	This product is not flammable. Product is not explosive. No dangerous
5.2	Special hazards arising from the substance or mixture:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use.
5.2 5.2a	Special hazards arising from the substance or mixture: Hazardous combustion products:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions.
5.2a 5.2b	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted.
5.2a 5.2b 5.2c	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials.
5.2a 5.2b	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other
5.2a 5.2b 5.2c	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials.
5.2a 5.2b 5.2c 5.3	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.2a 5.2b 5.2c 5.3 5.3a	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given.
5.2a 5.2b 5.2c 5.3	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing
5.2a 5.2b 5.2c 5.3 5.3a	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards
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5.2a 5.2b 5.2c 5.3c 5.3a 5.3b Section 6.1a 6.1b	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8).
5.2a 5.2b 5.2c 5.3c 5.3a 5.3b Section 6.1 6.1a 6.1c	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses.
5.2a 5.2b 5.2c 5.3c 5.3a 5.3b Section 6.1a 6.1b	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses.
5.2a 5.2b 5.2c 5.3c 5.3a 5.3b Section 6.1 6.1a 6.1c	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions: Methods and materials for containment and	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact, use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses. Contain any spills with dikes or absorbent materials to prevent
5.2a 5.2b 5.2c 5.3c 5.3a 5.3b Section 6.1 6.1a 6.1c	Special hazards arising from the substance or mixture: Hazardous combustion products: Unusual fire & explosion hazards: Protective measures in fire: Advice for firefighters: Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use. None under normal conditions. No unusual fire or explosion hazards noted. Use protective equipment appropriate for surrounding materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses.

Propidium Iodide SDS; Doc# F17-557-2-D; Effective: 05/12/2017; Supersedes: F17-557-2-C; Page 3 of 6 Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapor. 6.4 Refer to Sections 8 and 13 for additional information. Reference to other sections: Section 7: Handling and storage Precautions for safe handling: Do not handle until all safety precautions have been read and 7.1 understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition. 7.1a Avoid contact with strong acids and strong oxidizers. Prevent handling of incompatible substances or mixtures: 7.1b Do not eat, drink, or smoke in work areas. Wash hands after use. Advice on general occupational hygiene: Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices. 7.2 Conditions for safe storage, including any Refer to product label. Store in cool place. Keep container tightly incompatibilities: closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid spills and release into the environment; keep away from watercourses. 7.3 Specific end use(s): For research use only. Not for use in diagnostic procedures. Section 8: Exposure controls/personal protection Control parameters: 8.1 8.1a Occupational exposure limits, such as chemical Not available. identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin. 8.1b Appropriate engineering controls: 8.1c Individual protection measures, such as personal Wear gloves, protective goggles, and lab coat. protective equipment: 8.1d Safety symbols: 8.2 **Exposure controls:** 8.2a Process conditions: Provide eyewash station. Ensure that eyewash stations and safety showers are proximal to the Engineering controls: 8.2b workstation location. Provide adequate ventilation. 8.2c Ventilation controls: Refer to Section 5 for additional information. 8.2d Reference to other sections: Wear approved chemical safety goggles where eye exposure is 8.2e Eye/face protection: reasonably probable or face shield if risk of splashing. 8.2f Skin protection: Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 8.2g Hand protection: 8.2h Respiratory equipment: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Wear appropriate clothing to avoid skin contact. 8.2i Other protection: 8.2j DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift Hygiene measures: and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated 8.2k Thermal hazards: None known under normal conditions of use. 8.21 Environmental exposure controls: Not determined.

9.1 Information on basic physical and chemical properties: . 9.1a Appearance (physical state, color, etc.): Liquid; clear pink. 9.1b Odor: No characteristic odor. 9.1c Odor threshold: Not determined.	Sectio	Section 9: Physical and chemical properties		
9.1b Odor: No characteristic odor.	9.1	·		
	9.1a	Appearance (physical state, color, etc.):	Liquid; clear pink.	
9.1c Odor threshold: Not determined.	9.1b	Odor:	No characteristic odor.	
	9.1c	Odor threshold:	Not determined.	

