

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

1.1	Product identifier:	MitoPT® TMRE
I.1a	Other means of identification:	
.1b	Alternative product name(s)/ synonyms:	TMRE; tetramethylrhodamine ethyl ester perchlorate.
.1c	Product number/Catalog #(s):	6254
.1d	Internal identification:	TMRE; tetramethylrhodamine ethyl ester perchlorate
.2	Relevant identified uses of the substance or	For research use only. Not for use in diagnostic procedures.
	mixture and uses advised against:	,,
.2a	Brief description of what the substance or mixture is	Mitochondrial stain and potentiometric dye for cellular research.
	intended to do:	
.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
.3f	Website:	www.immunochemistry.com
.3g	Email:	help@immunochemistry.com
.3h	Contact person at ICT:	Quality Documentation Department
.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
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	n 2: Hazards identification	
.1	Classification of the substance or mixture:	Outstand
.1a	Product is a:	Substance. Acute Tox. 4 (oral) H302.
2.1b	Classification according to (EC) No. 1272/2008	Acute Tox. 4 (oral) H302.  Acute Tox. 4 (inhalation) H332.
	{CLP}:	Skin Irrit. 2 H315.
		Eye Irrit. 2A H319.
2.1c	The most important adverse physiochemical, human	Refer to Sections 9-12.
2.10	health, and environmental effects:	Refer to Sections 9-12.
2.2	Label elements:	
2.2a	GHS label elements, including precautionary	
<b>_</b> u	statements:	•
2.2b	Contains:	
2.2c	Labeling in accordance with (EC) No. 1272/2008:	<u> </u>
2.2d	Hazard Pictograms (Hazard Symbols):	
		<b>(!)</b>
		GHS07 Exclamation mark.
2.2e	Signal word:	Warning.
2.2f	Hazard statements:	H302 Harmful if swallowed.
		H315 Causes skin irritation.
		H319 Causes serious eye irritation.
		H332 Harmful if inhaled.
.2g	Precautionary statements:	P261 Avoid breathing dust.
-		P264 Wash hands thoroughly after handling.
		P270 Do not eat, drink, or smoke when using this product.
		P271 Use only outdoors or in a well-ventilated area.
		P280 Wear protective gloves/protective clothing/eye protection/face
		protection.
		P301+P312+P330 IF SWALLOWED: Call a POISON CENTER or
		physician if you feel unwell. Rinse mouth.
		P302+P352+P362+P364 IF ON SKIN: Wash with plenty of soap and
		water. Take off contaminated clothing and wash it before reuse.
		P304+P340+P312 IF INHALED: Remove person to fresh air and kee
		at rest comfortable for breathing. Call a POISON CENTER or
		physician if you feel unwell.
		P305+P351+P338 IF IN EYES: Rinse cautiously with water for sever minutes. Remove contact lenses, if present and easy to do. Continue

MitoPT-TMRE SDS; Doc# F17-6254-3-A; Effective: 06/22/2017; Supersedes: F17-657-3-A; Page 2 of 7 rinsing. P332+P313 If skin irritation occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P501 Dispose of contents/container in accordance with all local, regional, national and international regulations. Supplementary precaution statements: None. No additional information available. Other hazards: Does the chemical meet the criteria for PBT or vPvB? Not applicable. Other hazards which do not result in classification: No information available. Section 3: Composition/information on ingredients Substance: Item is a substance. 3.1a Chemical identity: MitoPT TMRE 3.1b Common name, synonyms, etc.: Chemical formula: C<sub>26</sub>H<sub>27</sub>CIN<sub>2</sub>O<sub>7</sub> 3.1c CAS number and 3.1e % 3.1f Classification according to (EC) No. 1272/2008 {CLP}: other unique identifiers: 3.1d EC number: Concentration: 115532-52-0 None. 100% Acute Tox. 4, H302, H332 Skin Irrit, 2, H315 Eye Irrit. 2A, H319 Chemical identity of any impurity, stabilizing additive, None known. 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): Other information on the substance: Chemical Formula: C<sub>26</sub>H<sub>27</sub>CIN<sub>2</sub>O<sub>7</sub> Molecular Weight: 515 g/mol 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

2.2h

2.3a

2.3b

3.1g

3.1h

3.2

5.1a

5.1b

5.2

Suitable extinguishing media:

mixture:

Unsuitable extinguishing media:

Special hazards arising from the substance or

2.3

	hazardous and are present above their cut-off levels:	
	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 attention if any discomfort continues.
4.1c	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
4.1d	Ingestion:	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if any discomfort continues.
4.2	Most important symptoms and effects, both acute and delayed:	Refer to Sections 2 and 11 for most important known symptoms and effects.
4.2a	Inhalation:	Harmful if inhaled.
4.2b	Skin contact:	Prolonged skin contact may cause mild irritation.
4.2c	Eye contact:	Causes serious eye irritation.
4.2d	Ingestion:	Harmful 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.
Section	on 5: Firefighting measures	
5.1	Extinguishing media:	Use fire-extinguishing media appropriate for the surrounding materials.
J. I	Extinguishing inicula.	coo in conting include appropriate for the surrounding materials.

None known.

Water spray, foam, dry powder, or carbon dioxide.

