

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

1.1	Product identifier:	FAM-LETD-FMK
1.1a	Other means of identification:	
1.1b	Alternative product name(s)/ synonyr	s: FAM-LETD-FLICA, Caspase-8 Inhibitor Reagent; a carboxyfluoresce
1.10	Alternative product name(s)/ synonyr	derivative of leucinylglutamylthreonylaspartic acid fluoromethyl keton
1.1c	Product number/Catalog #(s):	656, 6167
1.1d	Internal identification:	000, 0101
1.2	Relevant identified uses of the substance of	For research use only. Not for use in diagnostic procedures.
	mixture and uses advised against:	To recount add only. Not for add in alagheous procedures.
1.2a	Brief description of what the substance or mixtu	e is Caspase enzyme inhibitor and apoptosis detection reagent.
	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
Caatia	on 2: Hazards identification	
2.1	Classification of the substance or mixture:	
2.1 2.1a	Product is a:	Substance.
2.1a 2.1b	Classification according to (EC) No. 1272/2008	Does not meet the criteria for classification.
2.10	{CLP}:	Does not meet the chiena for classification.
2.1c	The most important adverse physiochemical, h	man Refer to Sections 9-12.
	health, and environmental effects:	Train to design of 12.
2.2	Label elements:	None.
2.2a	GHS label elements, including precautionary	None.
	statements:	
2.2b	Contains:	None.
2.2c	Labeling in accordance with (EC) No. 1272/200	
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	
2.3b	Other hazards which do not result in classificat	n: No information available.
	on 3: Composition/information on ingredients	Itana ia a subatanas
3.1	Substance:	Item is a substance.
	3.1a Chemical identity:	FAM-LETD-FMK
	3.1b Common name, synonyms, etc.:	None.
	3.1c CAS number and other unique identifiers: 3.1d EC numb	<u>3.1e %</u> 3.1f Classification according to (EC) No. <u>Concentration:</u> 1272/2008 {CLP}:
	other unique identifiers: 3.1d EC numb None. None.	<u>r: Concentration: 1272/2008 {CLP}:</u> 100% Not classified.
	inone.	100% Not dassilled.
3.1g	Chemical identity of any impurity, stabilizing ad	itive. None known.
J. 19	or individual constituent other than the main	HIVO, HOUTE MIOWIT.
	constituent, which is itself classified and which	
	contributes to the classification (such as produc	
	identifier, trade name, identification numbers):	
3.1h	Other information on the substance:	None.
	Sans. Information on the education.	

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Description of first aid measures: Inhalation: Skin contact: Eye contact: Ingestion: Most important symptoms and effects, both acute and delayed:	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. Due to the small packaging the risk of inhalation is minimal. 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. 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. 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. 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.
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	attention if any discomfort continues.
and delayed:	
Inhalation:	None known.
Skin contact:	None known.
Eye contact:	None known.
Ingestion:	None known. No additional information available.
	THO AGGILIOTTIA II ITOTTIA II OTTA AVAIIANIC.
•	Treat symptomatically. Refer to Sections 5-8 for advice on personal
Trotos to priyotolari mot responder.	protective equipment.
5: Firefighting measures	
	Use fire-extinguishing media appropriate for the surrounding materials.
	Water spray, foam, dry powder, or carbon dioxide.
	None known.
	Product is not explosive. No dangerous reactions known under normal
	conditions of use.
Hazardous combustion products:	In case of fire, toxic gases may be formed of carbon monoxide (CO),
Unusual fire & explosion bazards:	carbon dioxide (CO ₂ ; CO _x). None under normal conditions. No unusual fire or explosion hazards noted.
	Use protective equipment appropriate for surrounding materials.
	No specific firefighting procedure given.
	Wear full protective clothing, including self-contained breathing
firefighters:	apparatus, if necessary. The product presents no special fire hazards
	in normal use.
6: Accidental release measures	
	Use protective equipment appropriate for surrounding materials.
	No appoint a margapay managers are required of a state of the state of
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).
Advice for non-emergency personnel: personal	No specific emergency measures are required other than good
	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.
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: Environmental precautions:	emergency (also refer to Section 8).
Environmental precautions:	Do not allow to enter drains, sewers, or watercourses. Contain any spills with dikes or absorbent materials to prevent
	Ournain any opino with times of absorbent materials to prevent
Methods and materials for containment and clean up:	migration and entry into sewers or water sources. Place in a suitable
	Extinguishing media: Suitable extinguishing media: Unsuitable extinguishing media: 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: 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