Propidium Iodide SDS; Doc# F17-557-2-D; Effective: 05/12/2017; Supersedes: F17-557-2-C; Page 4 of 6

9.1d	pH:	4.5-6.5
9.1e	Melting point/freezing point (°C):	Not determined.
9.1f	Initial boiling point and boiling range:	<100°C @ 760 mm Hg.
9.1g	Flash point (°C):	Not applicable.
9.1h	Evaporation rate:	Not determined.
9.1i	Flammability (solid, gas):	Not applicable.
9.1j	Upper/lower flammability or explosive limits:	Not applicable.
9.1k	Vapor pressure:	Not determined.
9.11	Vapor density (Air =1):	Not determined.
9.1m	Relative density:	Not determined.
9.1n	Solubility(ies):	Soluble in water.
9.10	Partition coefficient (N-octanol/water):	Not determined.
9.1p	Auto-ignition temperature (°C):	Not determined.
9.1q	Decomposition temperature (°C):	Not determined.
9.1r	Viscosity:	Not determined.
9.1s	Explosive properties:	Not determined.
9.1t	Oxidizing properties:	Not determined.
9.2	Other information:	None.
9.2a		None.
9.Za	Other physical or chemical parameters:	None.
Section	10: Stability and reactivity	
10.1	Reactivity:	No data available.
10.2	Chemical stability:	Stable under normal temperature conditions.
10.3	Possibility of hazardous reactions:	Hazardous polymerization: no data available.
10.4	Conditions to avoid:	To avoid product degradation, avoid exposure to high temperatures or
	Conditions to avolu.	
		direct sunlight or light.
10.5	Incompatible materials:	Strong oxidizing substances.
10.6	Hazardous decomposition products:	None under normal conditions.
10.0	riazardous decomposition products.	None under normal conditions.
Section	11: Toxicological information	
11.1	Information on toxicological effects:	
11.1a	Name:	Propidium Iodide.
11.1b	Acute toxicity:	Not determined.
11.1c	Skin corrosion/irritation:	Not determined.
11.1d	Serious eye damage/irritation:	Not determined.
11.1e	Respiratory or skin sensitization:	Not determined.
11.1f	Germ cell mutagenicity:	Not determined.
11.1g	Carcinogenicity:	Not determined.
11.1h	Reproductive toxicity:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1j	STOT-repeated exposure:	Not determined.
11.1k	Aspiration hazard:	Not determined.
	· ·	
11.11	Information on the likely routes of exposure	May enter by skin and/or eye contact; inhalation of vapors/mist/dust.
	(inhalation, ingestion, skin and eye contact):	
11.1m	Ingestion:	May cause discomfort if swallowed.
11.1n	Inhalation:	In high concentrations, vapors may irritate throat and respiratory
	<u> </u>	system and cause coughing.
11.1o	Skin contact:	Liquid may irritate skin.
11.1p	Eye contact:	Spray and vapor in the eyes may cause irritation and smarting.
11.1q	Symptoms related to the physical, chemical and	No specific symptoms noted.
	toxicological characteristics:	
11 1-		Not determined
11.1r	Delayed and immediate effects as well as chronic	Not determined.
	effects from short and long term exposure:	
11.1s	Numerical measures of toxicity (such as acute	Not determined.
<u></u>	toxicity estimates):	
11.1t	Interactive effects:	Not determined.
11.1u	Absence of specific data:	Not applicable.
11.1v	Mixtures:	Item is a mixture.
11.1w	Mixture vs. substance information:	See Section 3 for any substances in the mixture.
11.1x	Classification by National Toxicity Program (NTP):	Not classified.
11.1y	Classification by International Agency for Research	Not classified.
	on Cancer (IARC):	
11.1z	Classification by OSHA 13:	Not classified.
11.1ab	Other information:	PI is a suspected mutagen at high concentrations. Prolonged skin
		contact may cause redness and irritation. Because of the small quantity
		of product, the health hazard is small.
		or product, the health hazard is small.
Section	n 12: Ecological information	
12.1	Toxicity:	
	i	Propidium lodido
12.1a	Name:	Propidium Iodide.

