

SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 Version 2.0 Revision Date: August 1, 2018 Printed Date: August 1, 2018

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1. Product identifier:				
Product ID:	CSC-600/602-B (Part B Epoxy Hardener)			
Product Name:	Standard Temperature Contour (Part B Epoxy Hardener)			
1.2. Relevant identified use	es of the substance or mixture and uses advised against			
Relevant identified uses:				
Uses advised against:				
1.3. Details of the supplier Supplier's name:	er of the safety data sheet Clock Spring Company L.P.			
Address:	621 Lockhaven Drive. Houston, TX 77073			
Information phone:	281-590-8491			
1.4. Emergency telephone number				
Supplier's emergency phone:	800-424-9300 Intl:703-527-3887			
	Chemtrec Contract # 5043			

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP):

Skin Corrosion - Category 1B Serious Eye Damage - Category 1 Skin Sensitizer - Category 1 Mutagenic Toxicity - Category 2 Acute toxicity, Dermal - Category 4 Acute toxicity, Oral - Category 4 Aquatic Chronic, Category 2

2.2. Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms:



Signal word:

Danger

- Hazard statements Health:H302+H312Harmful if swallowed or in contact with skin.H314Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction
- H341 Suspected of causing genetic defects

Hazard statements - Physical:

NA

Hazard statements – Environmental:

H411 Toxic to aquatic life with long lasting effects

Precautionary statements:

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of 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.
P362+P364	Take off contaminated clothing and wash it before reuse
P310	Immediately call a POISON CENTER/doctor.
P391	Collect spillage

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances

NA

3.2. Mixtures

Common Name	CAS No.	EC No.	INDEX No.	REACH Registration No., if applicable.	% [weight]	International Chemical Identification	Classification according to Regulation (EC) No 1278/2008 (CLP). CLP
ISOPHORONE DIAMINE	2855-13-2	220-666-8	612-067- 00-9	01-2119514687- 32-XXXX	60-90%	3,5,5- trimethylcyclohexyl amine	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412.
TETRAETHYLEN EPENTAMINE	112-57-2	203-986-2	612-060- 00-0	NA	15-40%	triazaundecamethyl enediamine tetraethylenepentam ine	Skin Corr. 1B, H314
BENZYL ALCOHOL	100-51-6	202-859-9	603-057- 00-5	01-2119492630- 38-XXXX	1-10%	Benzyl alcohol	Acute Tox. 4, H302, Acute Tox. 4, H332
2,4,6- TRI(DIMETHYLA MINOMETHYL) PHENOL	90-72-2	202-013-9	603-069- 00-0	01-2119560597- 27-XXXX	1-10%	2,4,6- tris(dimethylaminom ethyl)phenol	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2
TRIETHYLENE TETRAMINE	112-24-3	203-950-6	612-059- 00-5	NA	1-10%	Trientine	Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
PHENOL	108-95-2	203-632-7	604-001- 00-2	01-2119471329- 32-XXXX	1-8%	Phenol	Acute Tox. 3, H301, Acute Tox 3, H311 Skin Corr. 1B, H314 Acute Tox. 3, H331 Muta. 2, H341 STOT RE 2, H373 [kidney, liver]

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Skin Contact:

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse skin with lukewarm, gently flowing water for a duration of 30 minutes or until medical aid is available. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before re-use or discard.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rising for a duration of 30 minutes or until medical aid is available. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER/doctor.

Ingestion:

Do not induce vomiting. Give large amounts of water followed by milk if available. Do not give anything to a victim who is drowsy, unconscious, or convulsing. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Seek medical attention immediately.

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. If breathing has stopped, trained personnel should begin rescue breathing or, if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). Immediately call

4.2. Most important symptoms and effects, both acute and delayed Not available.

4.3 Indication of any immediate medical attention and special treatment needed Not available.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

No data available.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Recommended Equipment:

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (approved by EN-standards listed under Regulation (EU) 2016/425 on personal protective equipment and repealing Council Directive 89/686/EEC).

Emergency Procedure:

Cover the liquid with inert absorbent. Scoop all contaminated material into containers for proper disposal. Flush area with water to remove residues.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Do not touch or walk through spilled material.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

6.2. Environmental precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

6.3. Methods and material for containment and cleaning up

Not specified.