FAM-LETD-FMK SDS; Doc# F17-637-6-F; Effective: 01/06/2020; Supersedes: F17-637-6-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 Refer to Sections 8 and 13 for additional information. Reference to other sections: 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.

Not determined.

Not determined.

9.1c

9.1d

Odor threshold:

pH:

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9.1e	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 procedure: 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.
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.
Section	n 10: Stability and reactivity	
	Posstivity	No doto available
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
		direct sunlight or light.
40.5	La a a constituta con esta esta esta esta esta esta esta esta	
10.5	Incompatible materials:	No data available.
10.6	Hazardous decomposition products:	None under normal conditions.
Section	n 11: Toxicological information	
11.1	Information on toxicological effects:	
11.1a	Name:	FAM-LETD-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	1101 0010111111001
11.11		•
	(inhalation, ingestion, skin and eye contact):	
11.1m	Ingestion:	None known.
11.1n	Inhalation:	None known.
11.10	Skin contact:	None known.
11.1p	Eye contact:	None known.
11.1q	Symptoms related to the physical, chemical and	No specific symptoms noted.
	toxicological characteristics:	
11.1r	Delayed and immediate effects as well as chronic	Not determined.
	effects from short and long term exposure:	
44.4		Mat data made and
11.1s	Numerical measures of toxicity (such as acute	Not determined.
	toxicity estimates):	
11.1t	Interactive effects:	Not determined.
11.1u	Absence of specific data:	Not applicable.
11.1u		
	Mixtures:	Not applicable.
11.1w	Mixture vs. substance information:	Not applicable.
11.1x	O	Not classified.
	Classification by National Toxicity Program (NTP):	
11 11/	Classification by National Toxicity Program (NTP):	
11.1y	Classification by International Agency for Research	Not classified.
	Classification by International Agency for Research on Cancer (IARC):	Not classified.
11.1z	Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13:	Not classified. Not classified.
	Classification by International Agency for Research on Cancer (IARC):	Not classified.
11.1z	Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13:	Not classified. Not classified.
11.1z 11.1ab	Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information:	Not classified. Not classified.
11.1z 11.1ab	Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information:	Not classified. Not classified.
11.1z 11.1ab Section 12.1	Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information: 12: Ecological information Toxicity:	Not classified. Not classified. None.
11.1z 11.1ab	Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information:	Not classified. Not classified.
11.1z 11.1ab Section 12.1 12.1a	Classification by International Agency for Research on Cancer (IARC): Classification by OSHA 13: Other information: 12: Ecological information Toxicity: Name:	Not classified. Not classified. None. . FAM-LETD-FMK.
11.1z 11.1ab Section 12.1 12.1a 12.1b	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):	Not classified. Not classified. None. . FAM-LETD-FMK. Not determined.
11.1z 11.1ab Section 12.1 12.1a 12.1b 12.2	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:	Not classified. Not classified. None. FAM-LETD-FMK. Not determined. There are no data on the degradability of this product.
11.1z 11.1ab Section 12.1 12.1a 12.1b 12.2 12.3	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:	Not classified. None. FAM-LETD-FMK. Not determined. There are no data on the degradability of this product. No data available on bioaccumulation.
11.1z 11.1ab Section 12.1 12.1a 12.1b 12.2	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:	Not classified. None. FAM-LETD-FMK. Not determined. There are no data on the degradability of this product.