Thermal decomposition can lead to release of toxic/corrosive gases

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Hazardous combustion products:   Carbon coxides, Nifrogen coxides (N/X), Phosgene.	F 0-	MitoPT-TMRE SDS; Doc# F17-6254-3-A; Effect	
5.36 Advice for firefighting procedures:  5.37 Advice for mon-emergency personnel; personal procedures:  5.38 Special firefighting procedures:  5.39 Special firefighting procedures:  5.30 Special firefighting procedures:  5.30 Special firefighting procedures:  5.31 Advice for surrounding materials.  6.32 Section 6: Accidental release measures  6.32 General release measures  6.33 General release measures:  6.4 Personal procedures:  6.5 Advice for non-emergency personnel; personal procedures:  6.5 Advice for non-emergency personnel; personal procedures:  6.6 Advice for non-emergency personnel; personal procedures:  6.7 Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:  6.8 Advice for non-emergency personnel; personal procedures:  6.9 Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:  6.1 Personal procedures:  6.2 Environmental precautions.  6.3 Methods and materials for containment and clean up:  6.4 Reference to other sections:  6.5 Methods and materials for containment and clean up:  6.6 Reference to other sections:  7.1 Precautions for safe handling:  7.1 Prevent handling and storage  7.1 Prevent handling of incompatible substances or mixtures:  6.1 Prevent handling of incompatible substances or mixtures:  6.2 Conditions for safe handling:  6.3 Methods and materials for containment and clean up:  6.4 Reference to other sections:  6.5 Denote the procedures:  6.6 Denote the procedure incompatible substances or mixtures:  6.7 Denote the procedure incompatible substances or mixtures:  6.8 Denote the procedure incompatible substances or mixtures:  6.9 Procedures:  6.10 Proportion for safe handling:  6.11 Prevent handling of incompatible substances or mixtures:  6.12 Prevent procedures:  6.2 Environmental precautions:  6.3 Denote the procedure in procedure in procedure in procedures:  6.4 Reference to other sections:  6.5 Prophylate in procedure in procedure in procedure in procedure in procedure in procedur	5.2a	Hazardous combustion products:	Carbon oxides, Nitrogen oxides (NOx), Phosgene.
Section 6: Advice for Irreflighters:   Keep away from heat, hot surfaces, sparks, open flames and other signition sources. No smoking.   No specific fireflighting procedure juven.   No specific mention juven juv			
Special firefighting procedures:   Special firefighting procedures:   Special firefighters:   Specia			
5.3b Special firefighting procedures:  5.3b Special protective equipment and precautions for firefighters:  5.3b Special protective equipment and precautions for firefighters:  5.3b Special protective equipment and precautions for firefighters:  5.3c Incompany of the product presents no special fire hazards in normal use. Keep away from heat, tho sturfaces, sparks, open flames and other ignition sources. No smoking.  5.3c Incompany of the procedures:  6.1 Personal precautions, protective equipment, and emergency procedures:  6.1 General release measures:  6.1 General release measures:  6.1 Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:  6.1 Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:  6.1 Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:  6.2 Advice for amergency responders; personal precautions; protective equipment and emergency procedures;  6.3 Advice for amergency responders; personal precautions; protective equipment and emergency procedures.  6.4 Advice for amergency responders; personal precautions; protective equipment and emergency procedures.  6.5 Environmental precautions:  6.6 Reference to other sections:  6.7 Environmental precautions:  6.8 Mothods and materials for containment and clean up:  6.9 Control materials for containment and clean up:  6.1 Reference to other sections:  6.2 Environmental precautions:  6.3 Mothods and materials for containment and clean up:  6.4 Reference to other sections:  6.5 Reference to other sections:  6.6 Reference to other sections:  6.7 Prevent handling and storage  7.1 Prevent handling of incompatible substances or mitter and procedures are procedured procedures.  7.1 Prevent handling of incompatible substances or mitter and procedures and procedures are procedures.  8.6 Conditions for safe storage, including any incompatibilities:  9. Do not allow the entire displace and eye or please in a sub	0.0	The state of the s	
firefighters:    apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from healt, hot surfaces, sparks, open flames and other ignition sources. No smoking.    Section 6: Accidental release measures	5.3a	Special firefighting procedures:	
Section 6: Accidental release measures	5.3b		apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open
Section 7: Handling and storage   Precautions, protective equipment, and energency procedures:			names and other ignition sources. No smoking.
Section 7: Handling and storage   Precautions, protective equipment, and energency procedures:	Section	n 6: Accidental release measures	
Care			Use protective equipment appropriate for surrounding materials
Septific emergency measures are required other than good laboratory hygiene and safety practices for spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency procedures:    Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:   Advice for non-emergency personnel; personal procedures:   Advice for emergency responders; personal procedures:   Advice for emergency procedures:   Advice for emergency procedures:   Advice for emergency responders; personal procedures:   Advice for emergency procedures   Advice for emergency procedures:   Advice for emergency procedures   Advice for emergency procedures:   Adv	0		The protocure equipment appropriate for currountaing materials.
precautions, protective equipment and emergency procedures:  a laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist. or gas. Evacuate personal 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 precautions, protective equipment and emergency procedures:  6.2 Environmental precautions:  6.3 Methods and materials for containment and clean up:  6.4 Reference to other sections:  6.5 Reference to other sections:  6.6 Reference to other sections:  6.7 Reference to other sections:  8 Reference to other sections:  8 Precautions for safe handling:  8 Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition.  7.1a Prevent handling of incompatible substances or mixtures:  7.1b Advice on general occupational hygiene:  Avoid contact with strong acids and strong oxidizers.  For research use only. Not for use in diagnostic procedures.  8 Prevent handling of incompatible substances or mixtures:  7.3 Specific end use(s):  8 Prevent handling of incompatible substances or mixtures:  8 Provent handling of incompatible substances or mixtures:  8 P		General release measures:	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).
precautions, protective equipment and emergency procedures:  6.2 Environmental precautions:  6.3 Methods and materials for containment and clean up:  6.4 Reference to other sections:  6.5 Reference to other sections:  6.6 Reference to other sections:  6.6 Reference to other sections:  6.7 Precautions for safe handling:  7.1 Prevent handling of incompatible substances or mixtures:  7.1a Prevent handling of incompatible substances or mixtures:  7.1b Advice on general occupational hygiene:  7.1 Conditions for safe storage, including any incompatibilities:  7.2 Conditions for safe storage, including any incompatibilities:  7.3 Specific end use(s):  8.1a Occupational exposure limits, such as chemical identity, standard, TWAS proportate engineering controls:  8.1a Occupational exposure limits, such as chemical identity, standard, TWAS proportate engineering controls:  8.1b Appropriate agineering controls:  8.1c Individual protection equipment (Pores, Innues (short term exposure limit), etc.: WELL = Workplace Exposure Institutes and protection equipment, equipment positions.  9 Do not handle until all safety precautions have been read and understood. Avoid creation of aeroso/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.  8 Verent handling of incompatible substances or mixtures:  8 Conditions for safe storage, including any incompatibilities:  8 Conditions for safe storage, including any incompatibility standard, TWA-8 hours of the substances of the substan	6.1b	precautions, protective equipment and emergency	laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if
6.3 Methods and materials for containment and clean up:  Contain any spills with dikes or absorbent materials to prevent migration and entry into sewers or water sources. Place in a suitable container for disposal in accordance with local waste regulations (see Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapor.  Refer to Section 7: Handling and storage  7.1 Precautions for safe handling:  Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition.  7.1a Prevent handling of incompatible substances or mixtures:  7.1b Advice on general occupational hygiene:  7.2 Conditions for safe storage, including any incompatibilities:  Conditions for safe storage, including any incompatibilities:  7.3 Specific end use(s):  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.  Store frozen. Refer to product label. Keep container tightly closed in a dry and well-wentillated 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.  Section 8: Exposure controls/personal protection  8.1 Control parameters:  Cocupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure limit), etc.: Wet Le Workplace Exposure Limit. Sk = can be absorbed through skin.  Appropriate engineering controls:  Individual protection measures, such as personal  Wear gloves, protective goggles, an	6.1c	precautions, protective equipment and emergency	avoid contact; use an approved supplied-air respirator, in case of
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.    Refer to Section 7: Handling and storage     Precautions for safe handling:    Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mistr/dust. Avoid inhalation of vapors/mistr/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			Do not allow to enter drains, sewers, or watercourses.
Section 7: Handling and storage   T.1   Precautions for safe handling:   Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition.   7.1a	6.3		
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	7.1a 7.1b 7.2 7.3 Section 8.1	Reference to other sections:  7: Handling and storage Precautions for safe handling:  Prevent handling of incompatible substances or mixtures: Advice on general occupational hygiene:  Conditions for safe storage, including any incompatibilities:  Specific end use(s):  8: Exposure controls/personal protection Control parameters: 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 =	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. Refer to Sections 8 and 13 for additional information.  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.  Avoid contact with strong acids and strong oxidizers.  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.  Store frozen. Refer to product label. 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.  For research use only. Not for use in diagnostic procedures.
	7.1a 7.1b 7.2 7.3 Section 8.1 8.1a	Reference to other sections:  7: Handling and storage Precautions for safe handling:  Prevent handling of incompatible substances or mixtures:  Advice on general occupational hygiene:  Conditions for safe storage, including any incompatibilities:  Specific end use(s):  8: Exposure controls/personal protection Control parameters: 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. Appropriate engineering controls:	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.  Refer to Sections 8 and 13 for additional information.  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.  Avoid contact with strong acids and strong oxidizers.  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.  Store frozen. Refer to product label. 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.  For research use only. Not for use in diagnostic procedures.

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8.1d	Safety symbols:	fective: 06/22/2017; Supersedes: F17-657-3-A; Page 4 of 7
8.2	Exposure controls:	
8.2a	Process conditions:	Provide eyewash station.
8.2b	Engineering controls:	Ensure that eyewash stations and safety showers are proximal to the workstation location.
8.2c	Ventilation controls:	Provide adequate ventilation.
8.2d	Reference to other sections:	Refer to Section 5 for additional information.
8.2e	Eye/face protection:	Wear approved chemical safety goggles where eye exposure is 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 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.
Section 9.1	n 9: Physical and chemical properties Information on basic physical and chemical properties:	·
9.1a 9.1b	Appearance (physical state, color, etc.): Odor:	Powder; dust, varying color.  No characteristic odor.
9.1c	Odor threshold:	No data available.
9.1d	pH:	Not applicable.
9.1e	Melting point/freezing point (°C):	No data available.
9.1f	Initial boiling point and boiling range:	No data available.
9.1g	Flash point (°C):	Not applicable.
9.1h	Evaporation rate:	Not applicable.
9.1i	Flammability (solid, gas):	No data available.
9.1j 9.1k	Upper/lower flammability or explosive limits:	No data available.  No data available.
9.11	Vapor pressure: Vapor density (Air =1):	No data available.
9.1m	Relative density:	No data available.
9.1n	Solubility(ies):	Soluble in organic solvents (such as dimethyl sulfoxide, DMSO);
0.10	Partition coefficient (N. actanol/water):	insoluble in water.
9.1o 9.1p	Partition coefficient (N-octanol/water): Auto-ignition temperature (°C):	No data available.  No data available.
9.1p 9.1q	Decomposition temperature (°C):	No data available.
9.1r	Viscosity:	No data available.
9.1s	Explosive properties:	No data available.
9.1t	Oxidizing properties:	No data available.
9.2	Other information:	Molecular weight: 515
9.2a	Other physical or chemical parameters:	No additional information available.
	n 10: Stability and reactivity	
10.1	Reactivity:	No data available.
10.2	Chemical stability:	Stable under recommended handling and storage conditions (see Section 7).
10.3	Possibility of hazardous reactions:	Hazardous polymerization: no data available.
10.4	Conditions to avoid:	Avoid exposure to high temperatures or direct sunlight.
10.5	Incompatible materials:	Strong oxidizing substances.
10.6	Hazardous decomposition products:	Fire creates: vapors/gases/fumes of: carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> ), nitrous gases (NOx), phosgene.
Section	n 11: Toxicological information Information on toxicological effects:	

