



Safety Data Sheet

1 IDENTIFICATION

Product identifier CTS TXP FAST PART A

Other means of identification

Product code 185040000

Recommended use Industrial use

Recommended restrictions TXP Fast is packaged in pre-measured kits. **Proper proportioning and homogenization are absolutely critical for success. Do not attempt to hand mix.** Use only with adequate ventilation.

Manufacturer/Importer/Supplier/Distributor information

Company name CTS Cement Manufacturing Corporation

Address 11065 Knott Ave Suite A
Cypress, CA 90630
United States

Telephone 1-800-929-3030

E-mail info@ctsceement.com

Contact person Safety Officer

Emergency telephone number 1-800-929-3030 (8 AM - 5 PM)

2 HAZARDS IDENTIFICATION

Health Hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 2
	Skin Sensitization	Sub-category 1B
	Acute aquatic toxicity	Category 2
	Chronic aquatic toxicity	Category 2

Label elements

Pictogram(s):



Signal Word Warning!

Hazard statement	H315+H320: Can cause eye and skin irritation and sensitization H317: May cause allergic skin reaction H335: May cause respiratory tract irritation H351: Suspected of causing cancer H411: Toxic to aquatic life with long lasting effects
Precautionary statement	
Prevention	P261: Avoid breathing dust/fume/gas/mist/vapors/spray P264: Wash skin thoroughly after handling P272: Contaminated work clothing should not be allowed out of the workplace P273: Avoid release to the environment P280: Wear protective gloves/ protective clothing/ eye protection/ face protection
Response	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 so. Continue rinsing. P333+P313: If skin irritation or rash occurs: get medical advice/attention P337+P313: If eye irritation persists: get medical advice/attention P361+P364: Take off contaminated clothing and wash before reuse P391: collect spillage
Disposal	P501: Dispose of contents/container to an approved waste disposal plant
Hazard(s) not otherwise classified (HNOC)	No data available

3 COMPOSITIONS/INFORMATION ON INGREDIENTS

Mixtures

Chemical name	CAS number	Concentration
4,4'-isopropylidiphenol-epichlorohydrin copolymer	025068-38-6	60 - 100
Titanium dioxide	013463-67-7	15 - 40
Benzyl alcohol	000100-51-6	5 - 10
O-cresyl glycidylether	002210-79-9	1 - 5

4 FIRST-AID MEASURES

Inhalation	Move to fresh air. Give assisted respiration if breathing has stopped or is labored (call a physician).
Skin contact	Remove product and flush affected area with water for 15 minutes. If irritation persists get medical attention.
Eye contact	Flush with water for 15 minutes. Get medical attention.
Ingestion	Give 3 – 4 glasses of water or milk if person conscious. <u>DO NOT INDUCE VOMITING!</u> Obtain medical care and treatment.
General information	Remove person from affected area and make comfortable. Treat symptomatically.

5 FIRE-FIGHTING MEASURES

OSHA Class	Not Regulated
Suitable extinguishing media	Ignition may give rise to a Class B fire. In case of fire use: water fog, carbon dioxide, dry chemical, alcohol foam.
Unsuitable extinguishing media	None
Specific hazards arising from the chemical	CO, CO ₂ , aldehydes, acids
Special protective equipment	Wear self-contained breathing apparatus and protective clothing.
Fire fighting equipment/instructions	Water spray is useful in cooling fire-exposed vessels and in dispersing vapors.
Specific methods	N/A
General fire hazards	May generate toxic or irritating combustion products. Sudden reaction and fire may result if product is mixed with an oxidizing agent.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Shut off sources of ignition. Avoid skin contact. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Cover spills with absorbent materials. Place in metal containers for recovery or disposal.
Environmental precautions	Prevent entry into sewers, storm drains, and waterways.

