

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

1.1	Product identifier:	the company/underta	uorescein diacetate N-succinimidyl
•••			uoresceni diacetate 74-succinimidyi
		ester	
1.1a	Other means of identification:		
1.1b	Alternative product name(s)/ synonyms:	CFSE; CFDA-SE.	
1.1c	Product number/Catalog #(s):	6162	
1.1d	Internal identification:		scein diacetate N-succinimidyl ester; CFSE
1.2	Relevant identified uses of the substance or mixture and uses advised against:		nly. Not for use in diagnostic procedures.
1.2a	Brief description of what the substance or mixture is intended to do:	Cell permeant gree intracellular molecu	en fluorogenic reagent that covalently couples to ules.
1.3	Details of the supplier of the SDS:		
1.3a	Name:		Technologies, LLC (ICT)
1.3b	Address:		ue South, Suite 155
1.3c	City, State, Zip, Country	Bloomington, MN 5	
1.3d	Phone number:	1-800-829-3194 ar	nd 952-888-8788
1.3e	Fax number:	952-888-8988	
1.3f	Website:	www.immunochem	
1.3g	Email:	help@immunocher	
1.3h	Contact person at ICT:	Quality Documenta	
1.4	Emergency telephone number:		94 (USA & Canada) or 952-888-8788 world wide;
			n-5 pm central time USA, Monday through Friday
			s). Chemtrec 24-hour access within USA and 4-9300 or +1 703-527-3887. Collect calls accepted
		Canada: 1-800-424	1-9300 or +1 703-527-3887. Collect calls accepted
Section	on 2: Hazards identification		
2.1	Classification of the substance or mixture:		
2.1a	Product is a:	Substance.	
2.1b	Classification according to (EC) No. 1272/2008 {CLP}: Does not meet the criteria for classification.		criteria for classification.
2.1c	The most important adverse physiochemical, humar	Refer to Sections 9)-12.
	health, and environmental effects:		
2.2	Label elements:	•	
2.2a	GHS label elements, including precautionary statements:	•	
2.2b	Contains:	•	
2.2c	Labeling in accordance with (EC) No. 1272/2008:	NI	
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: Other hazards:	None.	motion available
2.3		No additional inform	nation available.
2.3a 2.3b	Does the chemical meet the criteria for PBT or vPvB Other hazards which do not result in classification:	? Not applicable. No information ava	ilable
۷۵.∠	Outer Hazarus Willott do Hot result III Classification.	i No inionnation ava	iliabie.
	on 3: Composition/information on ingredients	Manada I (
3.1	Substance:	Item is a substance	
	3.1a Chemical identity:	. , , ,	scein diacetate N-succinimidyl ester
	3.1b Common name, synonyms, etc.:	CFSE; CFDA-SE	2 of Classification apparding to (EO) No
	3.1c CAS number and other unique identifiers:	3.1e %	3.1f Classification according to (EC) No.
	other unique identifiers: 3.1d EC number:	Concentration:	1272/2008 {CLP}:
	150347-59-4 None.	100%	Not classified.
3.1g	Chemical identity of any impurity, stabilizing additive	, None known.	
. 3	or individual constituent other than the main	, , , , , , , , , , , , , , , , , , , ,	
	constituent, which is itself classified and which		
	contributes to the classification (such as product		
	identifier, trade name, identification numbers):		
3.1h	Other information on the substance:	Molecular Weight:	557.47, C ₂₉ H ₁₉ NO ₁₁

CFSE SDS; Doc# F17-5120-2-B; Effective: 06/02/2017; Supersedes: F17-5120-2-A; Page 2 of 6

2.0		06/02/2017; Supersedes: F17-5120-2-A; Page 2 of 6
3.2	Mixture:	Item is a substance, therefore Section 3.2 is not applicable; see
	The chemical identity and concentration or	Section 3.1.
	concentration ranges of all ingredients which are	
	hazardous and are present above their cut-off levels:	
Section	on 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.
4.1a	Inhalation:	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.
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes;
		continue to rinse for at least 15 minutes. Remove any contaminated
		clothing and shoes and wash thoroughly before reuse. Get medical
		attention if any discomfort continues.
4.1c	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make
		sure to remove any contact lenses from the eyes before rinsing.
		Continue to rinse for at least 15 minutes. Get medical attention if any
4 4 1		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	authuon n any disconnion continues.
7.2	and delayed:	·
4.2a	Inhalation:	May cause coughing or mild irritation.
4.2b	Skin contact:	Prolonged skin contact may cause 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.
4.0	No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	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
		protective equipment.
	on 5: Firefighting measures	
5.1	Extinguishing media:	Use fire-extinguishing media appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide.
5.1b	Unsuitable extinguishing media:	None known.
5.2	Special hazards arising from the substance or	Product is not explosive. No dangerous reactions known under normal
	mixture:	conditions of use.
5.2a	Hazardous combustion products:	In case of fire, toxic gases may be formed of carbon monoxide (CO),
5.2b	Unuqual fire 9 explosion hezarde:	carbon dioxide (CO ₂ ; CO _x). None under normal conditions. No unusual fire or explosion hazards noted.
5.2c	Unusual fire & explosion hazards: Protective measures in fire:	Use protective equipment appropriate for surrounding materials.
5.20	Advice for firefighters:	Keep away from heat, hot surfaces, sparks, open flames and other
0.0	Advisor of mongritors.	ignition sources. No smoking.
5.3a	Special firefighting procedures:	No specific firefighting procedure given.
5.3b	Special protective equipment and precautions for	Wear full protective clothing, including self-contained breathing
	firefighters:	apparatus, if necessary. The product presents no special fire hazards
		in normal use. Keep away from heat, hot surfaces, sparks, open
		flames and other ignition sources. No smoking.
	on On Annial male	
	on 6: Accidental release measures	
6.1	Personal precautions, protective equipment, and emergency procedures:	Use protective equipment appropriate for surrounding materials.
6.1a	General release measures:	No specific emergency measures are required other than good
0.1a	ออกอาณา เอเอฉออ กาธิสอนเธอ.	laboratory hygiene and safety practices for small spills. Wear suitable
		protective clothing, gloves and eye or face protection. Consult
		professional emergency personnel if concerned (see Section 8).
6.1b	Advice for non-emergency personnel; personal	No specific emergency measures are required other than good
	precautions, protective equipment and emergency	laboratory hygiene and safety practices. Wear suitable protective
	procedures:	clothing/gloves/eye/face protection to avoid contact with skin, eyes,
	·	and personal clothing; use an approved supplied-air respirator, in case
		of emergency (also refer to Section 8). Remove all sources of ignition.
	i de la companya de	
		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

CFSE SDS; Doc# F17-5120-2-B; Effective: 06/02/2017; Supersedes: F17-5120-2-A; Page 3 of 6

	CFSE SDS; Doc# F17-5120-2-B; Effective: (06/02/2017; Supersedes: F17-5120-2-A; Page 3 of 6
		contamination. Consult professional emergency personnel if
		concerned.
6.1c	Advice for emergency responders; personal	Wear suitable protective clothing, gloves and eye or face protection to
	precautions, protective equipment and emergency	avoid contact; use an approved supplied-air respirator, in case of
	procedures:	emergency (also refer to Section 8).
6.2	Environmental precautions:	Do not allow to enter drains, sewers, or watercourses.
6.3	Methods and materials for containment and	Contain any spills with dikes or absorbent materials to prevent
	clean up:	migration and entry into sewers or water sources. Place in a suitable
		container for disposal in accordance with local waste regulations (see
		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.
Soction	7. Handling and storage	
7.1	7: Handling and storage Precautions for safe handling:	Do not handle until all potety was soutions have been used and
7.1	Precautions for sale nationing.	Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of
		vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate
		personal protection equipment (PPE). Thoroughly wash hands and
		contaminated areas with water and soap before leaving the work site.
		Keep away from sources of ignition.
7.1a	Prevent handling of incompatible substances or	Avoid contact with strong acids and strong oxidizers.
	mixtures:	7 Trois contact man chang actual and only creating creating
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
	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.
Castian	O. Francisco controlo/novechal protection	
8.1	8: Exposure controls/personal protection Control parameters:	
8.1a	Occupational exposure limits, such as chemical	Not available.
0.1a	identity, standard, TWA-8 hours (time weighted	NOT available.
	average), STEL-15 minutes (short term exposure	
	limit), etc.: WEL = Workplace Exposure Limit. Sk =	
	can be absorbed through skin.	
8.1b	Appropriate engineering controls:	Ensure adequate ventilation, especially in confined areas.
8.1c	Individual protection measures, such as personal	Wear gloves. Wear protective goggles. Wear labcoat with full coverage
	protective equipment:	clothing.
8.1d	Safety symbols:	
8.2	Exposure controls:	
8.2a	Process conditions:	Provide eyewash station.
8.2b	Engineering controls:	Local exhaust ventilation is recommended for providing adequate
		ventilation. Ensure that eyewash stations and safety showers are
8.2c	Ventilation controls:	proximal to the workstation location. Provide adequate ventilation.
8.2c 8.2d	Reference to other sections:	Refer to section 5 for additional information.
8.2e	Eye/face protection:	Wear eye protection, including chemical splash goggles when
0.20	Lyonade proteotion.	possibility exists for eye contact due to spraying liquid or airborne
		particles.
8.2f	Skin protection:	Lab coat. Wear suitable protective clothing. Wear long sleeves.
8.2g	Hand protection:	Use gloves chemically resistant to this material when prolonged or
3	Francous.	repeated contact could occur. Gloves should be classified under
		Standard EN 374 or ASTM F1296. Suggested glove materials are:
		Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol
		laminate, PVC or vinyl. Suitable gloves for this specific application can
		be recommended by the glove supplier.
8.2h	Respiratory equipment:	Where excessive vapor, mist, or dust may result, use NIOSH approved
		respiratory protection equipment.
8.2i	Other protection:	Wear appropriate clothing to prevent any possibility of skin contact.
8.2j	Hygiene measures:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift
		and before eating, smoking, and using the toilet. Promptly remove any
		clothing that becomes contaminated. Use appropriate skin cream to