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12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	No data available.
Section	12. Disposal considerations	
13.1	n 13: Disposal considerations Waste treatment methods:	When handling waste, consideration should be made to the safety
1011	Tradio il dallioni moniono	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.
	, personaging	(
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:	. No.
14.5a	Is it environmentally dangerous according to UN	No.
	Model Regulations (IMDG Code, ADR, RID, and ADN)?:	
14.5b	Is it a marine pollutant according to the IMDG	No.
17.50	code?:	IVO.
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.
	45.5	
	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.
15.14	regulations specific for the product in question:	None known.
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}:	
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
		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
45.0	Chamical asisty assessment	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
		2015.
Section	n 16: Other information	
16.1	Other information:	
16.1a	Date of revision:	01/06/2020
16.1b	SDS number and revision:	F17-637-6-F
	Supersedes SDS number and revision:	F17-637-6-E
16.1c		
	Changes made to the previous version of the SDS:	Reviewed and updated information; updates for Health Canada;
16.1c 16.1d	Changes made to the previous version of the SDS:	updated document control numbers.
16.1c	Changes made to the previous version of the SDS: Key/legend to abbreviations and acronyms used in	updated document control numbers. ACGIH American Conference of Governmental Industrial Hygienists.
16.1c 16.1d	Changes made to the previous version of the SDS:	updated document control numbers. ACGIH American Conference of Governmental Industrial Hygienists. ADN European Provisions concerning the International Carriage of
16.1c 16.1d	Changes made to the previous version of the SDS: Key/legend to abbreviations and acronyms used in	updated document control numbers. ACGIH American Conference of Governmental Industrial Hygienists. ADN European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway.
16.1c 16.1d	Changes made to the previous version of the SDS: Key/legend to abbreviations and acronyms used in	updated document control numbers. ACGIH American Conference of Governmental Industrial Hygienists. ADN European Provisions concerning the International Carriage of

	EAM LETD EMV SDS, Doo# E47 527 6 E. E#o	otivo: 04/06/2020; Supercodes: E47 627 6 E. Bogo 6 of 6
	<u>FAM-LETD-FMK SDS; DOC# F17-637-6-F; Επε</u>	ctive: 01/06/2020; Supersedes: F17-637-6-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.
10.11	statements not written out in full elsewhere:	All statements were written out in full.
DISCLA		fic material designated and may not be valid for such material used
		r in any process. Such information is, to the best of the company's
		le as of the date indicated. However, no warranty guarantee or
	representation is made to its accuracy, re	liability, or completeness. It is the user's responsibility to satisfy

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

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
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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	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 Section 6.1	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	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
5.2b 5.2c 5.3 5.3a 5.3b Section 6.1	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	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.
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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.	

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12.1	Toxicity:	•
	12: Ecological information	
0- ::	40. Facilitation of	
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	Interactive effects: Absence of specific data:	Not determined. Not applicable.
11 1+	toxicity estimates):	Not determined
11.1s	Numerical measures of toxicity (such as acute	Not determined.
11.11	effects from short and long term exposure:	Not 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
. 5.7	Constitution to dividing	direct sunlight or light.
10.3	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.
9.11 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.
9.1k 9.1l	Vapor density (Air =1):	Not determined.
9.1j 9.1k	Vapor pressure:	Not determined.
9.1i 9.1j	Flammability (solid, gas): Upper/lower flammability or explosive limits:	Not applicable. Not applicable.
9.1h	Evaporation rate:	Not determined.
9.1g	Flash point (°C):	Not applicable.
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:	C; Effective: 5/19/17; Supersedes: F17-535-2-B; Page 4 of 6