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11.1a 11.1b	Name:	MitoPT TMRE
11.1b		
	Acute toxicity:	Oral: Harmful if swallowed.
		Inhalation: dust/mist: Harmful if inhaled.
11.1c	Skin corrosion/irritation:	Causes skin irritation.
11.1d	Serious eye damage/irritation:	Causes serious eye irritation.
11.1d	Respiratory or skin sensitization:	Harmful if inhaled.
11.1f	Germ cell mutagenicity:	Not determined.
11.1g	Carcinogenicity:	Not determined.
11.1h	Reproductive toxicity:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1j	STOT-repeated exposure:	Not determined.
11.1k	Aspiration hazard:	Not determined.
11.11	Information on the likely routes of exposure	May enter by ingestion; skin and/or eye contact; inhalation of
	(inhalation, ingestion, skin and eye contact):	vapors/mist/dust.
11.1m	Ingestion:	Harmful if swallowed.
11.1n	Inhalation:	Harmful if inhaled.
11.1o	Skin contact:	Causes skin irritation.
11.1p	Eye contact:	Causes serious eye irritation.
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	Not determined.
11.15	toxicity estimates):	not determined.
11.1t	Interactive effects:	Not determined.
11.1u	Absence of specific data:	Not applicable.
	Mixtures:	
11.1v		Not applicable.
11.1w	Mixture vs. substance information:	Not applicable.
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.
11.12 11.1ab	Other information:	None.
04	40. Factorial information	
	12: Ecological information	
12.1	Toxicity:	
12.1a	Name:	MitoPT TMRE.
12.1u		
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	Not determined.
12.1b <b>12.2</b>	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability:	Not determined. There are no data on the degradability of this product.
12.1b 12.2 12.3	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential:	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.
12.1b 12.2 12.3 12.4	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential: Mobility in soil:	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.
12.1b 12.2 12.3 12.4	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential: Mobility in soil:	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.
12.1b 12.2 12.3 12.4 12.5	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential: Mobility in soil: Results of PBT and vPvB assessment:	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.
12.1b 12.2 12.3 12.4 12.5	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential: Mobility in soil:	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.
12.1b 12.2 12.3 12.4 12.5 12.6	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential: Mobility in soil: Results of PBT and vPvB assessment: Other adverse effects:	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.
12.1b 12.2 12.3 12.4 12.5 12.6	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential: Mobility in soil: Results of PBT and vPvB assessment: Other adverse effects:  13: Disposal considerations	Not determined. There are no data on the degradability of this product. No data available on bioaccumulation. No data available. Not determined. No data available.
12.1b 12.2 12.3 12.4 12.5 12.6 Section	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential: Mobility in soil: Results of PBT and vPvB assessment: Other adverse effects:	Not determined. There are no data on the degradability of this product. No data available on bioaccumulation. No data available. Not determined. No data available. When handling waste, consideration should be made to the safety
12.1b 12.2 12.3 12.4 12.5 12.6 Section	Ecotoxicity (aquatic and terrestrial, where available): Persistence and degradability: Bioaccumulative potential: Mobility in soil: Results of PBT and vPvB assessment: Other adverse effects:  13: Disposal considerations Waste treatment methods:	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.
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12.1b 12.2 12.3 12.4 12.5 12.6 Section	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: Results of PBT and vPvB assessment: Other adverse effects:  13: Disposal considerations Waste treatment methods:  Description of waste residues and information on	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority
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12.1b 12.2 12.3 12.4 12.5 12.6 Section	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8
12.1b 12.2 12.3 12.4 12.5 12.6 Section	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling
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12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.
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12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.  Not applicable.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not applicable.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.  Not applicable.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not applicable.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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	Not determined.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not applicable.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  No.  No.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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.  There are no data on the degradability of this product.  No data available on bioaccumulation.  No data available.  Not determined.  No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product.  Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not applicable.  Not.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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. There are no data on the degradability of this product. No data available on bioaccumulation. No data available. Not determined. No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable. Not applicable. Not applicable. Not applicable. No. No. No. None known. Not applicable.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5a	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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. There are no data on the degradability of this product. No data available on bioaccumulation. No data available. Not determined. No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable. Not applicable. Not applicable. Not applicable. No.  No.  None known. Not applicable. The product is not considered a dangerous good for transport.
12.1b 12.2 12.3 12.4 12.5 12.6 Section 13.1 13.1a Section 14.1 14.2 14.3 14.4 14.5 14.5a 14.5b	Ecotoxicity (aquatic and terrestrial, where available):  Persistence and degradability: Bioaccumulative potential: Mobility in soil: 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. There are no data on the degradability of this product. No data available on bioaccumulation. No data available. Not determined. No data available.  When handling waste, consideration should be made to the safety precautions applying to handling of the product. Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.  Not applicable. Not applicable. Not applicable. Not applicable. No. No. No. None known. Not applicable.

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15.1	Safety, health and environmental	ctive: 06/22/2017; Supersedes: F17-657-3-A; Page 6 of 7
13.1	regulations/legislation specific for the substance	·
	or mixture:	
15.1a	Regional safety, health and environmental	None known.
	regulations specific for the product in question:	
15.1b	USA SARA Components (such as 302/311/313):	Not listed.
15.1c	USA Massachusetts Right to Know:	Not listed.
15.1d	USA Pennsylvania Right to Know:	Not listed.
15.1e	USA New Jersey Right to Know:	Not listed.
15.1f	USA California Prop. 65 Components:	Not listed.
15.1g 15.1h	EU Regulation 1907/2006 {REACH}: Annex XIV substances subject to authorization:	Not listed.
15.1ii	Substances of very high concern:	Not listed.
15.1i	Approved code of practice:	Classification and labeling of substances and preparations dangerous
,	r pprovou soud or praesioo.	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:	Not required.
15.2a	Other regulatory information:	None.
	16: Other information	
16.1	Other information:	
16.1a	Date of revision:	06/22/2017
16.1b 16.1c	SDS number and revision: Supersedes SDS number and revision:	F17-6254-3-A F17-657-3-A
16.1d	Changes made to the previous version of the SDS:	Updated to comply with EC 1272/2008 CLP regulations, EC 830/2015.
16.1e	Key/legend to abbreviations and acronyms used in	ACGIH American Conference of Governmental Industrial Hygienists.
10.10	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.
		In all 11 : Independent of the Manufacture of Dependent of Consider
		IMDG International Maritime Dangerous Goods.
1		LC50 Median lethal concentration.
		LC50 Median lethal concentration. LD50 Median lethal dose.
		LC50 Median lethal concentration. LD50 Median lethal dose. LogPow logarithm of the octanol/water partition coefficient.
		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
		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.
		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).
		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.
		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).

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			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		t of hazard statements and/or precautionary	All statements were written out in full.
		ents not written out in full elsewhere:	
DISCL	DISCLAIMER: This information relates only to the specific material designated and may not be valid for such material use in combination with any other materials or in any process. Such information is, to the best of the company' 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.		
		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 account account in ac	
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	

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6.4	Reference to other sections:	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 Section 13). Wash spill area thoroughly with plenty of soap and water.
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	
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	
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal protective equipment.
4.2d <b>4.3</b>	Ingestion: Indication of any immediate medical attention and special treatment needed:	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 4.2d	Eye contact:	May cause temporary eye irritation.  May cause discomfort if swallowed.
4.2a 4.2b	Skin contact:	Prolonged skin contact may cause redness and mild irritation.
4.2a	and delayed: Inhalation:	below the threshold for hazard classification, but may cause redness and irritation after prolonged exposure.  May cause coughing or mild irritation.
4.2	Most important symptoms and effects, both acute	advice from poison control center or medical professional. Get medical attention if any discomfort continues.  Contains sodium azide, sodium chloride, and phosphates which are
4.1d	Ingestion:	discomfort continues.  NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without
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
		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.