CFSE SDS; Doc# F17-5120-2-B; Effective: 06/02/2017; Supersedes: F17-5120-2-A; Page 4 of 6

	CFSE SDS; Doc# F17-5120-2-B; Effective	: 06/02/2017; Supersedes: F17-5120-2-A; Page 4 of 6			
		prevent drying of skin. When using do not eat, drink, or smoke. Wash			
8.2k	Thermal hazards:	promptly with soap and water if skin becomes contaminated. None known.			
8.2l	Environmental exposure controls:	Not determined.			
0.21	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.):	Powder, dust; varying color.			
9.1b	Odor:	No characteristic odor.			
9.1c	Odor threshold:	Not determined.			
9.1d	pH:	Not determined.			
9.1e 9.1f	Melting point/freezing point (°C):	Not determined. Not determined.			
9.11 9.1g	Initial boiling point and boiling range: Flash point (°C):	Not applicable.			
9.1h	Evaporation rate:	Not applicable.			
9.1i	Flammability (solid, gas):	Not determined.			
9.1j	Upper/lower flammability or explosive limits:	Not determined.			
9.1k	Vapor pressure:	Not applicable.			
9.11	Vapor density (Air =1):	Not applicable.			
9.1m	Relative density:	Not determined.			
9.1n	Solubility(ies):	No data available.			
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 9.1s	Viscosity: Explosive properties:	Not determined. Not determined.			
9.18 9.1t	Oxidizing properties:	Not determined.			
9.10	Other information:	None.			
9.2a	Other physical or chemical parameters:	None.			
0.20	- Caron projector or or or or or parameters	10.10			
Section	n 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:	Not determined.			
10.4	Conditions to avoid:	Avoid exposure to high temperatures or direct sunlight.			
10.4 10.5	Incompatible materials:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances.			
10.4		Avoid exposure to high temperatures or direct sunlight.			
10.4 10.5 10.6	Incompatible materials: Hazardous decomposition products:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances.			
10.4 10.5 10.6 Section	Incompatible materials: Hazardous decomposition products: 11: Toxicological information	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances.			
10.4 10.5 10.6 Section 11.1	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available.			
10.4 10.5 10.6 Section 11.1	Incompatible materials: Hazardous decomposition products: 11: Toxicological information	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate <i>N</i> -succinimidyl ester			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate <i>N</i> -succinimidyl ester No information available. Not determined. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1d	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate <i>N</i> -succinimidyl ester No information available. Not determined. Not determined. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate <i>N</i> -succinimidyl ester No information available. Not determined. Not determined. Not determined. Not determined. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1f 11.1g 11.1h 11.1i	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1f 11.1g 11.1h 11.1i	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1i	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. May enter by ingestion; skin and/or eye contact; inhalation of vapors/mist/dust. May cause discomfort if swallowed.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1i	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1f 11.1h 11.1i 11.1h 11.1i 11.1h	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion: Inhalation:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1h 11.1i 11.1h 11.1i 11.1h 11.1h	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. In high concentrations, vapors may irritate throat and respiratory system and cause coughing. Liquid may irritate skin.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1h 11.1i 11.1h 11.1h 11.1h 11.1h	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. In determined. May enter by ingestion; skin and/or eye contact; inhalation of vapors/mist/dust. 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.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1h 11.1i 11.1h 11.1n 11.1n	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and toxicological characteristics:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. 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.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1h 11.1i 11.1h 11.1h 11.1h 11.1h	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. In determined. May enter by ingestion; skin and/or eye contact; inhalation of vapors/mist/dust. 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.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1h 11.1i 11.1h 11.1n 11.1n 11.1n 11.1n	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. In determined. Not determined. Not of determined. Not determined. Not determined. 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.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1j 11.1h 11.1n 11.1n 11.1n 11.1n 11.1n	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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):	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. In the determined of vapors/mist/dust. 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.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1h 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. 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. Not determined. Not determined. Not determined. Not determined. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. 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. Not determined.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. 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 applicable. Not applicable.			
10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n 11.1n	Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	Avoid exposure to high temperatures or direct sunlight. Strong oxidizing substances. No data available. . 5(6)-Carboxyfluorescein diacetate N-succinimidyl ester No information available. Not determined. 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. Not determined.			

		06/02/2017; Supersedes: F17-5120-2-A; Page 5 of 6
11.1y	Classification by International Agency for Research	Not classified.
11.1z	on Cancer (IARC): Classification by OSHA 13:	Not classified.
11.12 11.1ab	Other information:	None.
11.140	Other information.	NOTIC.
Section	12: Ecological information	
12.1	Toxicity:	
12.1a	Name:	5(6)-Carboxyfluorescein diacetate <i>N</i> -succinimidyl ester.
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:	No data available on mobility in soil.
12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	Not determined.
Section	n 13: Disposal considerations	
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	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.
0.5-11	AA. Tuomomont information	
Section 14.1	14: Transport information UN number:	Not applicable
14.1	UN proper shipping name:	Not applicable. 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	No.
	Model Regulations (IMDG Code, ADR, RID, and	
	ADN)?:	
14.5b	Is it a marine pollutant according to the IMDG	No.
44.0	code?:	Negative sure
14.6 14.7	Special precautions for user: Transport in bulk according to Annex II of	None known.
14.7	MARPOL and the IBC code:	Not applicable.
14.7a	Other information:	None.
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	
45.4	or mixture:	
15.1a	Regional safety, health and environmental	
1 <i>E</i> 1h	regulations specific for the product in question:	This product is not listed in the CADA (Cuparfund Amandments and
15.1b	USA SARA Components (such as 302/311/313):	This product is not listed in the SARA (Superfund Amendments and
15.1c	USA Massachusetts Right to Know:	Reauthorization Act). 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:	This product does not contain any substances known to the state of
		California to cause cancer and/or reproductive harm.
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
45.41.	Cuidanas natas:	for supply. Safety data sheets for substances and preparations.
15.1k 15.1l	Guidance notes: EU legislation references:	Workplace exposure limits EH40. (EC) No. 1272/2008 on the classification, labelling and packaging of
15.11	EU legislation references:	substances and mixtures {CLP Regulation}. EC 830/2015. Regulation
		(EC) No 1907/2006 of the European Parliament and of the Council of
		18 December 2006 concerning the Registration, Evaluation,
		Authorisation and Restriction of Chemicals (REACH), establishing a
		European Chemicals Agency, amending Directive 1999/45/EC and
		repealing Council Regulation (EEC) No 793/93 and Commission
		Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC
		and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and
4.5.		2000/21/EC, including amendments.
15.2 15.2a	Chemical safety assessment:	Not required.
	Other regulatory information:	None.

CFSE SDS; Doc# F17-5120-2-B; Effective: 06/02/2017; Supersedes: F17-5120-2-A; Page 6 of 6

6.1 6.1a 6.1b	Other information:	
	Date of revision:	06/02/2017
	SDS number and revision:	06/02/2017 F17-5120-2-B
6.1c	Supersedes SDS number and revision:	F17-5120-2-A
6.1d 6.1e	Changes made to the previous version of the SDS: Key/legend to abbreviations and acronyms used in the SDS:	Updated to comply with EC 1272/2008 CLP regulations, EC 830/201 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 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-SE Specific Target Organ Toxicity - Repeated Exposure. UN United Nations. USA United States of America.
		vPvB very Persistent very bioaccumulative.
6.1f	Full text of hazard statements and/or precautionary statements not written out in full elsewhere:	All statements were written out in full.