	10X Apoptosis Wash Buffer SDS; Doc# F17-535-2-0	5; 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
10.1	Waste treatment methods.	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.
447	The man and the brother and a multiple to American H. of	NI de la companya de
14.7	Transport in bulk according to Annex II of MARPOL and the IBC code:	Not applicable.
14.7 14.7a	MARPOL and the IBC code: Other information:	The product is not considered a dangerous good for transport.
	MARPOL and the IBC code:	
14.7a	MARPOL and the IBC code: Other information:	The product is not considered a dangerous good for transport.
14.7a 14.7b	MARPOL and the IBC code: Other information: Classification for other modes of transport: 15: Regulatory information	The product is not considered a dangerous good for transport.
14.7a 14.7b	MARPOL and the IBC code: Other information: Classification for other modes of transport:	The product is not considered a dangerous good for transport.
14.7a 14.7b	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	The product is not considered a dangerous good for transport.
14.7a 14.7b Section 15.1	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:	The product is not considered a dangerous good for transport. Contact supplier.
14.7a 14.7b Section 15.1 15.1a	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):	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	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:	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	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:	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 15.1d	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:	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	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:	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	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}:	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	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:	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	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}:	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 15.1i 15.1i 15.1i 15.1k	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:	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. 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 15.1g 15.1h 15.1i 15.1i 15.1k 15.1l	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:	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. Not required.
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 15.1i 15.1i 15.1k	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:	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. 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.

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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	n 1: Identification of the substance/mixtu Product identifier:		Fixative
1.1a	Other means of identification:		
1.1b	Product number/Catalog #(s):		Fixative, Fix
1.1c			536, 636
1.1d			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	The most important adverse physiochemical, human health, and environmental effects: Label elements:	H312 Acute H315 Skin Ir H319 Eye Irr H317 Skin so H341 Germ H350 Carcin H371 Specif H335 Specif	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	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:	H227 Combu H302 Harmfu H312 Harmfu H319 Cause H315 Cause H317 May ca H350 May ca H341 Suspe H371 May ca	cted of causing genetic defects. ause damage to organs.
2.2g	Precautionary statements:	H335 May cause respiratory irritation. P201 Obtain special instructions before use. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physicial you feel unwell. Rinse mouth.	

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	<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.		oreathing mist/vapors	
					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.	INOU KITOWIT.	
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	mgesuon.				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 s s s s s s s s s s s s s s s s s s
4.2a	Inhalation:			May cause respirat	tory irritation.
	t .				-

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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
7.1a	Prevent handling of incompatible substances or mixtures:	ignition. 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.

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		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

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		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
,	7,5	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.
	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 9.1c	Odor: Odor threshold:	Pungent Not determined.
9.1d	pH:	6.8-7.4
9.1e	Melting point/freezing point (°C):	Not determined.
9.1f	Initial boiling point and boiling range:	Not determined.
9.1g	Flash point (°C):	85°C estimated value based on supplier data.
9.1h 9.1i	Evaporation rate: Flammability (solid, gas):	Not determined. Not determined.
9.1j	Upper/lower flammability or explosive limits:	Upper: 70%(V) estimated value.
o,	opposition in animal and or	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 9.1n	Relative density: Solubility(ies):	Not determined.
9.10	Partition coefficient (N-octanol/water):	Readily miscible in water. Not determined.
9.10 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 9.2	Oxidizing properties: Other information:	Not determined. None.
9.2a	Other physical or chemical parameters:	None.
	10: Stability and reactivity	110.10.
10.1	Reactivity:	Strong acids. Strong oxidizing substances.
10.2	Chemical stability:	Stable under normal temperature conditions.
10.3	Possibility of hazardous reactions:	Not determined.
10.4	Conditions to avoid:	Heat, flames, and sparks. Avoid exposure to high temperatures or direct sunlight.
10.5	Incompatible materials:	Strong bases, strong acids, strong oxidizing agents, alkali metals, amines, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates,
10.6	Hazardous decomposition products:	phenol, aniline. None under normal conditions. High temperatures generate:
		Vapors/gases/fumes of: Formaldehyde.
Section	11: Toxicological information	
11.1	Information on toxicological effects:	
11.1a	Name:	
11.1b	Acute toxicity:	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.
11.1c	Skin corrosion/irritation:	Formaldehyde: Not determined. Methanol: Not determined.
11.1d	Serious eye damage/irritation:	Formaldehyde: Not determined. Methanol: Not determined.
11.1e 11.1f	Respiratory or skin sensitization: Germ cell mutagenicity:	Formaldehyde: Not determined. Methanol: Not determined. Formaldehyde: Not determined. Methanol: Not determined.
11.11g	Carcinogenicity:	Formaldehyde:
9	Sa. Sinogoniony.	IARC: 1 - Group 1: Carcinogenic to humans.
		NTP - Known to be a human Carcinogen.
		NIOSH - List of Known Carcinogens.