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vapors/mist/dust, Prevent contact with skin and eyes. Use appropersional protection optignment (PPE). Thoroughly wash hands an contaminated areas with water and soap before leaving the work. Responsible substances or mixtures.  7.1a   Prevent handling of incompatible substances or mixtures.  7.1b   Advice on general occupational hygienes:   Avoid contact with strong ands and strong oxidizers. Remove contaminated softing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follo good laboratory hygiene and safety practices.  8.   Provide in variety of the protection of the prote	Continu	n 7: Handling and aterage	
understood. Avoid creation of aerosof/mist/dust. Avoid inhabition is vapors/mist/dust. Prevent contact with shis and eyes, ble appropries personal protection equipment (PPE). Thoroughly wash hands an ontaminated areas with water and soop pelicor leaving the work. Keep away from sources of ignition.  7.1a Prevent handling of incompatible substances or more contaminated areas with water and soop pelicor leaving the work. Keep away from sources of ignition.  7.1b Advice on general occupational prygiene:  8.1c Conditions for safe storage, including any incompatibilities:  9.1c Control parameters:  9			Do not handle until all safety precautions have been read and
Prevent handling of incompatible substances or mixtures:   Advice on general occupational hygiene:	7.1	Trecautions for safe nanuming.	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.
mixtures:  Advice on general occupational hygiene:  Remove contaminated dothing and protective equipment before testing eating areas. Good personal hygiene is necessary. Follogood laboratory hygiene and safety practices.  Store in cool pace. Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. The opened must be carefully eventilated place. Containers which are opened must be carefully eventilated place. Containers which are determined and eventilated place. The place are shell of the place and eventilated place. The place are proposed of the place are proprieted opene			
Remove contaminated clothing and protective equipment below protective equipment below protection and safety practices.  7.2 Conditions for safe storage, including any incompatibilities:  7.3 Specific end use(s):  7.3 Specific end use(s):  7.5 Specific end use(s):  7.6 Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1 Control parameters:  8.1 Control parameters:  8.2 Exposure controls/personal protection  8.1 Control parameters:  8.1 Control parameters:  8.2 Not in respirable form.  8.3 Not in respirable form.  8.4 Not in respirable form.  8.5 Not in respirable form.  8.6 Not in respirable form.  8.7 Not in respirable form.  8.8 Process conditions:  8.9 Exposure controls:  8.1 Exposure controls:  8.2 Exposure controls:  8.3 Exposure controls:  8.4 Preview controls:  8.5 Exposure controls:  8.6 Exposure controls:  8.7 Exposure controls:  8.8 Exposure controls:  8.9 Exposure con	7.1a		
Incompatibilities:	7.1b	Advice on general occupational hygiene:	Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow
Section   S. Exposure controls/personal protection	7.2		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
State	7.3	Specific end use(s):	
State			
Not in respirable form.			
identify, standard, TWA-8 hours (time weighted average), STEL15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin.  8.10 Appropriate engineering controls:  8.11 Individual protection measures, such as personal protective equipment:  8.12 Safety symbols:  8.2 Exposure controls:  8.2a Process conditions:  8.2b Engineering controls:  8.2c Ventilation controls:  8.2d Reference to other sections:  8.2e Eyaface protection:  8.2e Eyaface protection:  8.2f Skin protection:  8.2f Skin protection:  8.2g Hand protection:  8.2g Hand protection:  8.2h Wear gloves, protective goggles, and lab coat.  Provide eyewash station.  8.2c Insure that eyewash stations and safety showers are proximal to workstation location.  Provide adequate ventilation.  Provide adequate ventilation.  Provide eyewash stations and safety showers are proximal to workstation location.  Provide adequate ventilation.  Refer to Section 5 for additional information.  Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of skin contact.  Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of skin contact.  Wear approved or protective coloring in case of contact.  Wear approved or protective coloring in case of contact.  Wear sports of the separator or protective coloring in case of contact.  Were risk assessment shows air-purifying respirators are appropruse a full-face respirator with multi-purpose combination (US) or the ABEK (EN 14387) respirator carridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full supplied air respirator. Use respirators and components tested an approved under appropriate government standards such as NIOS (US) or CEN (EU).  8.21 Other protection:  8.22 Error mental exposure controls:  Nord Error Mark AREAL Wash at the end of each work and before eating, smoking, and using the toiler. Promptly remove clothing that becomes cont			Net in a serial la ferra
Mear gloves, protective goggles, and lab coat.		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.
8.2 Exposure controls: 8.2 Process conditions: 8.2b Engineering controls: 8.2c Ventilation controls: 8.2d Reference to other sections: 8.2e Eye/face protection: 8.2f Skin protection: 8.2g Hand protection: 8.2h Respiratory equipment: 8.2h Respiratory equi		Individual protection measures, such as personal	. Wear gloves, protective goggles, and lab coat.
8.2 Exposure controls:  8.2a Process conditions:  8.2b Engineering controls:  8.2c Ventilation controls:  8.2d Reference to other sections:  8.2e Eye/face protection:  8.2f Skin protection:  8.2g Hand protection:  8.2h Respiratory equipment:  8.2h Respiratory equipment:  8.2h Where risk assessment shows air-purifying respirators are appropriate combination (US) or t ABEK (EN 14387) respirator cartridges as a backup to engineerin controls. Hygiene measures:  8.2i Other protection:  8.2i Wear approved under appropriate government standards such as NIOS (US) or CEN (EU).  8.2i Wear approved under appropriate government standards such as NIOS (US) or CEN (EU).  8.2i Other protection:  8.2i Other protection:  8.2i Other protection:  8.2i DO NOT SMOKE IN WORK AREA! Wash at the end of each worf and before eating, smoking, and using the toilet. Promptly remove clothing that becomes contaminated. Use appropriate skin cream prevent drying of skin. When using do not eat, drink, or smoke. W promptly with soap and water if skin becomes contaminated.  8.2k Thermal hazards:  8.2l Environmental exposure controls:  8.2l Information on basic physical and chemical properties  9.1 Information on basic physical and chemical properties  9.1 Appearance (physical state, color, etc.):  9.1c Odor:  9.1c Odor threshold:  9.1d DH:  9.1d DH:  9.1d DH:  9.1d Not determined.	8 1d		
Provide eyewash station.   Provide eyewash station.   Ensure that eyewash stations and safety showers are proximal to workstation location.			
Ensure that eyewash stations and safety showers are proximal to workstation location.			,
workstation location.			
Refer to Section 5 for additional information.			workstation location.
8.2e   Eye/face protection:   Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing.			
reasonably probable or face shield if risk of splashing.   8.2f			
8.2g Hand protection:  8.2h Respiratory equipment:  Where risk assessment shows air-purifying respirators are appropuse a full-face respirator with multi-purpose combination (US) or to ABEK (EN 14387) respirator cartridges as a backup to engineerin controls. If the respirator is the sole means of protection, use a full supplied air respirator. Use respirators and components tested an approved under appropriate government standards such as NIOS (US) or CEN (EU).  8.2i Other protection:  8.2j Hygiene measures:  DO NOT SMOKE IN WORK AREA! Wash at the end of each work and before eating, smoking, and using the toilet. Promptly remove clothing that becomes contaminated. Use appropriate skin cream prevent drying of skin. When using do not eat, drink, or smoke. Wear promptly with soap and water if skin becomes contaminated.  8.2k Thermal hazards:  8.2l Environmental exposure controls:  Not determined.  8.2l Information on basic physical and chemical properties:  9.1 Information on basic physical and chemical properties:  9.1 Appearance (physical state, color, etc.):  9.1a Appearance (physical state, color, etc.):  9.1b Odor:  No characteristic odor.  Not determined.  Not determined.  Not determined.  Not determined.  Not determined.			reasonably probable or face shield if risk of splashing.
Respiratory equipment:   Where risk assessment shows air-purifying respirators are appropuse a full-face respirator with multi-purpose combination (US) or to ABEK (EN 14387) respirator cartridges as a backup to engineerin controls. If the respirator is the sole means of protection, use a full supplied air respirator. Use respirators and components tested an approved under appropriate government standards such as NIOS (US) or CEN (EU).    8.2i			
controls. If the respirator is the sole means of protection, use a ful supplied air respirator. Use respirators and components tested an approved under appropriate government standards such as NIOS (US) or CEN (EU).  8.2i Other protection: Wear appropriate clothing to avoid skin contact.  B.2j Hygiene measures: DO NOT SMOKE IN WORK AREA! Wash at the end of each work and before eating, smoking, and using the toilet. Promptly remove clothing that becomes contaminated. Use appropriate skin cream prevent drying of skin. When using do not eat, drink, or smoke. W promptly with soap and water if skin becomes contaminated  8.2k Thermal hazards: None known under normal conditions of use.  8.2l Environmental exposure controls: Not determined.  Section 9: Physical and chemical properties  9.1 Information on basic physical and chemical properties:  9.1a Appearance (physical state, color, etc.): Liquid; colorless.  9.1b Odor: No characteristic odor.  9.1c Odor threshold: Not determined.  9.1d PH: 6.6-7.0.  9.1e Melting point/freezing point (°C): Not determined.			Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type
Hygiene measures:   DO NOT SMOKE IN WORK AREA! Wash at the end of each work and before eating, smoking, and using the toilet. Promptly remove clothing that becomes contaminated. Use appropriate skin cream prevent drying of skin. When using do not eat, drink, or smoke. W promptly with soap and water if skin becomes contaminated   None known under normal conditions of use.			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
and before eating, smoking, and using the toilet. Promptly remove clothing that becomes contaminated. Use appropriate skin cream prevent drying of skin. When using do not eat, drink, or smoke. W promptly with soap and water if skin becomes contaminated  8.2k Thermal hazards:  8.2l Environmental exposure controls:  None known under normal conditions of use.  Not determined.  Section 9: Physical and chemical properties  9.1 Information on basic physical and chemical properties:  9.1a Appearance (physical state, color, etc.):  9.1b Odor:  9.1c Odor threshold:  9.1d pH:  9.1d Melting point/freezing point (°C):  Not determined.  6.6-7.0.  Not determined.		Other protection:	
8.2l Environmental exposure controls:  Not determined.  Section 9: Physical and chemical properties  9.1 Information on basic physical and chemical properties:  9.1a Appearance (physical state, color, etc.): Liquid; colorless.  9.1b Odor: No characteristic odor.  9.1c Odor threshold: Not determined.  9.1d pH: 6.6-7.0.  9.1e Melting point/freezing point (°C): Not determined.	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
8.2l Environmental exposure controls:  Not determined.  Section 9: Physical and chemical properties  9.1 Information on basic physical and chemical properties:  9.1a Appearance (physical state, color, etc.): Liquid; colorless.  9.1b Odor: No characteristic odor.  9.1c Odor threshold: Not determined.  9.1d pH: 6.6-7.0.  9.1e Melting point/freezing point (°C): Not determined.	8.2k	Thermal hazards:	
9.1     Information on basic physical and chemical properties:     .       9.1a     Appearance (physical state, color, etc.):     Liquid; colorless.       9.1b     Odor:     No characteristic odor.       9.1c     Odor threshold:     Not determined.       9.1d     pH:     6.6-7.0.       9.1e     Melting point/freezing point (°C):     Not determined.			
9.1     Information on basic physical and chemical properties:     .       9.1a     Appearance (physical state, color, etc.):     Liquid; colorless.       9.1b     Odor:     No characteristic odor.       9.1c     Odor threshold:     Not determined.       9.1d     pH:     6.6-7.0.       9.1e     Melting point/freezing point (°C):     Not determined.			
9.1a     Appearance (physical state, color, etc.):     Liquid; colorless.       9.1b     Odor:     No characteristic odor.       9.1c     Odor threshold:     Not determined.       9.1d     pH:     6.6-7.0.       9.1e     Melting point/freezing point (°C):     Not determined.		Information on basic physical and chemical	1.
9.1bOdor:No characteristic odor.9.1cOdor threshold:Not determined.9.1dpH:6.6-7.0.9.1eMelting point/freezing point (°C):Not determined.	9.1a		Liquid: colorless.
9.1cOdor threshold:Not determined.9.1dpH:6.6-7.0.9.1eMelting point/freezing point (°C):Not determined.			
9.1d pH: 6.6-7.0. 9.1e Melting point/freezing point (°C): Not determined.			
9.1e Melting point/freezing point (°C): Not determined.			
	9.1e	Melting point/freezing point (°C):	Not determined.
	9.1f	Initial boiling point and boiling range:	<100°C @ 760 mm Hg.

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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 ASSESSITIENT.	NOT UCTAININGU.