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

means of identification:		
means or identification	SR-VAD-FMK	
Alternative product name(s)/ synonyms:	SR-VAD-FLICA; re	d poly caspase inhibitor reagent; a sulforhodamine
		lalanylaspartic acid fluoromethyl ketone.
Product number/Catalog #(s):	679, 6139, 6221	
Internal identification:	SR-VAD-FMK	
ant identified uses of the substance or re and uses advised against:	For research use o	nly. Not for use in diagnostic procedures.
description of what the substance or mixture is led to do:	Caspase enzyme in	nhibitor and apoptosis detection reagent.
s of the supplier of the SDS:		
Name:	ImmunoChemistry	Technologies, LLC (ICT)
Address:	9401 James Avenu	ie South, Suite 155
City, State, Zip, Country	Bloomington, MN 5	
Phone number:	1-800-829-3194 an	
Fax number:	952-888-8988	
Website:	www.immunochem	istry com
Email:	help@immunochen	
Contact person at ICT:	Quality Documenta	
gency telephone number:		94 (USA & Canada) or 952-888-8788 world wide;
gency telephone number.		n-5 pm central time USA, Monday through Friday
		i). Chemtrec 24-hour access within USA and
		l-9300 or +1 703-527-3887. Collect calls accepted.
	Canada. 1-000-424	1-9300 01 +1 703-327-3667. Collect calls accepted.
zards identification		
ification of the substance or mixture:		
ect is a:	Substance.	
		ovitavia for alegaification
ification according to (EC) No. 1272/2008		criteria for classification.
nost important adverse physiochemical, human , and environmental effects:	Refer to Sections 9	l - 12.
elements:	None.	
abel elements, including precautionary	None.	
nents:	TVOTIC.	
Contains:	None.	
ing in accordance with (EC) No. 1272/2008:	None.	
d Pictograms (Hazard Symbols):	None.	
I word:	None.	
d statements:	None.	
utionary statements:	None.	
ementary precaution statements:	None.	
hazards:	No additional inform	nation available.
the chemical meet the criteria for PBT or vPvB?		
hazards which do not result in classification:	No information ava	ilable.
emposition/information on ingredients		
tance:	Item is a substance.	
Chemical identity:	SR-VAD-FMK	
Common name, synonyms, etc.:	None.	
CAS number and	3.1e %	3.1f Classification according to (EC) No.
r unique identifiers: 3.1d EC number:	Concentration:	1272/2008 {CLP}:
None. None.	100%	Not classified.
ical identity of any impurity, stabilizing additive,	None known.	
ividual constituent other than the main		
tuent, which is itself classified and which		
butes to the classification (such as product		
annes to the classification felich ac months		
fier, trade name, identification numbers):	Mone	
	None.	
fier, trade name, identification numbers):	None.	
J		

SR-VAD-FMK SDS; Doc# F17-678-3-E; Effective: 09/27/2017; Supersedes: F17-678-4-D; Page 2 of 6

Section	on 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 reuse. Never
		give anything by mouth to an unconscious person.
4.1a	Inhalation:	Due to the small packaging the risk of inhalation is minimal. Remove to
		fresh air and keep at rest in a comfortable position for breathing. If not
		breathing, give artificial respiration. Rinse nose and mouth with water.
		Get medical attention if any discomfort continues.
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes;
		continue to rinse for at least 15 minutes. Remove any contaminated
		clothing and shoes and wash thoroughly before reuse. Get medical
110	Five contests	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
4.10	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	
	and delayed:	·
4.2a	Inhalation:	May cause coughing or mild irritation.
4.2b	Skin contact:	Prolonged skin contact may cause 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
		protective equipment.
	on 5: Firefighting measures	
5.1	Extinguishing media:	Use fire-extinguishing media appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide.
5.1b	Unsuitable extinguishing media:	None known.
5.2	Special hazards arising from the substance or	Product is not explosive. No dangerous reactions known under normal
<i>-</i> 22	mixture:	conditions of use.
5.2a	Hazardous combustion products:	In case of fire, toxic gases may be formed of carbon monoxide (CO),
5.2b	Unusual fire & explosion hazards:	carbon dioxide (CO ₂ ; CO _x). None under normal conditions. 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
3.3	Advice for menginers.	ignition sources. No smoking.
5.3a	Special firefighting procedures:	No specific firefighting procedure given.
5.3b	Special protective equipment and precautions for	Wear full protective clothing, including self-contained breathing
0.00	firefighters:	apparatus, if necessary. The product presents no special fire hazards
	cg.n.c.c.	in normal use. Keep away from heat, hot surfaces, sparks, open
		flames and other ignition sources. No smoking.
	·	
	on 6: Accidental release measures	
6.1	Personal precautions, protective equipment, and	Use protective equipment appropriate for surrounding materials.
	emergency procedures:	
6.1a	General release measures:	No specific emergency measures are required other than good
		laboratory hygiene and safety practices for small spills. Wear suitable
		protective clothing, gloves and eye or face protection. Consult
0.11		professional emergency personnel if concerned (see Section 8).
6.1b	Advice for non-emergency personnel; personal	No specific emergency measures are required other than good
	precautions, protective equipment and emergency	laboratory hygiene and safety practices. Wear suitable protective
	procedures:	clothing/gloves/eye/face protection to avoid contact with skin, eyes,
		and personal clothing; use an approved supplied-air respirator, in case
		of emergency (also refer to Section 8). 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
6.1c	Advice for emergency responders; personal	concerned. Wear suitable protective clothing, gloves and eye or face protection to
0.10	precautions, protective equipment and emergency	avoid contact; use an approved supplied-air respirator, in case of
	procedures:	emergency (also refer to Section 8).
	11	1 02 (

SR-VAD-FMK SDS; Doc# F17-678-3-E; Effective: 09/27/2017; Supersedes: F17-678-4-D; Page 3 of 6

6.2	SR-VAD-FMK SDS; Doc# F17-678-3-Ε; Επεσ Environmental precautions:	ctive: 09/27/2017; Supersedes: F17-678-4-D; Page 3 of 6 Do not allow to enter drains, sewers, or watercourses.
6.3	Methods and materials for containment and	Contain any spills with dikes or absorbent materials to prevent
0.3	clean up:	migration and entry into sewers or water sources. Place in a suitable
	clean up.	
		container for disposal in accordance with local waste regulations (see Section 13). Wash spill area thoroughly with plenty of soap and water.
C 4	Deference to other coefficient	Avoid contact with skin or inhalation of spillage, dust, or vapor. Refer to Sections 8 and 13 for additional information.
6.4	Reference to other sections:	Refer to Sections 8 and 13 for additional information.
Section	n 7: Handling and storage	
7.1	Precautions for safe handling:	Do not handle until all safety precautions have been read and
7.1	Trecautions for sale nationing.	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:	Thoras contact man chang dotted and offering changes.
7.1b	Advice on general occupational hygiene:	Do not eat, drink, or smoke in work areas. Wash hands after use.
ì		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.
	n 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.
8.2b	Engineering controls:	Ensure that eyewash stations and safety showers are proximal to the
	gg	workstation location.
8.2c	Ventilation controls:	Provide adequate ventilation.
8.2d	Reference to other sections:	Refer to Section 5 for additional information.
8.2e	Eye/face protection:	Wear approved chemical safety goggles where eye exposure is
	, r	reasonably probable or face shield if risk of splashing.
8.2f	Skin protection:	Wear apron or protective clothing in case of contact.
8.2g	Hand protection:	Use suitable protective gloves if risk of skin contact.
8.2h	Respiratory equipment:	Where risk assessment shows air-purifying respirators are appropriate
	L	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	Other protection:	Wear appropriate clothing to avoid skin contact.
8.2j	Hygiene measures:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift
,	, ,	and before eating, smoking, and using the toilet. Promptly remove any
		clothing that becomes contaminated. Use appropriate skin cream to
		prevent drying of skin. When using do not eat, drink, or smoke. Wash
		promptly with soap and water if skin becomes contaminated
8.2k	Thermal hazards:	None known under normal conditions of use.
8.21	Environmental exposure controls:	Not determined.
Ì	•	

SR-VAD-FMK SDS; Doc# F17-678-3-E; Effective: 09/27/2017; Supersedes: F17-678-4-D; Page 4 of 6