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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.
	toxicological characteristics:	
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.
4.4.4.	estimates):	No. Let .
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	
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 14.5 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.
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12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b 14.6 14.7 14.7a 14.7b Section 15.1	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: 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:	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. Contact supplier.
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 mixture: Regional safety, health and environmental regulations	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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15.1g	EU Regulation 1907/2006 {REA		ve: 5/12/17; Supersedes: F17-536-2-C; Page 7 of 8
15.1g 15.1h	Annex XIV substances subject to authorization:		Formaldehyde is listed.
15.1i	Substances of very high concern		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.
15.2 15.2a	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	
40.4.	revision:	Davidson of the Co.	ad design of sector and a secto
16.1d	Changes made to the previous		ed document control numbers. Minor changes were made (corrected typos,
16.1e	version of the SDS: Key/legend to abbreviations	deleted redundant inf	ormation, etc.). nference of Governmental Industrial Hygienists.
10.16	and acronyms used in the		nterence of Governmental Industrial Hyglenists. sions concerning the International Carriage of Dangerous Goods by Inland
	SDS:	Waterway.	olono concerning the international ournage of Bangorous Goods by interna
			Agreement concerning the International Carriage of Dangerous Goods by
		Road.	
		ATE Acute Toxicity E	
		BCF Bio Concentration	
		CAS Chemical Abstra	
			abelling and Packaging.
			utagen or Reproductive toxicant.
	COD Chemical Oxy EC European Comn		
			ffective concentration.
			aining the list of workplace exposure limits for use with the Control of
		Substances Hazardo	us to Health Regulations.
			ventory of Existing Commercial chemical Substances.
			st of Notified Chemical Substances.
		EU European Union.	nized System of Classification and Labelling of Chemicals.
		H Statement GHS Ha	
			Transport Association.
		IBC Intermediate Bull	· •
			hibitory concentration.
		IMDG International M	laritime Dangerous Goods.
		LC50 Median lethal c	
		LD50 Median lethal d	
			the octanol/water partition coefficient. national Convention for the Prevention of Pollution From Ships, 1973 as
		modified by the Proto	
		OEL Occupational Ex	
			Safety and Health Administration (USA).
		PBT Persistent, Bioac	ccumulative, and Toxic.
		PEL Permissible Exp	
		RID The Regulations	concerning the International Carriage of Dangerous Goods by Rail.
			ng Decomposition Temperature.
			endments and Reauthorization Act. Bereathing Apparatus.
		SDS Safety Data She	
		STOT Specific Targe	t Organ Toxicity.
			arget Organ Toxicity - Repeated Exposure.
			arget Organ Toxicity - Single Exposure.
		UN United Nations.	
		USA United States of	America.
			very bioaccumulative.
16.1f	Full text of hazard statements	All statements were v	vritten out in full.
	and/or precautionary		
	statements not written out in		
full elsewhere:			

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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

	n 1: Identification of the substance/mixture and of the		
1.1	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.	
	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 {CLP}:	Does not meet the criteria for classification.	
2.1c	The most important adverse physiochemical, human health, and environmental effects:	Refer to Sections 9-12.	
2.2	Label elements:	None.	
2.2a	GHS label elements, including precautionary statements:		
2.2b	Contains:	None	
2.2c 2.2d	Labeling in accordance with (EC) No. 1272/2008: Hazard Pictograms (Hazard Symbols):	None.	
2.2u 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:	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.	
	n 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 ingradiants identified for reporting in this section	
	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 give anything by mouth to an unconscious person.	