		ctive: 05/12/2017; Supersedes: F17-557-2-C; Page 5 of 6
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	Not determined.
12.2	Persistence and degradability:	There are no data on the degradability of this product.
12.3	Bioaccumulative potential:	No data available on bioaccumulation.
12.4	Mobility in soil:	The product is soluble in water.
12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	No data available.
	An Bloom I would be at the settle of	
	13: Disposal considerations	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
13.1	Waste treatment methods:	When handling waste, consideration should be made to the safety
40.4-	Description of words residues and information or	precautions applying to handling of the product.
13.1a	Description of waste residues and information on	Dispose of waste and residues in accordance with local authority
	their safe handling and methods of disposal,	requirements. For the safety of persons conducting disposal, recycling
	including the disposal of any contaminated	or reclamation activities, please refer to the information in Section 8
	packaging:	(exposure controls and personal protection) of the SDS.
Section	14: Transport information	
14.1	UN number:	Not applicable.
14.2	UN proper shipping name:	Not applicable.
14.3	Transport hazard class(es):	Not applicable.
14.4	Packing group:	Not applicable.
14.5	Environmental hazards:	Not applicable.
14.5a	Is it environmentally dangerous according to UN	The product is not covered by these regulations.
1 7 .Ja	Model Regulations (IMDG Code, ADR, RID, and	The product is not covered by these regulations.
	ADN)?:	
14.5b	Is it a marine pollutant according to the IMDG	No.
17.00	code?:	INO.
14.6	Special precautions for user:	None known.
14.7	Transport in bulk according to Annex II of	Not applicable.
	MARPOL and the IBC code:	Not applicable.
14.7a	Other information:	The product is not considered a dangerous good for transport.
14.7b	Classification for other modes of transport:	Contact supplier.
1 111 6	Clacomodicities of the modes of the modes.	Contact cappilon
Section	15: Regulatory information	
15.1	Safety, health and environmental	
	regulations/legislation specific for the substance	·
	or mixture:	
15.1a	Regional safety, health and environmental	
	regulations specific for the product in question:	·
15.1b	USA SARA Components (such as 302/311/313):	Not listed.
15.1c	USA Massachusetts Right to Know:	Not listed.
15.1d	USA Pennsylvania Right to Know:	Not listed.
15.1e	USA New Jersey Right to Know:	Not listed.
15.1f	USA California Prop. 65 Components:	Not listed.
15.1g	EU Regulation 1907/2006 {REACH}:	The state of the s
15.1h	Annex XIV substances subject to authorization:	Not listed.
15.1i	Substances of very high concern:	Not listed.
15.1j	Approved code of practice:	Classification and labeling of substances and preparations dangerous
10.1	Approved edge of practice.	for supply. Safety data sheets for substances and preparations.
15.1k	Guidance notes:	Workplace exposure limits EH40.
15.1l	EU legislation references:	(EC) No. 1272/2008 on the classification, labelling and packaging of
		substances and mixtures {CLP Regulation}. EC 830/2015. Regulation
		(EC) No 1907/2006 of the European Parliament and of the Council of
		18 December 2006 concerning the Registration, Evaluation,
		Authorisation and Restriction of Chemicals (REACH), establishing a
		European Chemicals Agency, amending Directive 1999/45/EC and
		repealing Council Regulation (EEC) No 793/93 and Commission
		Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC
		and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and
		2000/21/EC, including amendments.
15.2	Chemical safety assessment:	Not required.
15.2a	Other regulatory information:	None.
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Section	16: Other information	
16.1	Other information:	
16.1a	Date of revision:	12-May-2017
16.1b	SDS number and revision:	F17-557-2-D
16.1c	Supersedes SDS number and revision:	F17-557-2-C
16.1d	Changes made to the previous version of the SDS:	Reviewed and updated document control numbers.
16.1e	Key/legend to abbreviations and acronyms used in	ACGIH American Conference of Governmental Industrial Hygienists.
	the SDS:	ADN European Provisions concerning the International Carriage of
	-	Dangerous Goods by Inland Waterway.
	I.	