6.4. Reference to other sections

NA

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

General:

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

7.2. Conditions for safe storage, including any incompatibilities

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet EN standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Do not cut, drill, grind, weld or perform similar operations on or near containers.

Do not store near acids or epoxy resins. Do not store product in reactive metal containers.

For products supplied in side-by-side cartridges, keep cartridges in a location where they cannot be punctured or ruptured which

would expose the catalyst to the resin in an uncontrolled environment.

7.3. Specific end use(s)

See section 13.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Substance BENZY ALCOHOL CAS No. 100-51-6

	Lir	Limit value - Eight hours		imit value - Short term	
	ppm	mg/m ³	ppm	mg/m ³	
Finland	10	45	-	-	
Germany (DFG)	5 (1)	22 (1)	10 (1)(2)	44 (1)(2)	
REMARKS	(1) Inhalable fraction	(1) Inhalable fraction and vapor			
1	(2) 15 minutes avera	(2) 15 minutes average value			

 Substance CAS No.
 Triethylertetramine 112-24-3

 Image: Case of the state of the state

Substance CAS No.	PHENOL 108-95-2	2			
		Limit value	- Eight hours	Limit value	- Short term
		ppm	mg/m ³	ppm	mg/m ³
European Union		2	8	4(1)	16(1)
Denmark		1	4	2	8
France		2	7.8	4	15.6
Italy		2	8	4	16
REMARKS (EU)		(1) 15 minutes average value			

8.2. Exposure controls

Follow established company guidelines

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Chemical-resistant clothing is recommended to avoid prolonged contact. Avoid unnecessary skin contact. Wear gloves, long sleeved shirt, long pants and other protective clothing as required to minimize skin contact. **Respiratory Protection:**

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed (European equivalence with EN standards listed under Regulation (EU) 2016/425 on personal protective equipment). Check with respiratory protective equipment suppliers. Use EN approved organic vapor cartridge respirator when vapor mist exposure is likely.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemi	cal properties
% VOC	8.00%
VOC Actual	75.64 g/l
Specific Gravity	0.95
Appearance	Pale yellow
Odor Description	N/A
рН	N/A
Flash Point	>93 °C
Flammability	Flash Point at or above 93.33 °C / 200°F
Boiling Point	N/A
Evaporation Rate	N/A
Vapour Pressure	<0.5mm HG, 20⁰C
Water Solubility	Slightly Miscible
Vapor Density	(air=1)>1

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Not expected.
10.2. Chemical stability
Stable at normal temperature and pressure.
10.3. Possibility of hazardous reactions
Not expected.
10.4. Conditions to avoid
Heat and flames.
10.5. Incompatible materials
Avoid strong oxidizing agents, acids and bases.
10.6. Hazardous decomposition products
Hazardous decomposition products may include oxides of carbon and nitrogen, hydrocarbon fragments and organic decomposition fragments.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute Toxicity: Classified for Acute Toxicity. See section 2. Data disclosure from ECHA regarding submitted dossiers according to REACH: CAS 2855-13-2; 3-aminomethyl-3,5,5-trimethylcyclohexylamine LC50 (4h): 1.07 – 5.01 mg/L air (rat) LD50: 1030mg/kg bw (rat), oral route LD50: 2000 mg/kg bw (rat), dermal route Repeated-dose toxicity: NOAEL (rat): 59 – 160 mg/kg bw/day LOAEL (rat): 160 mg/kg bw/day CAS 100-51-6 benzyl alcohol LC50 (4h): 4.178 mg/L air (rat), exposure route: inhalation. LD50: 1.55 mL/kg bw (rat), exposure route: oral. Repeated-dose toxicity: NOAEL (rat): 400 mg/kg bw/day, exposure route: oral. NOAEC (rat): 1.072 mg/L air, exposure route: inhalation.