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4.1a		tive: 05/12/2017; Supersedes: F17-557-2-C; Page 2 of 6
	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	Skiii 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.
4.2	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.
	oposia. Goddinont noodod.	If in doubt, get medical attention promptly!
	No. of the second secon	
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:	This product is not flammable. Use fire-extinguishing media
J. 1	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	This product is not flammable. Product is not explosive. No dangerous
·-	mixture:	reactions known under normal conditions of use.
- O-		
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.
5.3	Advice for firefighters:	Keep away from heat, hot surfaces, sparks, open flames and other
	/ turner for monginerer	ignition sources. No smoking.
5.5		
	0 16 616	
5.3a	Special firefighting procedures:	No specific firefighting procedure given.
	Special protective equipment and precautions for	No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing
5.3a	Special protective equipment and precautions for	No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing
5.3a	Special firefighting procedures: Special protective equipment and precautions for firefighters:	No specific firefighting procedure given. Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards
5.3a	Special protective equipment and precautions for	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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5.3a 5.3b	Special protective equipment and precautions for firefighters:	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
5.3a 5.3b	Special protective equipment and precautions for firefighters: on 6: Accidental release measures	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.
5.3a 5.3b	Special protective equipment and precautions for firefighters:	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.
5.3a 5.3b	Special protective equipment and precautions for firefighters: on 6: Accidental release measures	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
5.3a 5.3b Section 6.1	Special protective equipment and precautions for firefighters: on 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures:	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.
5.3a 5.3b	Special protective equipment and precautions for firefighters: on 6: Accidental release measures Personal precautions, protective equipment, and	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
5.3a 5.3b Section 6.1	Special protective equipment and precautions for firefighters: on 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures:	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
5.3a 5.3b Section 6.1	Special protective equipment and precautions for firefighters: on 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures:	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
5.3a 5.3b Section 6.1	Special protective equipment and precautions for firefighters: on 6: Accidental release measures Personal precautions, protective equipment, and emergency procedures: General release measures:	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).
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5.3a 5.3b Sectio 6.1	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	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
5.3a 5.3b Sectio 6.1	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	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
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5.3a 5.3b Sectio 6.1 6.1a 6.1c	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:	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	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	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 Sectio 6.1 6.1a 6.1c	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:	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		4.5-6.5
	pH:	
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	Other physical or chemical parameters:	None.
0.24	Garlor priyologi or orionilogi paramotoro:	1101101
	10: Stability and reactivity	
10.1	Reactivity:	No data available.
10.2	Chemical stability:	Stable under normal temperature conditions.
	Descibility of homes down reactions	
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
		direct sunlight or light.
10.5	Incompatible meterials:	
	Incompatible materials:	Strong oxidizing substances.
10.6	Hazardous decomposition products:	None under normal conditions.
Soction	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
		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:	
11.1r	Delayed and immediate effects as well as chronic	Not determined.
11.11		Not dotominou.
	effects from short and long term exposure:	
11.1s	Numerical measures of toxicity (such as acute	Not determined.
	toxicity estimates):	
44.41		Net determined
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.
y		
	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.
Section	12: Ecological information	
12.1	Toxicity:	·
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 1 .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.
. Ju		
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 Sectio 6.1	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	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
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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:	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).
5.3a 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

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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.Za	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

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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.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f	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 listed. Not listed.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g	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 listed. Not listed. Not listed. Not listed
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h	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 listed. Not listed. Not listed. Not listed Not listed Not listed.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i	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:	Not listed. Not listed. Not listed. Not listed. Not listed. Not listed. Not listed. Not listed.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i 15.1j	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 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.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i 15.1i 15.1s 15.1k	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 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. Not required.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i 15.1j	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 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.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i 15.1i 15.1s 15.1s 15.2 15.2a Section	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: Chemical safety assessment: Other regulatory information:	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. Not required.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i 15.1i 15.1s 15.1k 15.1l	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: Chemical safety assessment: Other regulatory information:	Not 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. Not required.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i 15.1i 15.1i 15.2 15.2a Section 16.1 16.1a	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: 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: Chemical safety assessment: Other regulatory information: 16: Other information: Date of revision:	Not 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. Not required. None.
15.1a 15.1b 15.1c 15.1d 15.1e 15.1f 15.1g 15.1h 15.1i 15.1i 15.1s 15.1k 15.1l	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: Chemical safety assessment: Other regulatory information:	Not 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. Not required.

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