Sectio	n 9: Physical and chemical properties	
9.1	Information on basic physical and chemical properties:	
9.1a	Appearance (physical state, color, etc.):	Powder, dust.
9.1b	Odor:	No characteristic odor.
9.1c	Odor threshold:	Not determined.
9.1d	pH:	Not applicable.
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 applicable.
9.1h	Evaporation rate:	Not applicable
9.1i	Flammability (solid, gas):	Not determined.
9.1j	Upper/lower flammability or explosive limits:	Not determined.
9.1k	Vapor pressure:	Not applicable.
9.11	Vapor density (Air =1):	Not applicable.
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.
Soction	n 10: Stability and reactivity	
10.1	Reactivity:	No data available.
10.1	Chemical stability:	Stable under normal temperature conditions.
10.2	Possibility of hazardous reactions:	Hazardous polymerization: no data available.
10.3	Conditions to avoid:	To avoid product degradation, avoid exposure to high temperatures or
10.4	Collutions to avoid.	direct sunlight or light.
		direct suringit of light.
10.5	Incompatible materials:	
10.5 10.6	Incompatible materials: Hazardous decomposition products:	No data available. None under normal conditions.
10.6	Hazardous decomposition products:	No data available.
10.6 Sectio	Hazardous decomposition products: n 11: Toxicological information	No data available.
10.6 Sectio 11.1	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects:	No data available. None under normal conditions.
10.6 Sectio 11.1 11.1a	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name:	No data available. None under normal conditions. . SR-VAD-FMK
10.6 Sectio 11.1 11.1a 11.1b	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity:	No data available. None under normal conditions. . SR-VAD-FMK Not determined.
Sectio 11.1 11.1a 11.1b 11.1c	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation:	No data available. None under normal conditions. . SR-VAD-FMK Not determined. Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation:	No data available. None under normal conditions. . SR-VAD-FMK Not determined. Not determined. Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization:	No data available. None under normal conditions. . SR-VAD-FMK Not determined. Not determined. Not determined. Not determined. Not determined. Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity:	No data available. None under normal conditions. . SR-VAD-FMK Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity:	No data available. None under normal conditions. . SR-VAD-FMK Not determined.
Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity:	No data available. None under normal conditions. . SR-VAD-FMK Not determined.
Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure:	No data available. None under normal conditions. . SR-VAD-FMK Not determined.
Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1j	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure:	No data available. None under normal conditions. SR-VAD-FMK Not determined.
Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1j	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard:	No data available. None under normal conditions. SR-VAD-FMK Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure	No data available. None under normal conditions. SR-VAD-FMK Not determined.
Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1j	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):	No data available. None under normal conditions. SR-VAD-FMK Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1i 11.1k	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure	None under normal conditions. SR-VAD-FMK Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1s 11.1s 11.1s 11.1s	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion:	None under normal conditions. SR-VAD-FMK Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1i 11.1s 11.1l 11.1l 11.1l	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion:	None under normal conditions. SR-VAD-FMK Not determined. In high concentrations, dust may irritate throat and respiratory system
Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1s 11.1h 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion: Inhalation:	None under normal conditions. SR-VAD-FMK Not determined. In high concentrations, dust may irritate throat and respiratory system and cause coughing
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1g 11.1h 11.1i 11.1i 11.1s 11.1n 11.1n 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact:	None under normal conditions. SR-VAD-FMK Not determined. In high concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin.
Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1j 11.1h 11.1n 11.1n 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact): Ingestion: Inhalation: Skin contact: Eye contact: Symptoms related to the physical, chemical and	None under normal conditions. SR-VAD-FMK Not determined. In determined. Not determined. In high concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin. Spray and dust in the eyes may cause irritation.
Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1n 11.1n 11.1n 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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	No data available. None under normal conditions. SR-VAD-FMK Not determined. In high concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin. Spray and dust in the eyes may cause irritation. No specific symptoms noted.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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	No data available. None under normal conditions. SR-VAD-FMK Not determined. In determined. Not determined. In high concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin. Spray and dust in the eyes may cause irritation. Not determined. Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1j 11.1h 11.1i 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	No data available. None under normal conditions. SR-VAD-FMK Not determined. In determined. Not determined. Not determined. Not determined. Source discomfort if swallowed. In high concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin. Spray and dust in the eyes may cause irritation. No specific symptoms noted. Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1i 11.1i 11.1i 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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):	No data available. None under normal conditions. SR-VAD-FMK Not determined. In determined. Not determined. Not determined. Separate discomfort if swallowed. In high concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin. Spray and dust in the eyes may cause irritation. No specific symptoms noted. Not determined. Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1i 11.1i 11.1i 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	No data available. None under normal conditions. SR-VAD-FMK Not determined. In thigh concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin. Spray and dust in the eyes may cause irritation. No specific symptoms noted. Not determined.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1i 11.1i 11.1i 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	No data available. None under normal conditions. SR-VAD-FMK Not determined. In high concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin. Spray and dust in the eyes may cause irritation. No specific symptoms noted. Not determined. Not applicable.
10.6 Sectio 11.1 11.1a 11.1b 11.1c 11.1d 11.1e 11.1f 11.1i 11.1i 11.1i 11.1n	Hazardous decomposition products: n 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: STOT-single exposure: STOT-repeated exposure: Aspiration hazard: Information on the likely routes of exposure (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:	No data available. None under normal conditions. SR-VAD-FMK Not determined. Not period if swallowed. In high concentrations, dust may irritate throat and respiratory system and cause coughing Dust may irritate skin. Spray and dust in the eyes may cause irritation. No specific symptoms noted. Not determined. Not determined. Not determined. Not determined. Not applicable. Not applicable. Not applicable.

SR-VAD-FMK SDS; Doc# F17-678-3-E; Effective: 09/27/2017; Supersedes: F17-678-4-D; Page 5 of 6

	Other information:	
Section	n 12: Ecological information	
12.1	Toxicity:	
12.1a	Name:	SR-VAD-FMK.
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:	No data available.
12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	No data available.
•	do Black de la collection	
Section 13.1	n 13: Disposal considerations Waste treatment methods:	When handling wests, consideration should be made to the cofety
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	Dispose of waste and residues in accordance with local authority
15.14	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.
	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 Model Regulations (IMDG Code, ADR, RID, and ADN)?:	No.
14.5b	Is it a marine pollutant according to the IMDG code?:	No.
14.6	Special precautions for user:	None known.
14.7	Transport in bulk according to Annex II of MARPOL and the IBC code:	Not applicable.
14.7a 14.7b	Other information: Classification for other modes of transport:	The product is not considered a dangerous good for transport. Contact supplier.
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:	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}:	Not Pate 1
15.1h	Annex XIV substances subject to authorization:	Not listed.
15.1i 15.1j	Substances of very high concern: Approved code of practice:	Not listed. Classification and labeling of substances and preparations dangerous
15.1]	Approved code of practice:	for supply. Safety data sheets for substances and preparations dangerous
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	Chemical safety assessment:	Not required.
15.2a	Other regulatory information:	None.
Section	16: Other information	
Section 16.1	Other information:	
Section		09/27/2017 F17-678-3-E

	SR-VAD-FMK SDS; Doc# F17-678-3-E; Effect	ctive: 09/27/2017; Supersedes: F17-678-4-D; Page 6 of 6
16.1c	Supersedes SDS number and revision:	F17-678-4-D
16.1d	Changes made to the previous version of the SDS:	Reviewed and updated document control numbers; minor corrections.
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.
		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.
		STOT-SE Specific Target Organ Toxicity - Single Exposure.
		UN United Nations.
		USA United States of America.
		vPvB very Persistent very bioaccumulative.
16.1f	Full text of hazard statements and/or precautionary	All statements were written out in full.
	statements not written out in full elsewhere:	stateone word without out in fulli
DISCLA		ific material designated and may not be valid for such material used
		or in any process. Such information is, to the best of the company's
		ble as of the date indicated. However, no warranty guarantee or
		eliability, or completeness. It is the user's responsibility to satisfy
	himself as to the suitability of such infor	

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	Product identifier:	7-Aminoactinomycin D
1.1a	Other means of identification:	
l.1b	Alternative product name(s)/ synonyms:	7-aminoactinomycin D; 7-AAD.
.1c	Product number/Catalog #(s):	5121, 6163
.1d	Internal identification:	7-AAD; 7AAD
.2	Relevant identified uses of the substance or mixture and uses advised against:	For research use only. Not for use in diagnostic procedures.
.2a	Brief description of what the substance or mixture is	Live cell impermeant red fluorescence-emitting DNA dye for assessin
	intended to do:	cell viability.
.3	Details of the supplier of the SDS:	
.3a	Name:	ImmunoChemistry Technologies, LLC (ICT)
.3b	Address:	9401 James Avenue South, Suite 155
.3c	City, State, Zip, Country	Bloomington, MN 55431-2500 USA
.3d	Phone number:	1-800-829-3194 and 952-888-8788
.3e	Fax number:	952-888-8988
1.3f	Website:	www.immunochemistry.com
1.3g	Email:	help@immunochemistry.com
.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:	Out at a second
2.1a	Product is a:	Substance.
2.1b	Classification according to (EC) No. 1272/2008	Acute Tox. 1 (oral) H300.
	{CLP}:	Carc. 1A. (oral) H350.
2.4	T	Repr. 1A. (unborn child) H360D
2.1c	The most important adverse physiochemical, human	Refer to Sections 9-12.
	health, and environmental effects: Label elements:	
2.2		
2.2a	GHS label elements, including precautionary statements:	•
2.2b	Contains:	7-aminoactinomycin D
2.2c	Labeling in accordance with (EC) No. 1272/2008:	
2.2d	Hazard Pictograms (Hazard Symbols):	- • — • —
		GHS06 Skull and crossbones. GHS08 Health Hazard
2.2e	Signal word:	Danger.
2.2f	Hazard statements:	H300 Fatal if swallowed.
		H350 May cause cancer if swallowed.
		H360D May damage the unborn child if swallowed.
2.2g	Precautionary statements:	P201 Obtain special instructions before use.
	_	P280 Wear protective gloves/protective clothing/eye protection/face
		protection.
		P308 + P313 IF exposed or concerned: Get medical advice/attention. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P405 Store locked up.
		P501 Dispose of contents/container to an approved waste disposal plant.
2.2h	Supplementary precaution statements:	

7-Aminoactinomycin D SDS; Doc# F17-5121-2-B; Effective: 08/04/2017; Supersedes: F17-5121-2-A; Page 2 of 7