CAS 108-95-2; phenol LD50: 340 - 650 mg/kg bw, (rat) oral route. LC0 (8h): 900 mg/m3 air (rat), inhalation route. LD50 0.625 mL/kg bw (rat), dermal route. Repeated-dose toxicity: Study data: oral NOAEL (rat): 1 000 - 5 000 ppm NOAEL (mouse): 5 000 ppm LOAEL (rat): 5 000 ppm NOEL (rat): 200 ppm LOEL (rat): 2 500 - 5 000 ppm Study data: inhalation NOAEC (rat): 25 ppm [1] NOAEC (monkey): 5 ppm Study data: dermal NOAEL (rabbit): 130 mg/kg bw/day LOAEL (rabbit): 260 mg/kg bw/day

Information by supplier for phenol: LD50 (oral, rat): 340 mg/kg (20% solution) (16) LD50 (oral, rat): 530 mg/kg (2 and 5% solutions) (16) LD50 (oral, rat): 320 mg/kg (cited as 0.30 cc/kg) (17) LD50 (dermal, pig): 500 mg/kg (liquefied phenol (45 deg C)) (2/3 animals died) (18)

Aspiration Hazard:

No Data Available Carcinogenicity: No Data Available Germ Cell Mutagenicity: No Data Available **Reproductive Toxicity:** Suspected of damaging fertility or the unborn child **Respiratory/Skin Sensitization:** Inhalation of vapors may cause irritation of the respiratory tract. May cause an allergic skin reaction Serious Eye Damage/Irritation: Corrosive to eyes and may cause severe damage including blindness. Causes serious eye damage Skin Corrosion/Irritation: Causes severe skin burns and eye damage Specific Target Organ Toxicity - Repeated Exposure: Causes damage to organs <liver, kidney> through prolonged or repeated exposure. Specific Target Organ Toxicity - Single Exposure: No Data Available **Potential Health Effects - Miscellaneous** CAS 100-51-6 benzyl alcohol Data from ECHA Disclosure Data for WORKERS

INHALATION Exposure	Threshold	Most sensitive study
Local Effects		
Long-term:	(DNEL) 22 mg/m ³	Repeated dose toxicity

Acute/Short-term	(DNEL) 110 mg/ m ³	Acute toxicity
DERMAL Exposure	Threshold	Most sensitive study
Local Effects		
Long-term:	(DNEL) 8 mg/kg bw/day	Repeated dose toxicity
Acute/Short-term	(DNEL) 40 mg/kg bw/day	Repeated dose toxicity

Data for the GENERAL POPULATION

INHALATION Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 5.4 mg/m ³	Repeated dose toxicity
Acute/Short-term	(DNEL) 27 mg/ m ³	Acute toxicity

DERMAL Exposure	Threshold	Most sensitive study
Systemic Effects		· · · · · · · · · · · · · · · · · · ·
Long-term:	(DNEL) 4 mg/kg bw/day	repeated dose toxicity
Acute / short term	(DNEL) 20 mg/kg bw/day	Acute toxicity
ORAL Exposure	Threshold	Most sensitive study
Systemic Effects	·	
Long-term:	(DNEL) 4 mg/kg bw/day	repeated dose toxicity

Acute toxicity

(DNEL) 20 mg/kg bw/day

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Acute / short term

Harmful to aquatic life with long lasting effects.

Summary data disclosed by ECHA for CAS 2855-13-2:

Hazard for Aquatic Organisms	PNEC
Freshwater	60 µg/L
Intermittent releases (freshwater)	230 µg/L
Marine water	6 μg/L
Sewage treatment plant (STP)	3.18 mg/L
Sediment (freshwater)	5.784 mg/kg sediment dw
Sediment (marine water)	578 µg/kg sediment dw

Short-term toxicity to fish, study results:

LC50 (4 days) 110 mg/L LC0 (4 days) 70 mg/L LC100 (4 days) 140 mg/L Short-term toxicity to aquatic invertebrates: EC50 (48 h) 23 mg/L EC50 (24 h) 27 mg/L LC50 (4 days) 324 mg/L LC50 (72 h) 362 mg/L LC50 (48 h) 388 mg/L Long-term toxicity to aquatic invertebrates: NOEC (21 days) 3 mg/L LOEC (21 days) 10 mg/L Toxicity to aquatic algae and cyanobacteria EC50 (72 h) 37 - 50 mg/L NOEC (72 h) 1.5 mg/L EC10 (72 h) 3.1 - 11.2 mg/L Toxicity to microorganisms: EC10 (18 h) 1.12 g/L