	of Dangerous Goods by Road. ATE Acute Toxicity Estimate.
	BCF Bio Concentration Factor.
	CAS Chemical Abstracts Service.
	CLP Classification, Labelling and Packaging.
	CMR Carcinogen, Mutagen or Reproductive toxicant.
	COD Chemical Oxygen Demand.
	EC European Commission.
	EC50 Half maximal effective concentration.
	EH40 Resource containing the list of workplace exposure limits for us
	with the Control of Substances Hazardous to Health Regulations. EINECS European Inventory of Existing Commercial chemical
	Substances.
	ELINCS European List of Notified Chemical Substances.
	EU European Union.
	GHS Globally Harmonized System of Classification and Labelling of
	Chemicals.
	H Statement GHS Hazard statement.
	IATA International Air Transport Association.
	IBC Intermediate Bulk Container.
	IC50 Half maximal inhibitory concentration.
	IMDG International Maritime Dangerous Goods.
	LC50 Median lethal concentration.
	LD50 Median lethal dose.
	LogPow logarithm of the octanol/water partition coefficient.
	MARPOL 73/78 International Convention for the Prevention of
	Pollution From Ships, 1973 as modified by the Protocol of 1978.
	OEL Occupational Exposure Limit.
	OSHA Occupational Safety and Health Administration (USA).
	PBT Persistent, Bioaccumulative, and Toxic.
	PEL Permissible Exposure Limit. RID The Regulations concerning the International Carriage of
	Dangerous Goods by Rail.
	SADT Self-Accelerating Decomposition Temperature.
	SARA Superfund Amendments and Reauthorization Act.
	SCBA Self-Contained Breathing Apparatus.
	SDS Safety Data Sheet.
	STOT Specific Target Organ Toxicity.
	STOT-RE Specific Target Organ Toxicity - Repeated Exposure.
	STOT-SE Specific Target Organ Toxicity - Single Exposure.
	UN United Nations.
	USA United States of America.
	vPvB very Persistent very bioaccumulative.
6.1f Full text of hazard statements and/or precautionary	All statements were written out in full.
statements not written out in full elsewhere:	

representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

END OF SDS



SAFETY DATA SHEET (SDS) according to Regulation (EC) No. 830/2015 amending 1907/2006

1.1	on 1: Identification of the substance/mixture and of the Product identifier:	
		Hoechst 33342
1.1a	Other means of identification:	
1.1b	Alternative product name(s)/ synonyms:	Hoechst stain, HS
1.1c	Product number/Catalog #(s):	556, 639
1.1d	Internal identification:	Hoechst stain; HS
1.2	Relevant identified uses of the substance or	For research use only. Not for use in diagnostic procedures.
	mixture and uses advised against:	
1.2a	Brief description of what the substance or mixture is	Cell permeant blue fluorescent stain typically used to visualize the
	intended to do:	nuclei of cells.
1.3	Details of the supplier of the SDS:	
1.3a	Name:	ImmunoChemistry Technologies, LLC (ICT)
1.3b	Address:	9401 James Avenue South, Suite 155
1.3c	City, State, Zip, Country	Bloomington, MN 55431-2500 USA
1.3d	Phone number:	1-800-829-3194 and 952-888-8788
1.3e	Fax number:	952-888-8988
1.3f	Website:	www.immunochemistry.com
1.3g	Email:	help@immunochemistry.com
1.3h	Contact person at ICT:	Quality Documentation Department
1.4	Emergency telephone number:	ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide;
		ICT hours are 9 am-5 pm central time USA, Monday through Friday
		(excluding holidays). Chemtrec 24-hour access within USA and
		Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.
	n 2: Hazards identification	
2.1	Classification of the substance or mixture:	
2.1a	Product is a:	Mixture.
2.1b	Classification according to (EC) No. 1272/2008	Does not meet the criteria for classification.
	{CLP}:	
2.1c	The most important adverse physiochemical, human	Refer to Sections 9-12.
	health, and environmental effects:	
2.2	Label elements:	None.
2.2a	GHS label elements, including precautionary	
	statements:	
2.2b	Contains:	
2.2c	Labeling in accordance with (EC) No. 1272/2008:	
2.2d	Hazard Pictograms (Hazard Symbols):	None.
2.2e	Signal word:	None.
2.2f	Hazard statements:	None.
2.2g	Precautionary statements:	None.
2.2h	Supplementary precaution statements:	None.
2.3	Other hazards:	No additional information available.
2.3a	Does the chemical meet the criteria for PBT or vPvB?	Not applicable.
2.3b	Other hazards which do not result in classification:	Hoechst contains a low concentration of Bis benzimide H 33342
		trihydrochloride (CAS 23491-52-3) which is below the threshold for
		reporting. Hoechst is a suspected mutagen at high concentrations.
		Prolonged skin contact may cause redness and irritation. Because of
		the small quantity of product, the health hazard is small.
Cact!-	n 3. Composition/information on in andicut-	
	on 3: Composition/information on ingredients	Henrica maintains therefore Continue 2.4 is not smallest less
3.1	Substance:	Item is a mixture therefore Section 3.1 is not applicable; see Section
2 2	Mixtura	3.2.
3.2	Mixture:	Item is a mixture.
	The chemical identity and concentration or	
	concentration ranges of all ingredients which are	
	L paragraphic and are process above their cut off levels.	
	hazardous and are present above their cut-off levels:	No ingredients identified for remerting in this
	3.2a Chemical identity:	No ingredients identified for reporting in this section.
Socti-	3.2a Chemical identity:	No ingredients identified for reporting in this section.
	3.2a Chemical identity: on 4: First aid measures	
Sectio 4.1	3.2a Chemical identity:	No ingredients identified for reporting in this section. If concerned, get medical attention/advice and provide physician with SDS information. Wash contaminated clothing before re-use. Never