2.3	Other hazards:	11 D 3D3; DOC# F17-5121-2-B;	No additional infor	'; Supersedes: F17-5121-2-A; Page 2 of 7	
2.3a	Does the chemical meet the	e criteria for PRT or vPvR2	Not applicable.	malion available.	
2.3b	Other hazards which do not result in classification:		No information ava	ailable.	
2.00	Caret Hazarde Willert de He	roodit iii olaooiiloatioii.	110 111101111411011410	andoro.	
	on 3: Composition/informati	on on ingredients			
3.1	Substance:		Item is a substance	e.	
	3.1a Chemical identity:			7-AAD	
	3.1b Common name, synor	nyms, etc.:	7-aminoactinomyc		
	3.1c CAS number and other unique identifiers:	3.1d EC number:	3.1e % Concentration:	3.1f Classification according to (EC) No. 1272/2008 {CLP}:	
	7240-37-1	635-285-6	100%	Acute Tox. 1, H300	
				Carc. 1A, H350 (oral)	
				Repr. 1A, H360D (Unborn child) (oral)	
3.1g	Chemical identity of any impurity, stabilizing additive, or individual constituent other than the main constituent, which is itself classified and which contributes to the classification (such as product identifier, trade name, identification numbers):		None known.		
3.1h	Other information on the su	bstance:	Chemical Formula Molecular Weight:		
3.2	Mixture:		Item is a substance	e, therefore Section 3.2 is not applicable; see	
J.2	The chemical identity and c	concentration or	Section 3.1.	5, 1 51010 5001.011 0.12 to 1101 applicable, 500	
	concentration ranges of all	ingredients which are			
	hazardous and are present	above their cut-off levels:			
Section	on 4: First aid measures				
4.1	Description of first aid me	easures:	If concerned, get n	nedical attention/advice and provide physician with	
	•		SDS information. N	Move out of dangerous area. Wash contaminated	
4.4-	labalatian.			ise. Never give anything to an unconscious person.	
4.1a	Inhalation:			ackaging the risk of inhalation is minimal. Remove to at rest in a comfortable position for breathing. If not	
				ificial respiration. Rinse nose and mouth with water.	
			Get medical attent	ion if any discomfort continues.	
4.1b	Skin contact:			hly with soap and water for several minutes;	
				or at least 15 minutes. Remove any contaminated sand wash thoroughly before reuse. Get medical	
			attention if any disc		
4.1c	Eye contact:			es with plenty of water while lifting the eyelids. Make	
			sure to remove any	y contact lenses from the eyes before rinsing.	
				or at least 15 minutes. Get medical attention if any	
4.1d	Ingestion		Get modical attent	es. ion immediately. Call a poison center or physician.	
4.10	Ingestion:			UNCONSCIOUS PERSON VOMIT OR DRINK	
				buth thoroughly. Do not induce vomiting without	
			advice from poisor	n control center or medical professional.	
4.2	Most important symptom	s and effects, both acute		Refer to Sections 2 and 11 for most important	
	and delayed:			and effects. The severity of the symptoms will vary concentration and length of exposure.	
4.2a	Inhalation:		None known.	consolitation and longin of exposure.	
4.2b	Skin contact:		None known.		
4.2c	Eye contact:		None known.		
4.2d	Ingestion:	7 P 1 22 25 25 25	Fatal if swallowed.		
4.3	Indication of any immedia special treatment needed		in case of accident	d measures noted, but first aid may still be required tal exposure, inhalation, or ingestion of this product. dical attention promptly!	
4.3a	Notes to physician/first resp	oonder:		cally. Refer to Sections 5-8 for advice on personal	
	, ,		protective equipme	·	
Section	on 5: Firefighting measures				
5.1	Extinguishing media:		Use fire-extinguish	ing media appropriate for the surrounding materials.	
5.1a	Suitable extinguishing med		Water spray, foam	, dry powder, or carbon dioxide.	
5.1b 5.2	Unsuitable extinguishing n Special hazards arising	nedia: from the substance or	None known.		
F 0-	mixture:	aduata	In coop of fire too!	a good may be formed of some a magneticle (00)	
5.2a	Hazardous combustion pro		carbon dioxide (CC	c gases may be formed of carbon monoxide (CO), D ₂ ; CO _x) and nitrogen oxides (NO ₂ ; NO _x).	
5.2b	Unusual fire & explosion h	azards:	Product is not expl conditions of use.	losive. No dangerous reactions known under normal	
5.2c	Protective measures in fire):		ipment appropriate for surrounding materials.	
			, , , , , , , , , , , , , , , , , , , ,	, <u>, , , , , , , , , , , , , , , , , , </u>	

7-Aminoactinomycin D SDS; Doc# F17-5121-2-B; Effective: 08/04/2017; Supersedes: F17-5121-2-A; Page 3 of 7

5.3	Advice for firefighters:	
5.3a	Special firefighting procedures:	No specific firefighting procedure given.
5.3b	Special protective equipment and precautions for	Wear full protective clothing, including self-contained breathing
	firefighters:	apparatus, if necessary. The product presents no special fire hazards
		in normal use.
Section	n 6: Accidental release measures	
6.1	Personal precautions, protective equipment, and	
	emergency procedures:	
6.1a	General release measures:	No specific emergency measures are required other than good
		laboratory hygiene and safety practices for small spills. Wear suitable
		protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8).
6.1b	Advice for non-emergency personnel; personal	No specific emergency measures are required other than good
0.15	precautions, protective equipment and emergency	laboratory hygiene and safety practices. Wear suitable protective
	procedures:	clothing/gloves/eye/face protection to avoid contact with skin, eyes,
		and personal clothing; use an approved supplied-air respirator, in case
		of emergency (also refer to Section 8). Ensure adequate ventilation
		and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and
		eye or face protection to prevent any contamination. Consult
		professional emergency personnel if concerned.
6.1c	Advice for emergency responders; personal	Wear suitable protective clothing, gloves and eye or face protection to
	precautions, protective equipment and emergency	avoid contact; use an approved supplied-air respirator, in case of
6.2	procedures: Environmental precautions:	emergency (also refer to Section 8).
6.2	Methods and materials for containment and	Do not allow to enter drains, sewers, or watercourses. Avoid dust formation. Contain any spills with dikes or absorbent
0.0	clean up:	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
6.4	Reference to other sections:	spillage, dust, or vapor. Refer to Sections 8 and 13 for additional information.
0.4	Reference to other sections.	Refer to Sections 8 and 13 for additional information.
Section	n 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.
		Avoid exposure during pregnancy.
7.1a	Prevent handling of incompatible substances or	Not known.
	mixtures:	
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. Protect from light. Store at
	incompatibilities:	specified temperature. 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. Avoid spills and release
7.3	Specific end use(s):	into the environment; keep away from watercourses. For research use only. Not for use in diagnostic procedures.
7.5	ביים ביים ביים ביים ביים ביים ביים ביים	1 3. 1000a.on 400 only. Hot for 400 in diagnostic procedures.
	1 8: Exposure controls/personal protection	
8.1	Control parameters:	<u> </u>
8.1a	Occupational exposure limits, such as chemical	No data 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:	Ensure adequate ventilation, especially in confined areas.
8.1c	Individual protection measures, such as personal	Wear gloves. Wear labcoat with full coverage clothing. Wear chemical
0 1 7	protective equipment:	goggles and face shield in combination.
8.1d	Safety symbols:	
8.2	Exposure controls:	
0.2	Exposure controls.	

7-Aminoactinomycin D SDS; Doc# F17-5121-2-B; Effective: 08/04/2017; Supersedes: F17-5121-2-A; Page 4 of 7