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	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:	. No.
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.
	15: Regulatory information	
5.1	Safety, health and environmental	 
	regulations/legislation specific for the substance or mixture:	·
5.1a	Regional safety, health and environmental	
	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 5.1e	USA Pennsylvania Right to Know:	Not listed.  Not listed.
5.1e 5.1f	USA New Jersey Right to Know: USA California Prop. 65 Components:	Not listed.
5.1g	EU Regulation 1907/2006 {REACH}:	
15.1h	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.
15.1k 15.1l	Guidance notes: EU legislation references:	Workplace exposure limits EH40.  (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures {CLP Regulation}. EC 830/2015. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
15.2	Chemical safety assessment:	Not required.
5.2a	Other regulatory information:	None.
Section 16.1	16: Other information Other information:	
6.1a	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
16.1d	Changes made to the previous version of the SDS:	Reviewed and updated document control numbers.
16.1e	Key/legend to abbreviations and acronyms used in 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.
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	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.
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	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; Effer

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

**END OF SDS** 



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

	n 1: Identification of the substance/mixture and of t	
1.1	Product identifier:	CCCP
1.1a	Other means of identification:	
1.1b	Alternative product name(s)/ synonyms:	Carbonyl cyanide 3-chlorophenylhydrazone; [(3-Chlorophenyl)hydrazono]malononitrile. It is at 50 mM in DMSO.
1.1c	Product number/Catalog #(s):	5140, 6257, 6258
1.1d	Internal identification:	CCCP
1.2	Relevant identified uses of the substance or mixture and uses advised against:	For research use only. Not for use in diagnostic procedures.
1.2a	Brief description of what the substance or mixture is intended to do:	To depolarize mitochondrial membranes.
1.3	Details of the supplier of the SDS:	
1.3a	Name:	ImmunoChemistry Technologies, LLC (ICT)
1.3b	Address:	9401 James Avenue South, Suite 155
1.3c	City, State, Zip, Country	Bloomington, MN 55431-2500 USA
1.3d	Phone number:	1-800-829-3194 and 952-888-8788
1.3e	Fax number:	952-888-8988
1.3f	Website:	www.immunochemistry.com
1.3g	Email:	help@immunochemistry.com
1.3h	Contact person at ICT:	Quality Documentation Department
1.4	Emergency telephone number:	ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide; ICT hours are 9 am-5 pm central time USA, Monday through Friday (excluding holidays). Chemtrec 24-hour access within USA and Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.
	n 2: Hazards identification	
2.1	Classification of the substance or mixture:	Out at an an
2.1a	Product is a:	Substance.
2.1b	Classification according to (EC) No. 1272/2008 (CLP):	Flammable Liquids (Category 4) H227 (USA only) Skin Irritation (Category 2) H315 Eye Irritation (Category 2) H319
2.1c	The most important adverse physiochemical, human health, and environmental effects:	Refer to Sections 9-12.
2.2	Label elements:	
2.2a	GHS label elements, including precautionary statements:	
2.2b 2.2c	Contains: Labeling in accordance with (EC) No. 1272/2008:	[(3-Chlorophenyl)hydrazono]malononitrile <1% in Dimethyl sulfoxide.
2.2d	Hazard Pictograms (Hazard Symbols):	
		GHS07 Exclamation mark.
2.2e	Signal word:	Warning.
2.2f	Hazard statements:	H227 Combustible liquid (USA only). H315 Causes skin irritation.
2.2~	Propositionary etatements:	H319 Causes serious eye irritation. P210 Keep away from heat/hot surfaces/sparks/open flames/other
2.2g	Precautionary statements:	ignition sources. No smoking. P264 Wash hands/skin thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection.
		P302+P352 IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get modical advice/attention
		P313 Get medical advice/attention. P321a Specific treatment: see first aid advice on this label. P370+P378 In case of fire: use dry sand, dry chemical or alcoholresistant foam to extinguish.
		P403+P235 Store in a well-ventilated place. Keep cool.

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	CCCP SDS; [	Ooc# F17-5140-2-C; Effective:		des: F17-5140-2-B; Page 2 of 7
			P501 Dipose of co plant.	ntents/container to an approved waste disposal
2.2h	Supplementary precaution s	statements:	P332+P313 If skin	irritation occurs: get medical advice/attention. irritation persists: get medical advice/attention.
				off contaminated clothing and wash it before reuse.
2.3	Other hazards:	: : ( BBT B B		
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 available.	
2.30	Other nazards which do not	result in classification.	NO IIIIOIIIIalioii ava	anable.
Section	on 3: Composition/information	on on ingredients		
3.1	Substance:		Item is a substance	-
	3.1a Chemical identity:		[(3-Chlorophenyl)h CCCP;	ydrazono]malononitrile
	3.1b Common name, synonyms, etc.:  3.1c CAS number and other unique identifiers: 3.1d EC number:		Propanedinitrile, 2- Propanedinitrile, [( Carbonyl cyanide,	-[2-(3-chlorophenyl)hydrazinylidene]-; 3-chlorophenyl)hydrazono]-; 3-chlorophenylhydrazone; hyl)hydrazinylidene]propanedinitrile.  3.1f Classification according to (EC) No. 1272/2008 {CLP}: H301 + H311 + H331 Toxic if swallowed, in
	555-60-2	209-103-7		contact with skin, or if inhaled. Acute Tox 3. H315 Causes skin irritation. Skin Irrit. 2. H319 Causes serious eye irritation. Eye Irrit. 2. H335 May cause respiratory irritation. STOT SE 3.
3.1g	Chemical identity of any important individual constituent other constituent, which is itself classificate identifier, trade name, identifier.	er than the main assified and which ion (such as product	Product contains the w/w. DMSO CAS #67-6 DMSO EC #200-66	
3.1h	Other information on the sul		DMSO: Chemical formula:	C <sub>2</sub> H <sub>6</sub> SO; Molecular Weight: 78.13 g/mol
			CCCP: Chemical formula:	C <sub>9</sub> H <sub>5</sub> ClN <sub>4</sub> ; Molecular Weight: 204.62 g/mol
3.2	Mixture:		Itam is a substance	e, therefore Section 3.2 is not applicable; see
0.2	The chemical identity and concentration ranges of all inhazardous and are present	ngredients which are	Section 3.1.	c, therefore decition 6.2 is not applicable, see
	4 = 1			
Section 4.1	on 4: First aid measures  Description of first aid me	actives:	If concerned get n	nedical attention/advice and provide physician with
4.1	Description of first aid file	asures.	SDS information. Vigive anything by m	Wash contaminated clothing before reuse. Never nouth to an unconscious person.
4.1a	Inhalation:		fresh air and keep breathing, give arti	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. ion if any discomfort continues.
4.1b	Skin contact:		Wash skin thoroug continue to rinse for clothing and shoes attention if any disc	phly with soap and water for several minutes; or at least 15 minutes. Remove any contaminated and wash thoroughly before reuse. Get medical comfort continues.
4.1c	Eye contact:		sure to remove any Continue to rinse for discomfort continue	
4.1d	Ingestion:		FLUIDS! Rinse mo	UNCONSCIOUS PERSON VOMIT OR DRINK buth thoroughly. Do not induce vomiting without a control center or medical professional. Get medical comfort continues.
4.2	Most important symptoms and delayed:	and effects, both acute		
4.2a 4.2b	Inhalation: Skin contact:		None known. Causes skin irritati	on
4.20 4.2c	Eye contact:		Causes skin irritati	
4.2d	Ingestion:		None known.	
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	onder:		cally. Refer to Sections 5-8 for advice on personal

CCCP SDS; Doc# F17-5140-2-C; Effective: 08/17/2017; Supersedes: F17-5140-2-B; Page 3 of 7