Hoechst 33342 SDS; Doc# F17-556-2-D; Effective: 05/12/2017; Supersedes: F17-556-2-C; Page 2 of 6

4.1a		
	Inhalation:	Remove to fresh air and keep at rest in a comfortable position for
		breathing. If not breathing, give artificial respiration. Rinse nose and
		mouth with water. Get medical attention if any discomfort continues.
4.41-	Older	
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes;
		continue to rinse for at least 15 minutes. Remove any contaminated
		clothing and shoes and wash thoroughly before reuse. Get medical
		attention if any discomfort continues.
4.1c	Typ contact:	
4.1C	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make
		sure to remove any contact lenses from the eyes before rinsing.
		Continue to rinse for at least 15 minutes. Get medical attention if any
		discomfort continues.
4.1d	Ingestion:	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK
4. IU	ingestion.	
		FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without
		advice from poison control center or medical professional. Get medical
		attention if any discomfort continues.
4.2	Most important symptoms and effects, both acute	Hoechst is a suspected mutagen at high concentrations. Prolonged
T	and delayed:	skin contact may cause redness and irritation. Because of the small
	and delayed.	
		quantity of product, the health hazard is small.
4.2a	Inhalation:	May cause coughing or mild irritation.
4.2b	Skin contact:	Prolonged skin contact may cause redness and mild irritation.
4.2c	Eye contact:	May cause temporary eye irritation.
4.2d	Ingestion:	May cause discomfort if swallowed.
4.3	Indication of any immediate medical attention and	No specific first aid measures noted, but first aid may still be required
	special treatment needed:	in case of accidental exposure, inhalation, or ingestion of this product.
	•	If in doubt, get medical attention promptly!
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal
+.3d	riotes to physician/ilist responder.	
		protective equipment.
Sectio	n 5: Firefighting measures	
5.1	Extinguishing media:	This product is not flammable. Use fire-extinguishing media
•••	=xiiigaioiiiig iiioalai	appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide.
5.1b	Unsuitable extinguishing media:	None known.
5.2	Special hazards arising from the substance or	This product is not flammable. Product is not explosive. No dangerous
	mixture:	reactions known under normal conditions of use.
F 20		None under normal conditions.
5.2a	Hazardous combustion products:	
5.2b	Unusual fire & explosion hazards:	No unusual fire or explosion hazards noted.
	Protective measures in fire:	Use protective equipment appropriate for surrounding materials.
5.2c		
	Advice for firefighters:	Keep away from heat, hot surfaces, sparks, open flames and other
5.2c 5.3	Advice for firefighters:	Keep away from heat, hot surfaces, sparks, open flames and other
5.3		ignition sources. No smoking.
5.3 5.3a	Special firefighting procedures:	ignition sources. No smoking. No specific firefighting procedure given.
5.3	Special firefighting procedures: Special protective equipment and precautions for	ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing
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5.3a 5.3b 5.3b Sectio 6.1 6.1a 6.1c	Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions:	ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses.
5.3a 5.3b Sectio 6.1 6.1a 6.1c	Special firefighting procedures: Special protective equipment and precautions for firefighters: on 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions: Methods and materials for containment and	ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses. Contain any spills with dikes or absorbent materials to prevent
5.3a 5.3b 5.3b Sectio 6.1 6.1a 6.1c	Special firefighting procedures: Special protective equipment and precautions for firefighters: n 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures: Advice for emergency responders; personal precautions, protective equipment and emergency procedures: Environmental precautions:	ignition sources. No smoking. No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8). No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned. Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Do not allow to enter drains, sewers, or watercourses.