Summary data disclosed by ECHA for CAS 1761-71-3:

Hazard for Aquatic Organisms	PNEC
Freshwater	80 µg/L
Intermittent releases (freshwater)	80 µg/L
Marine water	8 µg/L
Sewage treatment plant (STP)	3.2 mg/L
Sediment (freshwater)	14.6-137 mg/kg sediment dw
Sediment (marine water)	1.46-13.7 mg/kg sediment dw

Short-term toxicity to fish, study results: LC50 (4 days) 68 - 100 mg/L LC0 (4 days) 46.4 mg/L LC100 (4 days) 100 mg/L Long-term toxicity to fish: NOEC (14 days) 1 mg/L Short-term toxicity to aquatic invertebrates: EC50 (48 h) 6.84 - 9.24 mg/L EC50 (24 h) 19.65 mg/L EC0 (48 h) 2.5 - 3.12 mg/L EC0 (24 h) 12.5 mg/L EC100 (48 h) 20 - 25 mg/L Long-term toxicity to aquatic invertebrates: NOEC (21 days) 4 mg/L LOEC (21 days) 7.2 mg/L EC50 (21 days) 7.2 mg/L LC50 (21 days) 5.48 mg/L Toxicity to aquatic algae and cyanobacteria EC50 (72 h) 140 - 2 164 mg/L EC10 (72 h) 35.36 - 952.4 mg/L EC90 (72 h) 140 - 4 917 mg/L Toxicity to terrestrial macroorganisms except arthropods: NOEC (28 days) 1 g/kg soil dw EC10 (56 days) 228 mg/kg soil dw EC50 (56 days) 699 mg/kg soil dw Toxicity to soil microorganisms NOEC (28 days) 62.5 mg/kg soil dw EC10 (28 days) 1 g/kg soil dw

Summary data disclosed by ECHA for CAS 108-95-2:

Freshwater 7.7µg/L Intermittent releases (freshwater) 31 µg/L Marine water 770 ng/L Sewage treatment plant (STP) 2.1 mg/L Sediment (freshwater) 91.5 µg/kg sediment dw Sediment (marine water) 91.5 µg/kg sediment dw Short-term toxicity to fish LC50 (14 days) 21.93 mg/L LC50 (14 days) 8.9 - 67.5 mg/L LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L EC50 (16 days) 100 µg/L EC50 (16 days) 10 µg/L	Hazard for Aquatic Organisms	PNEC
Marine water 770 ng/L Sewage treatment plant (STP) 2.1 mg/L Sediment (freshwater) 91.5 µg/kg sediment dw Sediment (marine water) 91.5 µg/kg sediment dw Short-term toxicity to fish LC50 (14 days) 21.93 mg/L LC50 (14 days) 8.9 - 67.5 mg/L LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	Freshwater	7.7µg/L
Sewage treatment plant (STP) 2.1 mg/L Sediment (freshwater) 91.5 µg/kg sediment dw Sediment (marine water) 91.5 µg/kg sediment dw Short-term toxicity to fish 2.5 µg/kg sediment dw LC50 (14 days) 21.93 mg/L LC50 (14 days) 8.9 - 67.5 mg/L LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L EC10 (16 days) 460 µg/L	Intermittent releases (freshwater)	31 µg/L
Sediment (freshwater) 91.5 µg/kg sediment dw Sediment (marine water) 91.5 µg/kg sediment dw Short-term toxicity to fish 91.5 µg/kg sediment dw LC50 (14 days) 21.93 mg/L LC50 (14 days) 8.9 - 67.5 mg/L LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L EC10 (16 days) 460 µg/L	Marine water	770 ng/L
Sediment (marine water) 91.5 μg/kg sediment dw Short-term toxicity to fish LC50 (14 days) 21.93 mg/L LC50 (14 days) 21.93 mg/L LC50 (4 days) 8.9 - 67.5 mg/L LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 μg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 μg/L EC10 (16 days) 460 μg/L EC10 (16 days) 460 μg/L	Sewage treatment plant (STP)	2.1 mg/L
Short-term toxicity to fish LC50 (14 days) 21.93 mg/L LC50 (4 days) 8.9 - 67.5 mg/L LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	Sediment (freshwater)	91.5 µg/kg sediment dw
LC50 (14 days) 21.93 mg/L LC50 (4 days) 8.9 - 67.5 mg/L LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	Sediment (marine water)	91.5 µg/kg sediment dw
LC50 (4 days) 8.9 - 67.5 mg/L LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	Short-term toxicity to fish	
LC100 (14 days) 16 mg/L NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	LC50 (14 days) 21.93 mg/L	
NOEC (14 days) 4 mg/L Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	LC50 (4 days) 8.9 - 67.5 mg/L	
Long-term toxicity to fish NOEC (60 days) 77 µg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	LC100 (14 days) 16 mg/L	
NOEC (60 days) 77 μg/L Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 μg/L EC10 (16 days) 460 μg/L	NOEC (14 days) 4 mg/L	
Short-term toxicity to aquatic invertebrates EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	Long-term toxicity to fish	
EC50 (48 h) 3.1 mg/L Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 μg/L EC10 (16 days) 460 μg/L	NOEC (60 days) 77 µg/L	
Long-term toxicity to aquatic invertebrates NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	Short-term toxicity to aquatic invertebrates	
NOEC (16 days) 160 µg/L EC10 (16 days) 460 µg/L	EC50 (48 h) 3.1 mg/L	
EC10 (16 days) 460 µg/L	Long-term toxicity to aquatic invertebrates	
	NOEC (16 days) 160 μg/L	
EC50 (16 days) 10 mg/L	EC10 (16 days) 460 µg/L	
	EC50 (16 days) 10 mg/L	
Toxicity to aquatic algae and cyanobacteria	Toxicity to aquatic algae and cyanobacteria	
EC50 (4 days) 61.1 mg/L	EC50 (4 days) 61.1 mg/L	