Section 5: Firefighting measures  5.1 Extinguishing media: Unsutable exinguishing media: Unsutable exinguishing media: Unsutable exinguishing media: Water spray, foam, dry powder, or carbon dioxide. None known.  5.2 Special hazards arising from the substance or Combustible liquid. In a fine or if health, the container may burst. No Carbon flower and the combustion products: Carbon dioxide (CO2), Co2). None under normal conditions. 1 st. occurs of the container may burst. No Carbon flower under roam de conditions.  5.2 Protective measures in fire: Use protective acuptional appropriate for surrounding materials.  5.3 Advice for firefighters: Use protective suppriment and precautions for the firefighters: Carbon dioxide (CO2), CO2). None under normal conditions.  5.3 Special mediphray procedures: Use protective suppriment and emergency procedures:  5.4 Advice for increase measures  5.5 Section 6: Accidental release measures  6.1 Personal precautions, protective equipment, and emergency procedures:  6.1 Personal precautions, protective equipment and emergency procedures:  6.1 Personal precautions, protective equipment and emergency procedures:  6.1 Advice for non-emergency personnel; personal procedures.  6.2 Environmental precautions of the containment and emergency procedures:  6.3 Methods and materials for containment and emergency procedures:  6.4 Reference to other sections:  6.5 Environmental precautions:  6.6 Reference to other sections:  6.7 Personal precautions of the containment and clean up:  6.8 Continue of the containment and emergency procedures:  6.9 Personal procedures:  6.1 Personal precautions of the containment and emergency procedures:  6.2 Environmental precautions:  6.3 Methods and materials for containment and emergency procedures:  6.4 Reference to other sections:  6.5 Refer to Section 8). Remove all sources of ignition. Consult professional emergency personnel if concerned gives and eye or face protection to avoid contact, with six or inhabition of surface and eye or face protection of acco		CCCI 3D3, D0C# 1 17-3140-2-C, Ellective	protective equipment
Section 5.1a   Subble extinguishing media:   Use fire-extinguishing media products for the surrounding materials.   Value spray, form, dry powder, or carbon dioxide.   Value spray, form, dry powder, dry powde			protective equipment.
Section 5.1a   Subble extinguishing media:   Use fire-extinguishing media products for the surrounding materials.   Value spray, form, dry powder, or carbon dioxide.   Value spray, form, dry powder, dry powde	Saction	n 5: Firefighting measures	
Suitable extinguishing media:   Now frown.			Lico fire extinguiching modic engrapriete for the currounding materials
5.12 Drautiable extinguishing media: 5.2 Agriculture in a properties of mixture: 5.2 Hazardous combustion products: 5.2 Hazardous combustion products: 5.3 Agriculture in a product in case of fire, toxog gases may be formed of carbon monoxide (CO), carbon disolde (CO), co), when under normal conditions. 5.3 Advice for firefighters: 5.3 Advice in firefighting procedures: 5.3 Advice in firefighting procedures: 5.3 Special protective equipment and precautions for firefighters:  Section 6: Accidental release measures 6.1 Personal precautions, protective equipment, and emergency procedures:  Section 6: Accidental release measures 6.1 General release measures:  Section 6: Accidental release measures 6.2 General release measures:  Section 6: Accidental release measures:  Section 6: Accidental release measures:  Section 7: Advice for non-emergency personnel; personnel precautions, protective equipment and emergency procedures:  Section 8: Advice for non-emergency personnel; personnel precautions, protective equipment and emergency procedures:  Section 9: Advice for non-emergency personnel; personnel precautions, protective equipment and emergency procedures:  Section 9: Advice for non-emergency personnel; personnel precautions, protective equipment and emergency procedures:  Section 9: Advice for non-emergency personnel; personnel precautions, protective equipment and emergency personnel if concerned (see Section 8).  Advice for non-emergency personnel; personnal precautions, protective equipment and emergency personnel if concerned (see Section 8).  No specific emergency measures are required other than good aboratory hygiene and safety practices. Wars stable protective clothing, gloves and eye or face protection to avoid contract with skin, eyes, and			
mixture:  dangerous reactions known under normal conditions of use.  1. ace of fire, toxic gases may be formed of carbon monoxide (CO), carbon dixide (CO); CO). None under normal conditions.  No unusual fire or explosion hazards noted.  Protective measures in fire:  3. Advice for frierighters:  Special firefighting procedures:  No specific firefighting procedure given.  Wear full protective doubling, including self-contained breathing sparatus, if necessary. The product is combustible.  Section 6: Accidental release measures  6.1 Personal precautions, protective equipment, and emergency procedures:  Section 6: Accidental release measures:  Section 6: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures.  Section 6: Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:  Section 6: Advice for emergency personnel; personal precautions, protective equipment and emergency procedures:  Section 6: Advice for emergency personnel; personal precautions, protective equipment and emergency procedures:  Section 7: Advice for emergency personnel; personal precautions, protective equipment and emergency contains the protective equipment and procedures:  Section 7: Handling and storage  Section 7: Handling and storage  Prevent handling in compatible substances or mixtures:  Prevent handling and storage  Prevent handling of incompatible substances or mixtures:  7.1 Prevent handling of incompatible substances or mixtures:  Advice on general occupational hygiene:  Advice on general occupational hygiene:  Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mixtures. Avoid contact with sharin or also procedures.  Section 7: Handling and storage  Prevent handling of incompatible substances or mixtures:  Occupational exposure limits, such as chemical dentity standard. They have a decided the information of occupational hygiene:  Prevent handling of incompatible substances or mixtures:		Unsuitable extinguishing media:	None known.
Hazardous combustion products:	5.2	•	
carbon dioxide (CO <sub>2</sub> ; CO <sub>3</sub> ). None under normal conditions.  5.2b Protective measures in fire:  5.3c Advice for friefighters:  5.3d Special friefighting procedures:  5.3d Special friefighting procedures:  5.3d Special friefighting procedure given.  5.3d Special friefighting procedure given.  6.1e Special friefighting procedure given.  6.1e Accidental release measures  6.1e Personal precautions, protective equipment, and emergency procedures:  6.1e General release measures:  6.1a General release measures:  6.1b Advice for non-emergency personnel; personal precaudions, protective equipment and emergency procedure; procedures:  6.1b Advice for non-emergency personnel; personal precaudions, protective equipment and emergency procedures:  6.1c Advice for emergency presponders; personal precaudions, protective equipment and emergency procedures:  6.1e Advice for emergency responders; personal precaudions, protective equipment and emergency procedures:  6.1e Advice for emergency responders; personal precaudions, protective equipment and emergency procedures:  6.1e Advice for emergency responders; personal precaudions, protective equipment and emergency procedures:  6.2e Environmental precautions:  6.3e Environmental precautions:  6.4e Reference to other sections:  6.5e Environmental precautions:  6.6.4 Reference to other sections:  6.7.1b Advice for emergency responders; personal precaudions, protective equipment and emergency procedures:  6.8e Environmental precautions:  6.9e Environmental precautions:  6.10 Conditions for safe handling:  6.11 On a lalvo to enter drains, sewers, or watercourses.  6.12 Environmental precautions:  6.23 Personal precautions and to prevent may contamination. Consult professional emergency personal if concerned.  6.9e Environmental precautions:  6.10 Conditions for safe handling:  6.11 On the handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly water hierarchy in the vork site.	5.2a		
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5.3a Advice for firefighters: 5.3a Special protective equipment and precautions for firefighters: 5.3b Special protective equipment and precautions for firefighters:  Section 6: Accidental release measures 6.1 Personal precautions, protective equipment, and emergency procedures: 6.1a General release measures:  Section 6: Accidental release measures:  Section 7: Handling and storage  Precautions, protective equipment and emergency procedures:  Section 7: Handling of incompatible substances or mixtures:  Do not handle until all safety practical substances or mixtures:  Do not handle until all safety practical substances or mixtures:  Prevent handling of incompatible substances or mixtures:  Advice for safe storage, including any incompatibilities:  Section 8: Xposure controls/personal protection  Section 7: Control parameters:  Section 8: Xposure controls/personal protection  Section 7: Advice for safe storage, including any incompatibilities:  Section 8: Xposure controls/personal protection  Section 8: Xposu			
Saccion 6: Accidental release measures 6.1 Personal precatures 6.1 General release measures 6.2 General release measures 6.3 Advice for non-amergency personnel; personal precautions, protective equipment and emergency procedures 6.4 Advice for non-amergency personnel; personal precautions, protective equipment and emergency procedures 6.5 Advice for non-amergency personnel; personal precautions, protective equipment and emergency procedures 6.6 Advice for emergency personnel and emergency procedures 6.6 Advice for emergency responders; personal precautions, protective equipment and emergency procedures 6.6 Advice for emergency responders; personal precautions, protective equipment and emergency procedures 6.6 Advice for emergency responders; personal precautions, protective equipment and emergency procedures 6.6 Advice for emergency responders; personal precautions, protective equipment and emergency procedures 6.6 Advice for emergency responders; personal precautions, protective equipment and emergency procedures 6.6 Advice for emergency responders; personal precautions, protective equipment and emergency procedures 6.6 Advice for emergency responders; personal precautions, protective equipment and emergency procedures 6.6 Advice for emergency responders; personal precautions, protective equipment and emergency procedures 6.7 Denote the process protection to prove the process protection to protective equipment process protection to protective equipment process protection to protection to protection to p			Use protective equipment appropriate for surrounding materials.
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6.1a Personal precautions, protective equipment, and emergency procedures:  General release measures:  Advice for non-emergency personnel if concerned (see Section 8).  May personal chemergency personnel if concerned (see Section 8).  No specific emergency personnel if concerned (see Section 8).  No specific emergency personnel if concerned (see Section 8).  May personal clothing; uses an approved supplied-air respirator, in case of emergency clost or gene release.  General release measures are required other than good laborator development of personal protective clothing, gloves and eye or face protection t		firefighters:	apparatus, if necessary. The product is combustible.
6.1a General release measures:  Use protective equipment appropriate for surrounding materials. No specific emergency measures are required other than good laboratory hygine and safety practices. Wars suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8).  Advice for non-emergency personnel; personal procautions, protective equipment and emergency procedures:  Advice for emergency responders; personal procautions, protective equipment and emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control traction 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 traction to avoid contact with skin or concerned.  6.1c Advice for emergency responders; personal precautions, protective equipment and emergency procedures:  6.3 Methods and materials for containment and clean up:  6.4 Reference to other sections:  Contain any spills with dikes or absorbent materials to prevent migration and entry into sewers or vartes rouse. 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 varier. Avoid contact with skin or inhalation of spillage, dust, or vapor. Refer to Section 8 and 13 for additional information.  6.4 Reference to other sections:  Contain any spills with dikes or absorbent materials to prevent ingration and entry into sewers or vartes respirator, in case of emergency (also refer to Section 8).  Contain any spills with dikes or absorbent materials to prevent ingration and entry into sewers or vartes respirator, in case of emergency (also refer to Section 8).  Contain any spills with dikes or absorbent materials to preven			
General release measures:   Use protective equipment appropriate for surrounding materials. No specific emergency measures are required or than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel from concerned (see Section 8).	6.1		•
hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel; personal precautions, protective equipment and 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 see protection to add contact with skin, eyes, and personal cothing: use an approved supplied-air respirator, in case of emergency (also refer to Section 8).  Advice for emergency responders; personal precautions, protective equipment and emergency also refer to Section 8; and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned.  6.1 Environmental precautions:  6.2 Environmental precautions:  6.3 Methods and materials for containment and clean up:  6.4 Reference to other sections:  6.5 Reference to other sections:  6.6 Reference to other sections:  6.7 Reference to other sections:  8 Section 7: Handling and storage  7.1 Prevent handling:  7 Prevent handling of incompatible substances or mixtures:  8 Prevent handling of incompatible substances or mixtures:  9 Prevent handling of incompatible substances	6.1a		
diothing, gloves and eye or face protection. Consult professional emergency personnel fromcement (see Section 8). No specific emergency measures are required other than good laboratory hygine and safety practices. War suitable protective olohing/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 dustrinatis. 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.  6.1 Advice for emergency responders; personal precautions, protective equipment and emergency procedures:  6.2 Environmental precautions:  6.3 Methods and materials for containment and clean up:  On not allow to enter drains, sewers, or water courses.  Contain any spills with dikes or absorbent materials to prevent migration and entry into sewers or water sources. Place in a suitable container for disposal in accordance with local waste regulations (see Section 13). Wash spill area throughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapor.  8 Refer to Sections 8 and 13 for additional information.  8 Section 7: Handling and storage  7.1 Prevent handling of incompatible substances or mixtures:  7.1b Advice on general occupational hygiene:  Advice on general occupational hygiene:  7.1b Advice on general occupational hygiene:  Advice on general occupational hygiene:  Refer to Section 8. Prevent handling and protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from heat, hot surfaces. Sapske, open llames, and other ignition sources.  Avoid contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughy wash hands and contaminated areas with water			
6.1b Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:  Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:  Advice for emergency (also refer to Section 8). Remove all sources of ignition, in case of emergency (also refer to Section 8). Remove all sources of ignition, in case of emergency (also refer to Section 8). Remove all sources of ignition, in case of emergency (also refer to Section 8). Remove all sources of ignition, in case of emergency (also refer to Section 8). Remove all sources of ignition, in case of emergency contamination. Consult professional emergency personnel if concerned.  6.1c Advice for emergency responders; personal precautions, protective equipment and emergency procedures:  6.2 Environmental precautions:  6.3 Methods and materials for containment and clean up:  6.4 Reference to other sections:  6.5 Reference to other sections:  6.6 Reference to other sections:  6.7 Reference to other sections:  8 Precautions for safe handling:  8 Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapor/mist/dust. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapor/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and sopherole leaving the work site. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources.  7.1b Advice on general occupational hygiene:  7.1c Conditions for safe storage, including any incompatibilities:  7.1b Specific end use(s):  8 Prevent handling of incompatible substances or mixtures:  7.1c Conditions for safe storage, including any incompatibilities:  8 Prevent handling of incompatible substances or mixtures:  9 Do not eat, first, or smoke in work areas. Wash hands and contaminated areas with water and sophero leaving the work site. Keep away from heat, hot			
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7.1a Prevent handling of incompatible substances or mixtures:  7.1b Advice on general occupational hygiene:  7.1b Advice on general occupational hygiene:  7.2 Conditions for safe storage, including any incompatibilities:  7.3 Specific end use(s):  7.4 Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted)  Avoid contact with strong acids, strong oxidizing substances, strong reducing agents, acid chlorides and phosphorus halides.  Avoid contact with strong acids, strong oxidizing substances, strong reducing agents, acid chlorides and phosphorus halides.  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.  Refer to product label. 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.  For research use only. Not for use in diagnostic procedures.  Dimethyl sulfoxide: US WEEL Workplace Environmental Exposure Levels			
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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.  Refer to product label. 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.  Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted)  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.  Refer to product label. 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.  For research use only. Not for use in diagnostic procedures.  Section 8: Exposure controls/personal protection  B.1 Control parameters:  US WEEL Workplace Environmental Exposure Levels	7.1a		
Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices.  7.2 Conditions for safe storage, including any incompatibilities:  Refer to product label. 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):  Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted  Dimethyl sulfoxide: US WEEL Workplace Environmental Exposure Levels	7.1b		
entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices.  7.2 Conditions for safe storage, including any incompatibilities:  Refer to product label. 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):  Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted)  Dimethyl sulfoxide: US WEEL Workplace Environmental Exposure Levels		3	
good laboratory hygiene and safety practices.  7.2 Conditions for safe storage, including any incompatibilities:  Refer to product label. 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):  Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted  Dimethyl sulfoxide: US WEEL Workplace Environmental Exposure Levels			
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.  For research use only. Not for use in diagnostic procedures.  Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted  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.  For research use only. Not for use in diagnostic procedures.  Dimethyl sulfoxide: US WEEL Workplace Environmental Exposure Levels			good laboratory hygiene and safety practices.
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.  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted US WEEL Workplace Environmental Exposure Levels	7.2		
spills and release into the environment; keep away from watercourses.  7.3 Specific end use(s): For research use only. Not for use in diagnostic procedures.  Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted  Dimethyl sulfoxide: US WEEL Workplace Environmental Exposure Levels		incompatibilities:	
7.3 Specific end use(s):  Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted US WEEL Workplace Environmental Exposure Levels			
Section 8: Exposure controls/personal protection  8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted  Dimethyl sulfoxide: US WEEL Workplace Environmental Exposure Levels	7 2	Specific and usa(s):	
8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted US WEEL Workplace Environmental Exposure Levels	1.3	Specific end use(s):	For research use only, that for use in diagnostic procedures.
8.1 Control parameters:  8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted US WEEL Workplace Environmental Exposure Levels	Section	n 8: Exposure controls/personal protection	
8.1a Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted US WEEL Workplace Environmental Exposure Levels			
	8.1a	Occupational exposure limits, such as chemical	
average), STEL-15 minutes (short term exposure TWA: 250 PPM 8-hours			
		average), STEL-15 minutes (short term exposure	TWA: 250 PPM 8-hours