Hoechst 33342 SDS; Doc# F17-556-2-D; Effective: 05/12/2017; Supersedes: F17-556-2-C; Page 3 of 6 Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapor. Reference to other sections: Refer to Sections 8 and 13 for additional information. 6.4 Section 7: Handling and storage Do not handle until all safety precautions have been read and 7.1 Precautions for safe handling: understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition. 7.1a Prevent handling of incompatible substances or Avoid contact with strong acids and strong oxidizers. mixtures: 7.1b Do not eat, drink, or smoke in work areas. Wash hands after use. Advice on general occupational hygiene: Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices. 7.2 Conditions for safe storage, including any Refer to product label. Store in cool place. Keep container tightly incompatibilities: closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid spills and release into the environment; keep away from watercourses. 7.3 Specific end use(s): For research use only. Not for use in diagnostic procedures. Section 8: Exposure controls/personal protection Control parameters: 8.1 8.1a Occupational exposure limits, such as chemical Not available. identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin. 8.1b Appropriate engineering controls: 8.1c Individual protection measures, such as personal Wear gloves, protective goggles, and lab coat. protective equipment: 8.1d Safety symbols: 8.2 **Exposure controls:** 8.2a Process conditions: Provide eyewash station. 8.2b Engineering controls: Ensure that eyewash stations and safety showers are proximal to the workstation location. Ventilation controls: Provide adequate ventilation. 8.2c 8.2d Reference to other sections: Refer to Section 5 for additional information. Wear approved chemical safety goggles where eye exposure is 8.2e Eye/face protection: reasonably probable or face shield if risk of splashing. 8.2f Skin protection: Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 8.2g Hand protection: 8.2h Respiratory equipment: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 8.2i Wear appropriate clothing to avoid skin contact. Other protection: 8.2j DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift Hygiene measures: and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated 8.2k None known under normal conditions of use. Thermal hazards: 8.21 Environmental exposure controls: Not determined. Section 9: Physical and chemical properties 9.1 Information on basic physical and chemical

Liquid; clear light yellow.

No characteristic odor.

Not determined.

properties:

Odor threshold:

Odor:

Appearance (physical state, color, etc.):

9.1a

9.1b

9.1c

Hoechst 33342 SDS; Doc# F17-556-2-D; Effective: 05/12/2017; Supersedes: F17-556-2-C; Page 4 of 6