	D Pro	D :1
8.2a	Process conditions:	Provide eyewash station.
8.2b	Engineering controls:	Local exhaust ventilation is recommended for providing adequate
	J	ventilation. 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.
8.2e	Eye/face protection:	Eye protection, including both chemical splash goggles and face
0.26	Eyenade protection.	
		shield, must be worn when possibility exists for eye contact due to
		spraying liquid or airborne particles.
8.2f	Skin protection:	Lab coat. Wear suitable protective clothing. Wear long sleeves.
8.2g	Hand protection:	Use gloves chemically resistant to this material when prolonged or
		repeated contact could occur. Gloves should be classified under
		Standard EN 374 or ASTM F1296. Suggested glove materials are:
		Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol
		laminate, PVC or vinyl.
8.2h	Respiratory equipment:	Where excessive vapor, mist, or dust may result, use NIOSH approved
	, , , , ,	respiratory protection equipment.
0.0:	Other protection.	
8.2i	Other protection:	Wear appropriate clothing to prevent any possibility of skin contact.
8.2j	Hygiene measures:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift
-		and before eating, smoking, and using the toilet. Promptly remove any
		clothing that becomes contaminated. Use appropriate skin cream to
		prevent drying of skin. When using do not eat, drink, or smoke. Wash
		promptly with soap and water if skin becomes contaminated.
8.2k	Thermal hazards:	None known.
8.21	Environmental exposure controls:	Not determined.
Section	n 9: Physical and chemical properties	
9.1	Information on basic physical and chemical	
3.1		•
	properties:	
9.1a	Appearance (physical state, color, etc.):	Powder, dust; varying color.
9.1b	Odor:	No characteristic odor.
9.1c	Odor threshold:	Not determined.
9.1d	pH:	Not determined.
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 applicable.
	Evaporation rate:	Not applicable.
y,in		
9.1h		
9.1i	Flammability (solid, gas):	Not determined.
9.1i 9.1j	Flammability (solid, gas): Upper/lower flammability or explosive limits:	Not determined. Not determined.
9.1i	Flammability (solid, gas):	Not determined. Not determined.
9.1i 9.1j 9.1k	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure:	Not determined. Not determined. Not applicable.
9.1i 9.1j 9.1k 9.1l	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1):	Not determined. Not applicable. Not applicable.
9.1i 9.1j 9.1k	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density:	Not determined. Not determined. Not applicable.
9.1i 9.1j 9.1k 9.1l	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1):	Not determined. Not applicable. Not applicable.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies):	Not determined. Not applicable. Not applicable. Not determined. Not determined. Not determined. No data available.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water):	Not determined. Not applicable. Not applicable. Not determined. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C):	Not determined. Not applicable. Not applicable. Not determined. Not determined. Not determined. No data available. Not determined. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water):	Not determined. Not applicable. Not applicable. Not determined. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C):	Not determined. Not applicable. Not applicable. Not determined. Not determined. No data available. Not determined. Not determined. Not determined. Not determined. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity:	Not determined. Not applicable. Not applicable. Not determined. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties:	Not determined. Not applicable. Not applicable. Not determined. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties:	Not determined. Not applicable. Not applicable. Not determined. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties:	Not determined. Not applicable. Not applicable. Not determined. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information:	Not determined. Not applicable. Not applicable. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties:	Not determined. Not applicable. Not applicable. Not determined. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters:	Not determined. Not applicable. Not applicable. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters:	Not determined. Not applicable. Not applicable. Not determined. No data available. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters:	Not determined. Not applicable. Not applicable. Not determined. No data available. Not determined. Not not determined. Not not determined. None. None.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity:	Not determined. Not applicable. Not applicable. Not determined. No data available. Not determined. Not none. None.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability:	Not determined. Not applicable. Not applicable. Not determined. No data available. Not determined. Stable under normal temperature conditions.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity:	Not determined. Not applicable. Not applicable. Not determined. No data available. Not determined. Not none. None.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2 10.3	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. Not determined. Not determined. None. None. None. Hone.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. Not determined. None. None. None. Avoid exposure to high temperatures or direct sunlight. Hygroscopic;
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2 10.3 10.4	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. None. None. None. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2 10.3 10.4	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. Not determined. None. None. None. Avoid exposure to high temperatures or direct sunlight. Hygroscopic;
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2 10.3 10.4	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. None. None. None. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2 10.3 10.4	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. None. None. None. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2 10.3 10.4	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. None. None. None. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.2 9.2a Section 10.1 10.2 10.3 10.4 Section	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products:	Not determined. Not applicable. Not applicable. Not determined. None. None. None. None. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 9.2a Section 10.1 10.2 10.3 10.4	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products:	Not determined. Not applicable. Not applicable. Not determined. None. None. None. None. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.2 9.2a Section 10.1 10.2 10.3 10.4 Section	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. None. None. None. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available. Because of small quanity, the health hazard is small. Knowledge about
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 10.2 10.3 10.4 10.5 10.6 Sectior	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. None. None. None. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available. Because of small quanity, the health hazard is small. Knowledge about health hazard is incomplete.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 10.2 10.3 10.4 10.5 10.6 Sectior 11.1	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name:	Not determined. Not applicable. Not applicable. Not determined. None. None. None. None. Brace of small quanity, the health hazard is small. Knowledge about health hazard is incomplete. 7-aminoactinomycin D
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 10.2 10.3 10.4 10.5 10.6 Sectior	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. Not determined. None. None. None. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available. Because of small quanity, the health hazard is small. Knowledge about health hazard is incomplete.
9.1i 9.1j 9.1k 9.1l 9.1n 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.1t 9.2 10.1 10.2 10.3 10.4 10.5 10.6 Sectior 11.1 11.1a 11.1b	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity:	Not determined. Not applicable. Not applicable. Not determined. None. None. None. None. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available. Because of small quanity, the health hazard is small. Knowledge about health hazard is incomplete. 7-aminoactinomycin D No specific data available. See Section 2 for classification.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.21 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. None. None. None. None. Biable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available. Because of small quanity, the health hazard is small. Knowledge about health hazard is incomplete. 7-aminoactinomycin D No specific data available. See Section 2 for classification. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.21 10.1 10.2 10.3 10.4 10.5 10.6 Sectior 11.1 11.1a 11.1b 11.1c 11.1d	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation:	Not determined. Not applicable. Not applicable. Not determined. No data available. Not determined. None. None. None. None. None. Because of small quanity, the health hazard is small. Knowledge about health hazard is incomplete. T-aminoactinomycin D No specific data available. See Section 2 for classification. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.21 10.1 10.2 10.3 10.4 10.5 10.6 Section 11.1 11.1a 11.1b 11.1c	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation:	Not determined. Not applicable. Not applicable. Not determined. Not not determined. None. None. None. None. Biable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available. Because of small quanity, the health hazard is small. Knowledge about health hazard is incomplete. 7-aminoactinomycin D No specific data available. See Section 2 for classification. Not determined.
9.1i 9.1j 9.1k 9.1l 9.1m 9.1n 9.1n 9.1o 9.1p 9.1q 9.1r 9.1s 9.21 10.1 10.2 10.3 10.4 10.5 10.6 Sectior 11.1 11.1a 11.1b 11.1c 11.1d	Flammability (solid, gas): Upper/lower flammability or explosive limits: Vapor pressure: Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water): Auto-ignition temperature (°C): Decomposition temperature (°C): Viscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters: 10: Stability and reactivity Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: 11: Toxicological information Information on toxicological effects: Name: Acute toxicity: Skin corrosion/irritation: Serious eye damage/irritation:	Not determined. Not applicable. Not applicable. Not determined. Not data available. Not determined. None. None. None. None. Bo data available. Stable under normal temperature conditions. Hazardous polymerization will not occur. Avoid exposure to high temperatures or direct sunlight. Hygroscopic; keep container tightly closed. Strong oxidizing substances. Strong acids. Strong bases. No data available. Because of small quanity, the health hazard is small. Knowledge about health hazard is incomplete. 7-aminoactinomycin D No specific data available. See Section 2 for classification. Not determined. Not determined.

7-Aminoactinomycin D SDS; Doc# F17-5121-2-B; Effective: 08/04/2017; Supersedes: F17-5121-2-A; Page 5 of 7

11.1g		
	Carcinogenicity:	No specific data available. See Section 2 for classification.
11.1h	Reproductive toxicity:	No specific data available. See Section 2 for classification.
11.1i	STOT-single exposure:	Not determined.
1.1j	STOT-repeated exposure:	Not determined.
11.1k	Aspiration hazard:	Not determined.
11.11	Information on the likely routes of exposure	May enter by ingestion; skin and/or eye contact; inhalation of
1 1. 11	(inhalation, ingestion, skin and eye contact):	vapors/mist/dust.
44.4		
11.1m	Ingestion:	Fatal if swallowed.
11.1n	Inhalation:	Not determined.
11.1o	Skin contact:	Not determined.
11.1p	Eye contact:	Not determined.
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	Carcinogenicity: May cause cancer if swallowed. Risk of cancer
	effects from short and long term exposure:	depends on duration and level of exposure.
	enects from short and long term exposure.	Teratogenicity: May damage the unborn child if swallowed.
44.4-	Niver seizel and a service of the delta for the service	
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.
11.1v	Mixtures:	Not applicable.
11.1w	Mixture vs. substance information:	Not applicable.
11.1w	Classification by National Toxicity Program (NTP):	Not classified.
11.1y	Classification by International Agency for Research	Not classified.
	on Cancer (IARC):	
11.1z	Classification by OSHA 13:	Not classified.
11.1ab	Other information:	None.
Section	n 12: Ecological information	
12.1	Toxicity:	
12.1a	Name:	7-aminoactinomycin D.
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:	
		No data available on mobility in soil.
12.5	Results of PBT and vPvB assessment:	No data available on mobility in soil. Not determined.
12.5	Results of PBT and vPvB assessment:	Not determined.
12.5 12.6	Results of PBT and vPvB assessment: Other adverse effects:	Not determined.
12.5 12.6 Section	Results of PBT and vPvB assessment: Other adverse effects: 13: Disposal considerations	Not determined. Not determined.
12.5 12.6	Results of PBT and vPvB assessment: Other adverse effects:	Not determined. Not determined. When handling waste, consideration should be made to the safety
12.5 12.6 Section	Results of PBT and vPvB assessment: Other adverse effects: 13: Disposal considerations	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as
12.5 12.6 Section 13.1	Results of PBT and vPvB assessment: Other adverse effects: 13: Disposal considerations Waste treatment methods:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste.
12.5 12.6 Section	Results of PBT and vPvB assessment: Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. Dispose of waste and residues in accordance with local authority
12.5 12.6 Section 13.1	Results of PBT and vPvB assessment: Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal,	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling
12.5 12.6 Section 13.1	Results of PBT and vPvB assessment: Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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
12.5 12.6 Section 13.1	Results of PBT and vPvB assessment: Other adverse effects: 13: Disposal considerations Waste treatment methods: Description of waste residues and information on their safe handling and methods of disposal,	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling
12.5 12.6 Sectior 13.1	Results of PBT and vPvB assessment: 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	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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
12.5 12.6 Section 13.1	Results of PBT and vPvB assessment: 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. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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
12.5 12.6 Section 13.1 13.1a	Results of PBT and vPvB assessment: 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	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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.
12.5 12.6 Section 13.1	Results of PBT and vPvB assessment: 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. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462
12.5 12.6 Section 13.1 13.1a Section 14.1	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462
12.5 12.6 Section 13.1 13.1a Section 14.1	Results of PBT and vPvB assessment: 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	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-
12.5 12.6 Section 13.1 13.1a Section 14.1	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D).
12.5 12.6 Section 13.1 13.1a	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-
12.5 12.6 Section 13.1 13.1a Section 14.1	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D).
12.5 12.6 Section 13.1 13.1a Section 14.1	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-
12.5 12.6 Section 13.1 13.1a Section 14.1	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2	Results of PBT and vPvB assessment: 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):	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1
12.5 12.6 Section 13.1 13.1a Section 14.1	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	Results of PBT and vPvB assessment: 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	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2	Results of PBT and vPvB assessment: 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	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	Results of PBT and vPvB assessment: 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)?:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	Results of PBT and vPvB assessment: 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)?:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	Results of PBT and vPvB assessment: 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	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II . No.
12.5 12.6 Section 13.1 13.1a 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	Results of PBT and vPvB assessment: 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?:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated at controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II . No.
12.5 12.6 Section 13.1 13.1a 13.1a 14.1 14.2 14.3 14.4 14.5 14.5a	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II No.
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	Results of PBT and vPvB assessment: 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	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II No.
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II No. No. None known. Not applicable.
12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II IMDG: II . No. No. None known. Not applicable.
12.5 12.6 Section 13.1 13.1a 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b	Results of PBT and vPvB assessment: 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:	Not determined. Not determined. When handling waste, consideration should be made to the safety precautions applying to handling of the product. Waste to be treated as controlled waste. 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. ADR/RID/ADN: 3462 IMDG: 3462 ADR/RID: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). IMDG: Toxins extracted from living sources, solid, NOS (7-aminoactinomycin D). ADR/RID/ADN: Class 6.1: toxic substances IMDG: Class 6.1 ADR/RID/ADN: II IMDG: II . No. No. None known. Not applicable.