CCCP SDS; Doc# F17-5140-2-C; Effective: 08/17/2017; Supersedes: F17-5140-2-B; Page 4 of 7

1	CCCP SDS; Doc# F17-5140-2-C; Effective   limit), etc.: WEL = Workplace Exposure Limit. Sk =	[(3-Chlorophenyl)hydrazono]malononitrile:
	can be absorbed through skin.	None
8.1b	Appropriate engineering controls:	None
8.1c	Individual protection measures, such as personal	Wear gloves, protective goggles, and lab coat.
00	protective equipment:	giores, protestivo goggios, ana las esati
8.1d	Safety symbols:	
8.2	Exposure controls:	
8.2a	Process conditions:	Provide eyewash station.
8.2b	Engineering controls:	Ensure that eyewash stations and safety showers are proximal to the workstation location.
8.2c	Ventilation controls:	Provide adequate ventilation.
8.2d	Reference to other sections:	Refer to Section 5 for additional information.
8.2e	Eye/face protection:	Wear approved chemical safety goggles where eye exposure is 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 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.
	Tricima nazaras.	TWO IC KNOWN GNACH NORMAL CONGRESS OF GOC.
8.21	Environmental exposure controls:	Not determined.
8.21		Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for
8.2l Section	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in
Section 9.1	Environmental exposure controls:  1 9: Physical and chemical properties Information on basic physical and chemical properties:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).
8.2l  Section 9.1  9.1a  9.1b  9.1c	Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.
9.1a 9.1b 9.1c 9.1d	Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.
9.1a 9.1b 9.1c 9.1d 9.1e	Environmental exposure controls:  19: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f	Environmental exposure controls:  19: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g	Environmental exposure controls:  19: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h	Environmental exposure controls:  19: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i	Environmental exposure controls:  19: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: Flammability (solid, gas):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h	Environmental exposure controls:  19: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i	Environmental exposure controls:  19: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: Flammability (solid, gas):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i 9.1j	Environmental exposure controls:  19: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: Flammability (solid, gas): Upper/lower flammability or explosive limits:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1j 9.1k 9.1l	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: Flammability (solid, gas): Upper/lower flammability or explosive limits:  Vapor pressure:  Vapor density (Air =1): Relative density:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1j 9.1k 9.1l 9.1n	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: Flammability (solid, gas): Upper/lower flammability or explosive limits:  Vapor pressure:  Vapor density (Air =1): Relative density: Solubility(ies):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1j 9.1k 9.1l 9.1n 9.1n	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: Flammability (solid, gas): Upper/lower flammability or explosive limits:  Vapor pressure:  Vapor density (Air =1): Relative density: Solubility(ies): Partition coefficient (N-octanol/water):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i 9.1j 9.1k 9.1n 9.1n 9.1n 9.1n	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i 9.1j 9.1h 9.1n 9.1n 9.1n 9.1n	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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):	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).  > 190°C (> 374°F).
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i 9.1j 9.1k 9.1l 9.1n 9.1n 9.1n 9.1n 9.1n	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).  > 190°C (> 374°F).  2.14 mPa.s at 20°C
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i 9.1j 9.1k 9.1l 9.1n 9.1n 9.1n 9.1n 9.1o 9.1r 9.1s	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).  > 190°C (> 374°F).  2.14 mPa.s at 20°C  Not explosive.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i 9.1j 9.1h 9.1n 9.1n 9.1n 9.1n 9.1n 9.1n 9.1n 9.1s	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).  > 190°C (> 374°F).  2.14 mPa.s at 20°C  Not explosive.  Not determined.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1g 9.1h 9.1i 9.1j 9.1k 9.1l 9.1n 9.1n 9.1n 9.1n 9.1o 9.1r 9.1s	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).  > 190°C (> 374°F).  2.14 mPa.s at 20°C  Not explosive.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1j 9.1h 9.1i 9.1j 9.1k 9.1l 9.1n 9.1n 9.1n 9.1n 9.1o 9.1p 9.1r 9.1s 9.1t 9.2	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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: Oxidizing properties: Other information: Other physical or chemical parameters:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).  > 190°C (> 374°F).  2.14 mPa.s at 20°C  Not explosive.  Not determined.  None.
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1j 9.1h 9.1i 9.1j 9.1k 9.1l 9.1n 9.1n 9.1n 9.1n 9.1o 9.1p 9.1r 9.1s 9.1t 9.2	Environmental exposure controls:  9: Physical and chemical properties Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).  > 190°C (> 374°F).  2.14 mPa.s at 20°C  Not explosive.  Not determined.  None.  Stable under normal conditions and use. Forms explosive mixtures
9.1a 9.1b 9.1c 9.1d 9.1e 9.1f 9.1j 9.1h 9.1i 9.1j 9.1k  9.1l 9.1n 9.1n 9.1n 9.1o 9.1p 9.1r 9.1s 9.1t 9.2 9.2a  Section	Information on basic physical and chemical properties:  Appearance (physical state, color, etc.): Odor: Odor threshold: pH: Melting point/freezing point (°C): Initial boiling point and boiling range: Flash point (°C): Evaporation rate: 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): Uiscosity: Explosive properties: Oxidizing properties: Other information: Other physical or chemical parameters:	Most of the physical and chemical properties for CCCP in DMSO are unknown. Except for the appearance (physical state and color) listed in box 9.1a, the physical and chemical properties listed below are for Dimethyl sulfoxide (DMSO).  Liquid; yellow.  Characteristic.  Not determined.  No data available.  18.5°C (65.3°F)  189°C (372°F) @ 1013 hPa  87°C (189°F) - closed cup - ASTM D 93 (pure DMSO).  Not determined.  Not applicable.  Upper explosion limit: 42% (V)  Lower explosion limit: 3.5% (V)  0.55 hPa (0.41 mmHg) at 20°C (68°F)  4 hPa (3 mmHg) at 50°C (122°F)  2.7 (Air=1)  1.1g/cm³ at 20°C  Soluble in water.  log Pow: -1.349.  300 - 302°C (572 - 576°F).  > 190°C (> 374°F).  2.14 mPa.s at 20°C  Not explosive.  Not determined.  None.