		1ve: 05/12/2017; Supersedes: F17-350-2-C; Page 4 01 6
9.1d	pH:	3.0-5.0
9.1e	Melting point/freezing point (°C):	Not determined.
9.1f	Initial boiling point and boiling range:	<100°C @ 760 mm Hg.
9.1g	Flash point (°C):	Not applicable.
9.1h	Evaporation rate:	Not determined.
9.1i	Flammability (solid, gas):	Not applicable.
9.1j	Upper/lower flammability or explosive limits:	Not applicable.
9.1k	Vapor pressure:	Not determined.
9.11	Vapor density (Air =1):	Not determined.
	Relative density:	
9.1m		Not determined.
9.1n	Solubility(ies):	Soluble in water.
9.10	Partition coefficient (N-octanol/water):	Not determined.
9.1p	Auto-ignition temperature (°C):	Not determined.
9.1q	Decomposition temperature (°C):	Not determined.
9.1r	Viscosity:	Not determined.
9.1s	Explosive properties:	Not determined.
9.1t	Oxidizing properties:	Not determined.
9.2	Other information:	None.
9.2a	Other physical or chemical parameters:	None.
3.2a	Other physical of chemical parameters.	None.
	40.00 1 1111	
	10: Stability and reactivity	
10.1	Reactivity:	No data available.
10.2	Chemical stability:	Stable under normal temperature conditions.
10.3	Possibility of hazardous reactions:	Hazardous polymerization: will not polymerize.
	Conditions to avoid:	
10.4	Conditions to avoid:	To avoid product degradation, avoid exposure to high temperatures or
		direct sunlight or light.
10.5	Incompatible materials:	Strong oxidizing substances.
10.6	Hazardous decomposition products:	None under normal conditions.
.0.0	Tidada do do composition productor	Trene and trental conditions.
0	AA. Taulada dada listama (las	
	11: Toxicological information	
11.1	Information on toxicological effects:	•
11.1a	Name:	Hoechst 33342
11.1b	Acute toxicity:	Not determined.
11.1c	Skin corrosion/irritation:	Not determined.
11.1d	Serious eye damage/irritation:	Not determined.
11.1e	Respiratory or skin sensitization:	Not determined.
11.1f	Germ cell mutagenicity:	Toxicological studies are not yet available. In vitro DNA repair and
		inhibition tests suggest mutagenic effects in mouse fibroblasts and
		hamster lung cells. Knowledge about health hazard is incomplete.
11.1g	Carcinogenicity:	Not determined.
11.1h	Reproductive toxicity:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1j	STOT-repeated exposure:	Not determined.
_		
11.1k	Aspiration hazard:	Not determined.
11.11	Information on the likely routes of exposure	
		May enter by skin and/or eye contact; inhalation of vapors/mist/dust.
		May enter by skin and/or eye contact; inhalation of vapors/mist/dust.
11 1m	(inhalation, ingestion, skin and eye contact):	
11.1m	(inhalation, ingestion, skin and eye contact): Ingestion:	May cause discomfort if swallowed.
11.1m 11.1n	(inhalation, ingestion, skin and eye contact):	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory
11.1n	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing.
	(inhalation, ingestion, skin and eye contact): Ingestion:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin.
11.1n 11.1o	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin.
11.1n 11.1o 11.1p	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting.
11.1n 11.1o	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin.
11.1n 11.10 11.1p 11.1q	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted.
11.1n 11.1o 11.1p	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting.
11.1n 11.10 11.1p 11.1q	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted.
11.1n 11.10 11.1p 11.1q	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined.
11.1n 11.10 11.1p 11.1q	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted.
11.1n 11.1o 11.1p 11.1q 11.1r 11.1s	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates):	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined.
11.1n 11.1o 11.1p 11.1q 11.1r 11.1s	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined.
11.1n 11.1o 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable.
11.1n 11.1o 11.1p 11.1q 11.1r 11.1s	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined.
11.1n 11.1o 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable. Item is a mixture.
11.1n 11.1o 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture.
11.1n 11.1o 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP):	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture. Not classified.
11.1n 11.1o 11.1p 11.1q 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture.
11.1n 11.1o 11.1p 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x 11.1y	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC):	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture. Not classified.
11.1n 11.1o 11.1p 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x 11.1y	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC):	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture. Not classified.
11.1n 11.1o 11.1p 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x 11.1y 11.1z	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture. Not classified. Not classified.
11.1n 11.1o 11.1p 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x 11.1y	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC):	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture. Not classified. Not classified. Not classified. Not classified. Hoechst is a suspected mutagen at high concentrations. Prolonged skin
11.1n 11.1o 11.1p 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x 11.1y 11.1z	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Prolonged skin contact may cause redness and irritation. Because of the small quantity
11.1n 11.1o 11.1p 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x 11.1y 11.1z	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture. Not classified. Not classified. Not classified. Not classified. Hoechst is a suspected mutagen at high concentrations. Prolonged skin
11.1n 11.1o 11.1p 11.1r 11.1s 11.1t 11.1u 11.1v 11.1w 11.1x 11.1y 11.1z	(inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics: Delayed and immediate effects as well as chronic effects from short and long term exposure: Numerical measures of toxicity (such as acute toxicity estimates): Interactive effects: Absence of specific data: Mixtures: Mixture vs. substance information: Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin. Spray and vapor in the eyes may cause irritation and smarting. No specific symptoms noted. Not determined. Not determined. Not applicable. Item is a mixture. See Section 3 for any substances in the mixture. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Prolonged skin contact may cause redness and irritation. Because of the small quantity