7-Aminoactinomycin D SDS; Doc# F17-5121-2-B; Effective: 08/04/2017; Supersedes: F17-5121-2-A; Page 6 of 7

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture:	. Effective: 08/04/2017, Supersedes: F17-3121-2-A, Fage 6 01 7
15.1a	Regional safety, health and environmental regulations specific for the product in question:	
15.1b	USA SARA Components (such as 302/311/313):	This product is not listed in the SARA (Superfund Amendments and Reauthorization Act).
15.1c 15.1d	USA Massachusetts Right to Know: USA Pennsylvania Right to Know:	Not listed. 7-aminoactinomycin D (CAS # 7240-37-1) is listed.
15.1d 15.1e	USA New Jersey Right to Know:	7-aminoactinomycin D (CAS # 7240-37-1) is listed. 7-aminoactinomycin D (CAS # 7240-37-1) is listed.
15.1f	USA California Prop. 65 Components:	This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.
15.1g 15.1h	EU Regulation 1907/2006 {REACH}: Annex XIV substances subject to authorization:	Not listed.
15.1n 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 2000/21/EC, including amendments.
15.2	Chemical safety assessment:	No chemical safety assessment has been carried out.
15.2a	Other regulatory information:	None.
Section	n 16: Other information	
16.1	Other information:	
16.1a	Date of revision:	08/04/2017
16.1b	SDS number and revision:	F17-5121-2-B
16.1c 16.1d	Supersedes SDS number and revision: Changes made to the previous version of the SDS:	F17-5121-2-A Updated to comply with EC 1272/2008 CLP regulations, EC 830/2015.
16.1e	Key/legend to abbreviations and acronyms used in the SDS:	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.

		7-Aminoactinomycin D SDS; Doc# F17-5121-2-B	; Effective: 08/04/2017; Supersedes: F17-5121-2-A; Page 7 of 7
			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.
16.1f		tt of hazard statements and/or precautionary ents not written out in full elsewhere:	All statements were written out in full.
DISCL	DISCLAIMER: This information relates only to the specing in combination with any other materials of knowledge and belief, accurate and relial		fic material designated and may not be valid for such material used or in any process. Such information is, to the best of the company's ple as of the date indicated. However, no warranty guarantee or eliability, or completeness. It is the user's responsibility to satisfy mation for his own particular use.
		E	ND OF SDS



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

	on 1: Identification of the substance/mixture and of the	
1.1	Product identifier:	10X Assay Buffer
1.1a	Other means of identification:	
1.1b	Alternative product name(s)/ synonyms:	10X AB, AB, MitoPT Assay Buffer, Assay Buffer
1.1c	Product number/Catalog #(s):	685, 686, 6161, 6259
1.1d	Internal identification:	10X AB, AB, MitoPT Assay Buffer, Assay 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:	To recourse only. Not for use in utagricous procedures.
1.2a	Brief description of what the substance or mixture is	A buffered diluent for use in research laboratory techniques.
1.24	intended to do:	7 ballored allacit for account in recocarcit laboratory testiniques.
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
1.3e 1.3f	Website:	www.immunochemistry.com
	Email:	help@immunochemistry.com
1.3g		
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	
	Classification of the substance or mixture:	
2.1		No. to the second secon
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
	health, and environmental effects:	Sections 4, 9-12.
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:	Contains sodium chloride and phosphates which are below the
		threshold for hazard classification, but may cause redness and
		irritation after prolonged exposure.
Sectio	on 3: Composition/information on ingredients	
	on 3: Composition/information on ingredients Substance:	Item is a mixture therefore Section 3.1 is not applicable; see Section
		Item is a mixture therefore Section 3.1 is not applicable; see Section 3.2.
3.1		· ·
3.1	Substance:	3.2.
3.1	Substance: Mixture:	3.2.
3.1	Substance: Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are	3.2.
3.1	Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels:	3.2. Item is a mixture.
3.1	Substance: Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are	3.2.
3.1	Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels:	3.2. Item is a mixture.
3.1 3.2 Sectio	Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels: 3.2a Chemical identity: on 4: First aid measures	3.2. Item is a mixture. No ingredients identified for reporting in this section.
3.1 3.2 Sectio	Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels: 3.2a Chemical identity:	3.2. Item is a mixture. No ingredients identified for reporting in this section. If concerned, get medical attention/advice and provide physician with
3.1 3.2 Sectio	Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels: 3.2a Chemical identity: on 4: First aid measures	3.2. Item is a mixture. 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
3.1 3.2 Sectio 4.1	Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels: 3.2a Chemical identity: on 4: First aid measures Description of first aid measures:	3.2. Item is a mixture. 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 give anything to an unconscious person.
3.1 3.2 Sectio	Mixture: The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels: 3.2a Chemical identity: on 4: First aid measures	3.2. Item is a mixture. 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 Assay Buffer SDS; Doc# F17-685-2-D; Effective: 05/26/2017; Supersedes: F17-685-2-C; Page 2 of 6

6.4	Reference to other sections:	Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapour. Refer to Sections 8 and 13 for additional information.
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
6.2	precautions, protective equipment and emergency procedures: Environmental precautions:	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.
6.1c	Advice for emergency responders; personal	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
		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
6.1b	Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:	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,
6.1a	emergency procedures: 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
6.1	Personal precautions, protective equipment, and	Use protective equipment appropriate for surrounding materials.
Soction	on 6: Accidental release measures	<u> </u>
5.3a 5.3b	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 in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.3	Advice for firefighters:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.2c	Protective measures in fire:	Use protective equipment appropriate for surrounding materials.
5.2a 5.2b	Hazardous combustion products: Unusual fire & explosion hazards:	None under normal conditions. No unusual fire or explosion hazards noted.
5.10	Special hazards arising from the substance or mixture:	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use.
5.1a 5.1b	Suitable extinguishing media: Unsuitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide. None known.
5.1	Extinguishing media:	This product is not flammable. Use fire-extinguishing media appropriate for the surrounding materials.
Section	on 5: Firefighting measures	- processing a processing
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal protective equipment.
4.2d 4.3	Ingestion: Indication of any immediate medical attention and special treatment needed:	May cause discomfort if swallowed. No specific first aid measures noted, but first aid may still be required in case of accidental exposure, inhalation, or ingestion of this product. If in doubt, get medical attention promptly!
4.2c	Eye contact:	May cause temporary eye irritation.
4.2a 4.2b	Inhalation: Skin contact:	May cause coughing or mild irritation. Prolonged skin contact may cause redness and mild irritation.
4.2	Most important symptoms and effects, both acute and delayed:	Contains sodium azide, sodium chloride, and phosphates which are below the threshold for hazard classification, but may cause redness and irritation after prolonged exposure.
4.1 u	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.
4.1d	Ingestion:	Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK
4.1c	Eye contact:	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. Remove any contaminated

10X Assay Buffer SDS; Doc# F17-685-2-D; Effective: 05/26/2017; Supersedes: F17-685-2-C; Page 3 of 6