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10.3	Possibility of hazardous reactions:	Hazardous polymerization will not occur. Risk of explosion with: acetylidene, organic halides, perchlorates, acid chlorides, nonmetalic halides, iron (III) compounds, nitrates, fluorides, chlorates, hydrides, perchloric acid, Oxides of phosphorus, Nitric acid, silver compounds, silicon compounds, silanes, acid halides.  Exothermic reaction with: boron compounds, oxyhalogenic compounds, potassium, sodium, strong oxidizing agents, phosphorus halides, strong reducing agents, acid chlorides, strong acids, silver salt, nitogen dioxide.  Risk of ignition or formation of inflammable gases or vapors with: potassium permanganate.
10.4	Conditions to avoid:	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. Avoid exposure to high temperatures or direct sunlight.
10.5	Incompatible materials:	Strong acids. Strong oxidizing substances. Strong reducing agents. Acid chlorides. Phosphorus halides.
10.6	Hazardous decomposition products:	Fire creates: vapors/gases/fumes of: carbon monoxide (CO); carbon dioxide (CO <sub>2</sub> ); nitrous gases (NO <sub>x</sub> ); hydrogen chloride (HCI); hydrogen cyanide (HCN).
Section	11: Toxicological information	
11.1	Information on toxicological effects:	
11.1a	Name:	[(3-chlorophenyl)hydrazono]malononitrile suspended in Dimethyl sulfoxide (DMSO)
11.1b	Acute toxicity:	LD50 Oral - Rat - 14,500 mg/kg LD50 Dermal - Rat - 40,000 mg/kg
11.1c	Skin corrosion/irritation:	Dimethyl sulfoxide (DMSO) Skin – Mild Irritant - 24 hours exposure with 500 mg rabbit. Eyes – Mild Irritant - 24 hours exposure with 500 mg rabbit. May cause skin irritation with susceptible persons.
11.1d	Serious eye damage/irritation:	Not determined.
11.1e 11.1f	Respiratory or skin sensitization: Germ cell mutagenicity:	Not determined.  Not determined.
11.1g	Carcinogenicity:	Not determined.
11.1h	Reproductive toxicity:	Not determined.
11.1i	STOT-single exposure:	[(3-chlorophenyl)hydrazono]malononitrile: Category 3 - Respiratory tract irritation.
11.1j	STOT-repeated exposure:	Not determined.
11.1k 11.1l	Aspiration hazard: Information on the likely routes of exposure	Not determined.
11 1	(inhalation, ingestion, skin and eye contact):	None
11.1m 11.1n	Ingestion: Inhalation:	None.
11.10	Skin contact:	Causes skin irritation.
11.1p	Eye contact:	Causes serious eye irritation.
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:	Not applicable.
11.1w	Mixture vs. substance information:	Not applicable.
11.1x 11.1y	Classification by National Toxicity Program (NTP): Classification by International Agency for Research on Cancer (IARC):	Not classified.  Not classified.
11.1z	Classification by OSHA 13:	Not classified.
11.12 11.1ab	Other information:	None.
Section	12: Ecological information	
12.1	Toxicity:	
12.1a	Name:  Ecotoxicity (aquatic and terrestrial, where available):	Dimethyl sulfoxide (DMSO) and [(3-Chlorophenyl)hydrazono]malononitrile.  Dimethyl sulfoxide (DMSO): Fish: LC50 96 hours 34,000 mg/l Pimephales promelas (fat-head minnow). LC50 96 hours 35,000 mg/l Onchorhynchus mykiss (rainbow trout). [(3-Chlorophenyl)hydrazono]malononitrile: Daphnia: LC50 159.11 mg/l Fresh water Daphnia pulex (water flea)

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12.2	Persistence and degradability:	No data available.
12.3	Bioaccumulative potential:	No data available.
12.4	Mobility in soil:	Mobility in soil is unknown (the product is soluble in water).
12.5	Results of PBT and vPvB assessment:	Not determined.
12.6	Other adverse effects:	No data available.
	13: Disposal considerations	
13.1	Waste treatment methods:	
13.1a	Description of waste residues and information on	When handling waste, consideration should be made to the safety
	their safe handling and methods of disposal, including the disposal of any contaminated	precautions applying to handling of the product. Waste to be treated as
	packaging:	controlled waste. Disposal to licensed waste disposal site in accordance with local waste disposal authority. Dispose of waste and
	packaging.	residues in accordance with local authority requirements. Please refer
		to the information in Section 8 (exposure controls and personal
		protection) of the SDS.
Section	14: Transport information	
14.1	UN number:	Not applicable.
14.2	UN proper shipping name:	Not applicable.
14.3	Transport hazard class(es):	Not applicable.
14.4	Packing group:	Not applicable.
14.5	Environmental hazards:	:.
14.5a	Is it environmentally dangerous according to UN	No.
	Model Regulations (IMDG Code, ADR, RID, and	
14.5b	ADN)?: Is it a marine pollutant according to the IMDG	No.
14.30	code?:	NO.
14.6	Special precautions for user:	None known.
14.7	Transport in bulk according to Annex II of	Not applicable.
	MARPOL and the IBC code:	The application
14.7a	Other information:	The product is not considered a dangerous good for transport.
14.7b	Classification for other modes of transport:	Contact supplier.
	•	
	15: Regulatory information	
15.1	Safety, health and environmental	
	regulations/legislation specific for the substance	
	or mixture:	
15.1a	Regional safety, health and environmental	
4 <i>F</i> 4 <i>b</i>	regulations specific for the product in question:	CADA 244/242 Irong dieta (Acuta) Haalib Harard (Directhyl culfquide
15.1b	USA SARA Components (such as 302/311/313):	SARA 311/312: Immediate (Acute) Health Hazard (Dimethyl sulfoxide and [(3-Chlorophenyl)hydrazono]malononitrile).
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:	DMSO (CAS #67-68-5) is listed.
15.1f	USA California Prop. 65 Components:	Not listed.
15.1g	EU Regulation 1907/2006 {REACH}:	
15.1h	Annex XIV substances subject to authorization:	Not listed.
15.1i	Substances of very high concern:	Not listed.
15.1j	Approved code of practice:	Classification and labeling of substances and preparations dangerous
		for supply. Safety data sheets for substances and preparations.
15.1k	Guidance notes:	Workplace exposure limits EH40.
4= **		Workplace Environmental Exposure Levels US WEEL.
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.
	16: Other information	
16.1	Other information:	
16.1a	Date of revision:	08/17/2017
16.1b	SDS number and revision:	F17-5140-2-C
	Supersedes SDS number and revision:	F17-5140-2-B
16.1c 16.1d	Changes made to the previous version of the SDS:	Section 2 (Hazards identification): addition of P statements

	<u> </u>	e: 08/17/2017; Supersedes: F17-5140-2-B; Page 7 of 7 P370+P378, P403+P235, P501, P362+P364, Section 9 (Physical and
		chemical properties): edits/additional information added to: odor, pH,
		melting point/freezing point, boiling point, vapor density, solubility(ies)
		viscosity fields. Minor edits/additions to items: 3.1g, 3.1h, 4.1, 5.2b,
		7.1a, 10.1, 10.2, 10.3, 10.5, 11.1a, 11.1b, 11.1c, 12.4, 13.1a.
6.1e	Key/legend to abbreviations and acronyms used in	ACGIH American Conference of Governmental Industrial Hygienists.
6. TE	the SDS:	
	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 us
		with the Control of Substances Hazardous to Health Regulations.
		EINECS European Inventory of Existing Commercial chemical
		Substances.
	ELINCS European List of Notified Chemical Substances.	
	EU European Union.	
		GHS Globally Harmonized System of Classification and Labelling of
	Chemicals.	
		H Statement GHS Hazard statement.
		IATA International Air Transport Association.
		IBC Intermediate Bulk Container.
		IC50 Half maximal inhibitory concentration.
		IMDG International Maritime Dangerous Goods.
		LC50 Median lethal concentration.
		LD50 Median lethal dose.
		LogPow logarithm of the octanol/water partition coefficient.
		MARPOL 73/78 International Convention for the Prevention of
		Pollution From Ships, 1973 as modified by the Protocol of 1978.
		OEL Occupational Exposure Limit.
		OSHA Occupational Safety and Health Administration (USA).
		PBT Persistent, Bioaccumulative, and Toxic.
		PEL Permissible Exposure Limit.
		RID The Regulations concerning the International Carriage of
		Dangerous Goods by Rail.
		SADT Self-Accelerating Decomposition Temperature.
		SARA Superfund Amendments and Reauthorization Act.
		SCBA Self-Contained Breathing Apparatus.
		SDS Safety Data Sheet.
		STOT Specific Target Organ Toxicity.
		STOT-RE Specific Target Organ Toxicity - Repeated Exposure.
		STOT-SE Specific Target Organ Toxicity - Single Exposure.
		UN United Nations.
		USA United States of America.
		vPvB very Persistent very bioaccumulative.
		WEEL Workplace Environmental Exposure Levels (USA).
6.1f	Full text of hazard statements and/or precautionary	All statements were written out in full.
	statements not written out in full elsewhere:	
)ISCL/		ific material designated and may not be valid for such material use
	in combination with any other metarials of	or in any process. Such information is to the best of the company'
		or in any process. Such information is, to the best of the company' ble 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