Hoechst 33342 SDS; Doc# F17-556-2-D; Effective: 05/12/2017; Supersedes: F17-556-2-C; Page 5 of 6

Section	n 12: Ecological information	
12.1	Toxicity:	
12.1a	Name:	Hoechst 33342.
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	Not determined.
12.2	Persistence and degradability:	There are no data on the degradability of this product.
12.3	Bioaccumulative potential:	No data available on bioaccumulation.
12.4	Mobility in soil:	The product is soluble in water.
12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	No data available.
	40.51	
	13: Disposal considerations	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
13.1	Waste treatment methods:	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
13.1a	Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.
Section	14: Transport information	
14.1	n 14: Transport information UN number:	Not applicable.
14.1	UN proper shipping name:	Not applicable.
14.3	Transport hazard class(es):	Not applicable.
14.4	Packing group:	Not applicable.
14.5	Environmental hazards:	
14.5a	Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?:	The product is not covered by these regulations.
14.5b	Is it a marine pollutant according to the IMDG code?:	No.
14.6	Special precautions for user:	None known.
14.7	Transport in bulk according to Annex II of MARPOL and the IBC code:	Not applicable.
14.7a	Other information:	The product is not considered a dangerous good for transport.
14.7b	Classification for other modes of transport:	Contact supplier.
	15: Regulatory information	
15.1		
	Safety, health and environmental regulations/legislation specific for the substance or mixture:	
15.1a	regulations/legislation specific for the substance or mixture: Regional safety, health and environmental	
15.1a	regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question:	. Not listed.
	regulations/legislation specific for the substance or mixture: Regional safety, health and environmental	. Not listed. Not listed.
15.1a	regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know:	
15.1a 15.1b 15.1c 15.1d 15.1e	regulations/legislation specific for the substance or mixture: Regional safety, health and environmental regulations specific for the product in question: USA SARA Components (such as 302/311/313): USA Massachusetts Right to Know: USA Pennsylvania Right to Know: USA New Jersey Right to Know:	Not listed. Not listed. Not listed.
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Hoechst 33342 SDS; Doc# F17-556-2-D; Effective: 05/12/2017; Supersedes: F17-556-2-C; Page 6 of 6 Reviewed and updated document control numbers. 16.1d Changes made to the previous version of the SDS: 16.1e Key/legend to abbreviations and acronyms used in ACGIH American Conference of Governmental Industrial Hygienists. ADN European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway. ADR The European Agreement concerning the International Carriage of Dangerous Goods by Road. ATE Acute Toxicity Estimate. BCF Bio Concentration Factor. CAS Chemical Abstracts Service. CLP Classification, Labelling and Packaging. CMR Carcinogen, Mutagen or Reproductive toxicant. COD Chemical Oxygen Demand. EC European Commission. EC50 Half maximal effective concentration. EH40 Resource containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations. EINECS European Inventory of Existing Commercial chemical Substances. ELINCS European List of Notified Chemical Substances. EU European Union. GHS Globally Harmonized System of Classification and Labelling of Chemicals. H Statement GHS Hazard statement. IATA International Air Transport Association. IBC Intermediate Bulk Container. IC50 Half maximal inhibitory concentration. IMDG International Maritime Dangerous Goods. LC50 Median lethal concentration. LD50 Median lethal dose. LogPow logarithm of the octanol/water partition coefficient. MARPOL 73/78 International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. OEL Occupational Exposure Limit. OSHA Occupational Safety and Health Administration (USA). PBT Persistent, Bioaccumulative, and Toxic. PEL Permissible Exposure Limit. RID The Regulations concerning the International Carriage of Dangerous Goods by Rail. SADT Self-Accelerating Decomposition Temperature. SARA Superfund Amendments and Reauthorization Act. SCBA Self-Contained Breathing Apparatus. SDS Safety Data Sheet. STOT Specific Target Organ Toxicity. STOT-RE Specific Target Organ Toxicity - Repeated Exposure.

16.1f Full text of hazard statements and/or precautionary statements not written out in full elsewhere:

All statements were written out in full.

vPvB very Persistent very bioaccumulative.

USA United States of America.

STOT-SE Specific Target Organ Toxicity - Single Exposure.

DISCLAIMER:

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

UN United Nations.

END OF SDS