Toxicity to aquatic plants other than algae EC50 (7 days) 61.82 - 1 981.8 mg/L EC10 (7 days) 5.92 - 37.1 mg/L Toxicity to microorganisms IC50(24h): 21 mg/L Toxicity to terrestrial macroorganisms except arthropods: LC50 (14 days) 401 mg/kg soil dw Toxicity to terrestrial plants: EC50 (14 days) 79 mg/kg soil dw Toxicity to soil microorganisms: EC10 (14 days): 100 mg/kg soil dw

12.2. Persistence and degradability No data available.

12.3. Bioaccumulative potential No data available.
12.4. Mobility in soil No data available.
12.5. Results of PBT and vPvB assessment No data available.
12.6. Other adverse effects No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

According to DIRECTIVE 2008/98/EC the waste resulting is classified as H 5/13/14, according to Annex III.

Local, national and European waste management legislation for the particular form of containment used must be complied with.

It should be noted that final decisions on the appropriate waste management method, in line with regional, national and European legislation, and possible adaptation to local conditions, remains the responsibility of the waste treatment operator.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purpose. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number.

UN No: UN2289

14.2 UN proper shipping name.

Description: ADR: UN 2289, ISOFORONDIAMINA, 8, GE III, (E) IMDG: UN 2289, ISOFORONDIAMINA, 8, GE/E III ICAO/IATA: UN 2289, ISOFORONDIAMINA, 8, GE III

14.3 Transport hazard class(es).

Class(es): 8

14.4 Packing group.

Packing group: III

14.5 Environmental hazards.

Marine pollutant: No

14.6 Special precautions for user.

Label 8



14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code. The product is not transported in bulk.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU REGULATIONS:

Regulation (EC) 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), according to Annex II.
Regulation (EC) 1272/2008 on the classification, labeling and packaging of substances and mixtures (CLP Regulation)
Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.
Directive (EC) 98/2008 on waste
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

Restrictions of occupation
GESTIS INTERNATIONAL LIMIT VALUES, by IFRA Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung.
Information on chemical hazards:
ECHA webpage, brief profile of substances and summary disclosures.
AGENCIES:
ECHA: European Chemicals Agency

15.2. Chemical safety assessment

NA

SECTION 16: OTHER INFORMATION

Glossary:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EN- European Standard; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313-Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

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