Continu	n 7. Handling and storage	
7.1	n 7: Handling and storage Precautions for safe handling:	Do not handle until all safety precautions have been read and
7.1	Trecautions for safe nanding.	understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site.
		Keep away from sources of ignition.
7.1a	Prevent handling of incompatible substances or mixtures:	Avoid contact with strong acids and strong 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 incompatibilities:	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. 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.
	n 8: Exposure controls/personal protection	
8.1	Control parameters:	Notice as activated forms
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.	Not in respirable form.
8.1b 8.1c	Appropriate engineering controls: Individual protection measures, such as personal protective equipment:	. Wear gloves, protective goggles, and lab coat.
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 2~	Ventilation controls:	Provide adequate ventilation.
8.2c		
8.2d	Reference to other sections:	Refer to Section 5 for additional information.
8.2d 8.2e	Eye/face protection:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing.
8.2d 8.2e 8.2f	Eye/face protection: Skin protection:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact.
8.2d 8.2e 8.2f 8.2g	Eye/face protection: Skin protection: Hand protection:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact.
8.2d 8.2e 8.2f 8.2g 8.2h	Eye/face protection: Skin protection: Hand protection: Respiratory equipment:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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).
8.2d 8.2e 8.2f 8.2g 8.2h	Eye/face protection: Skin protection: Hand protection:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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.
8.2d 8.2e 8.2f 8.2g 8.2h	Eye/face protection: Skin protection: Hand protection: Respiratory equipment:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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).
8.2d 8.2e 8.2f 8.2g 8.2h	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash
8.2d 8.2e 8.2f 8.2g 8.2h 8.2i 8.2j	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection: Hygiene measures:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated
8.2d 8.2e 8.2f 8.2g 8.2h 8.2i 8.2j	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection: Hygiene measures: Thermal hazards: Environmental exposure controls:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated None known under normal conditions of use.
8.2d 8.2e 8.2f 8.2g 8.2h 8.2i 8.2j	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection: Hygiene measures: Thermal hazards: Environmental exposure controls: n 9: Physical and chemical properties Information on basic physical and chemical	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated None known under normal conditions of use.
8.2d 8.2e 8.2f 8.2g 8.2h 8.2i 8.2j 8.2i 8.2j	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection: Hygiene measures: Thermal hazards: Environmental exposure controls: n 9: Physical and chemical properties Information on basic physical and chemical properties:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated None known under normal conditions of use. Not determined.
8.2d 8.2e 8.2f 8.2g 8.2h 8.2i 8.2j 8.2i 8.2j Section 9.1	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection: Hygiene measures: Thermal hazards: Environmental exposure controls: n 9: Physical and chemical properties Information on basic physical and chemical properties: Appearance (physical state, color, etc.):	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated None known under normal conditions of use. Not determined.
8.2d 8.2e 8.2f 8.2g 8.2h 8.2i 8.2j 8.2i 8.2j Section 9.1 9.1a 9.1b	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection: Hygiene measures: Thermal hazards: Environmental exposure controls: n 9: Physical and chemical properties Information on basic physical and chemical properties: Appearance (physical state, color, etc.): Odor:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated None known under normal conditions of use. Not determined.
8.2d 8.2e 8.2f 8.2g 8.2h 8.2i 8.2j 8.2i 8.2j Section 9.1	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection: Hygiene measures: Thermal hazards: Environmental exposure controls: n 9: Physical and chemical properties Information on basic physical and chemical properties: Appearance (physical state, color, etc.):	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated None known under normal conditions of use. Not determined.
8.2d 8.2e 8.2f 8.2g 8.2h 8.2i 8.2i 8.2j 8.2k 8.2l Section 9.1 9.1a 9.1b 9.1c	Eye/face protection: Skin protection: Hand protection: Respiratory equipment: Other protection: Hygiene measures: Thermal hazards: Environmental exposure controls: n 9: Physical and chemical properties Information on basic physical and chemical properties: Appearance (physical state, color, etc.): Odor: Odor: Odor threshold:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing. Wear apron or protective clothing in case of contact. Use suitable protective gloves if risk of skin contact. 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. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated None known under normal conditions of use. Not determined.

10X Assay Buffer SDS; Doc# F17-685-2-D; Effective: 05/26/2017; Supersedes: F17-685-2-C; Page 4 of 6

0.1~		tive: 05/26/2017; Supersedes: F17-685-2-C; Page 4 of 6
9.1g	Flash point (°C):	Not applicable.
9.1h 9.1i	Evaporation rate: Flammability (solid, gas):	Not determined. 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.
Continu	40. Stability and reactivity	
10.1	10: Stability and reactivity Reactivity:	No data available
10.1	Chemical stability:	No data available. Stable under normal temperature conditions.
10.2	Possibility of hazardous reactions:	Hazardous polymerization: will not polymerize.
10.4	Conditions to avoid:	To avoid product degradation, avoid exposure to high temperatures or
		direct sunlight or light.
10.5	Incompatible materials:	No data available.
10.6	Hazardous decomposition products:	None under normal conditions.
	11: Toxicological information	
11.1	Information on toxicological effects:	
11.1a	Name:	10X Assay Buffer
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 11.1h	Carcinogenicity: Reproductive toxicity:	Not determined. Not determined.
11.11i	STOT-single exposure:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1k	Aspiration hazard:	Not determined.
11.11	Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):	May enter by skin and/or eye contact; inhalation of vapors/mist/dust.
11.1m 11.1n	Ingestion: Inhalation:	May cause discomfort if swallowed. In high concentrations, vapors may irritate throat and respiratory
	militari.	system and cause coughing.
11.1o	Skin contact:	Liquid may irritate skin and cause redness.
11.1p	Eye contact:	Spray and vapor in the eyes may cause irritation and smarting.
11.1q	Symptoms related to the physical, chemical and toxicological characteristics:	No specific symptoms noted.
11.1r	Delayed and immediate effects as well as chronic effects from short and long term exposure:	Not determined.
11.1s	Numerical measures of toxicity (such as acute toxicity estimates):	Not 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 on Cancer (IARC):	Not classified.
11.1z	Classification by OSHA 13:	Not classified.
11.1ab	Other information:	None.
	12: Ecological information	
12.1	Toxicity:	
12.1a	Name:	10X Assay 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 12.4	Bioaccumulative potential:	No data available on bioaccumulation. The product is soluble in water.
12.4	Mobility in soil: Results of PBT and vPvB assessment:	The product is soluble in water. Not determined.
12.5	NESULIS OFFDE AND VEVD ASSESSIBLETT.	NOT UCTAININGU.

10X Assay Buffer SDS; Doc# F17-685-2-D; Effective: 05/26/2017; Supersedes: F17-685-2-C; Page 5 of 6

	13: Disposal considerations	
3.1	Waste treatment methods:	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
3.1a	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	
4.1	UN number:	Not applicable.
4.2	UN proper shipping name:	Not applicable.
4.3	Transport hazard class(es):	Not applicable.
4.4	Packing group:	Not applicable.
4.5	Environmental hazards:	
4.5a	Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?:	No.
4.5b	Is it a marine pollutant according to the IMDG code?:	No.
4.6	Special precautions for user:	None known.
4.7	Transport in bulk according to Annex II of MARPOL and the IBC code:	Not applicable.
14.7a 14.7b	Other information: Classification for other modes of transport:	The product is not considered a dangerous good for transport. Contact supplier.
5ection 15.1	15: Regulatory information Safety, health and environmental	
10.1	regulations/legislation specific for the substance or mixture:	
5.1a	Regional safety, health and environmental	
J	regulations specific for the product in question:	
5.1b	USA SARA Components (such as 302/311/313):	Not listed.
5.1c	USA Massachusetts Right to Know:	Not listed.
5.1d	USA Pennsylvania Right to Know:	Not listed.
5.1e	USA New Jersey Right to Know:	Not listed.
5.1f 5.1g	USA California Prop. 65 Components: EU Regulation 1907/2006 {REACH}:	Not listed.
5.1g 5.1h	Annex XIV substances subject to authorization:	Not listed.
5.1i	Substances of very high concern:	Not listed.
5.1j	Approved code of practice:	Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.
5.1k	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	Chemical safety assessment:	Not required.
5.2a	Other regulatory information:	None.
Section 16.1	16: Other information Other information:	
6.1 a	Date of revision:	26-May-2017
6.1b	SDS number and revision:	F17-685-2-D
6.1c	Supersedes SDS number and revision:	F17-685-2-C
6.1d	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 the SDS:	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.

Full text of hazard statements and/or precautionary statements not written out in full elsewhere: MER: This information relates only to the specif	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. All statements were written out in full.
	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.
	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.
	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.
	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. STOT-SE Specific Target Organ Toxicity - Single Exposure.
	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.
	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.
	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.
	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.
	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.
	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.
	OSHA Occupational Safety and Health Administration (USA). PBT Persistent, Bioaccumulative, and Toxic. PEL Permissible Exposure Limit. RID The Regulations concerning the International Carriage of
	OSHA Occupational Safety and Health Administration (USA). PBT Persistent, Bioaccumulative, and Toxic.
	OSHA Occupational Safety and Health Administration (USA).
	ΩEL Ωccupational Expocure Limit
	Pollution From Ships, 1973 as modified by the Protocol of 1978.
	MARPOL 73/78 International Convention for the Prevention of
	LogPow logarithm of the octanol/water partition coefficient.
	LC50 Median lethal concentration. LD50 Median lethal dose.
	IMDG International Maritime Dangerous Goods.
	IC50 Half maximal inhibitory concentration.
	IBC Intermediate Bulk Container.
	IATA International Air Transport Association.
	Chemicals. H Statement GHS Hazard statement.
	GHS Globally Harmonized System of Classification and Labelling of
	EU European Union.
	ELINCS European List of Notified Chemical Substances.
	Substances.
	with the Control of Substances Hazardous to Health Regulations. EINECS European Inventory of Existing Commercial chemical
	EH40 Resource containing the list of workplace exposure limits for u
	EC50 Half maximal effective concentration.
	EC European Commission.
	COD Chemical Oxygen Demand.
	CLP Classification, Labelling and Packaging. CMR Carcinogen, Mutagen or Reproductive toxicant.
	10X Assay Buffer SDS; Doc# F17-685-2-D; Effet

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

END OF SDS