7 HANDLING AND STORAGE

Precautions for safe handling	Store in cool, well ventilated areas. Keep away from heat and open flames. Avoid prolonged inhalation of heated vapors or mists. Avoid prolonged skin contact.
Conditions for safe storage, including any incompatibilities	Avoid temperature extremes. Store away from excessive heat, from sources of ignition and from reactive materials.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components (CAS)	Type	Value	Form
025068-38-6	TWA	Not established	
	STEL	Not established	
013463-67-7	TWA	10mg/m ³	VALUES MEANINGFUL ONLY WHEN HARDENED PRODUCT IS ABRADED, GROUND, ETC.
	STEL	No data	
000100-51-6	TWA	Not established	
	STEL	Not established	
002210-79-9	TWA	Not established	
	STEL	Not established	

US. ACGIH Threshold Limit Values

Components (CAS)	Type	Value	Form
025068-38-6	TWA	Not established	
	STEL	Not established	
013463-67-7	TWA	10mg/m ³	VALUES MEANINGFUL ONLY WHEN HARDENED PRODUCT IS ABRADED, GROUND, ETC.
	STEL	No data	
000100-51-6	TWA	Not established	
	STEL	Not established	
002210-79-9	TWA	Not established	
	STEL	Not established	

Appropriate engineering controls No specific controls needed. General and local exhaust recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection	Splash-proof goggles or chemical safety glasses
Skin protection	
Hand protection	Nitrile rubber gloves
Other	Long sleeved shirts and trousers. Emergency showers and eye wash stations should be readily accessible.
Respiratory protection	None required in adequately ventilated areas. If vapor concentration exceeds 20ppm for longer than 15 minutes, a NIOSH approved respirator for organic vapors is recommended.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid
Color	White
Odor	Mild

Odor threshold	No data
pH	Not applicable
Melting point/freezing point	No data
Initial boiling point and boiling range	>120°C (199°F)
Flash point	93°C (199°F) TCC
Flammability (solid, gas)	Not combustible
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	No data
Flammability limit – upper (%)	No data
Vapor pressure	< 0.13 kPA @ 20°C (68°F)
Vapor density	No data (Air = 1)
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	No data
Decomposition temperature	No decomposition if stored and handled as prescribed/indicated
Mixed Viscosity	800 cps @ 77°F
Other information	
Partition coefficient (oil/water)	No data
VOC (weight %)	0%
VOC as part of multi-component system	0 g/L

10 STABILITY AND REACTIVITY

Chemical stability	Stable
Conditions to avoid	Not applicable (material is stable)
Incompatible materials	Oxidizing agents (perchlorates, nitrates), strong acids, hypochlorites, peroxides.
Hazardous decomposition products	
Decomposition products	CO, CO ₂

11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

ACUTE ORAL TOXICITY

Very low toxicity if swallowed. harmful effects not anticipated from swallowing small amounts

LD50, RAT >15,000 mg/kg

ACUTE DERMAL TOXICITY

Prolonged skin contact is unlikely to result in absorption of harmful amounts

LD50, RABBIT 23,000 mg/kg

ACUTE INHALATION TOXICITY

At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material, mist or aerosols may cause respiratory irritation.

LC50 has not been determined

Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness
Repeated contact may cause skin irritation with local redness

Serious eye damage/eye irritation

May cause eye irritation
Corneal injury is unlikely

Respiratory or skin sensitization

Respiratory sensitization

No relevant data found

Skin sensitization

Has caused allergic skin reactions in humans
Has demonstrated the potential for contact allergy in mice

Carcinogenicity

The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

IARC Monographs. Overall Evaluation of Carcinogenicity

2B

NTP Report on Carcinogens

None

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None

Specific target organ toxicity – single exposure

Evaluation of available data suggests this material is not an STOT-SE toxicant

Specific target organ toxicity – repeated exposure Except for skin sensitization repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects

Teratogenicity: No
Embryotoxicity: No

Mutagenicity: No
Synergistic material: No

12 ECOLOGICAL INFORMATION

Ecotoxicity

ACUTE TOXICITY TO FISH

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/l in the most sensitive species tested)
LC50, oncorhynchus mykiss (rainbow trout), semi-static test. 96 HR, 2 mg/l

ACUTE TOXICITY TO AQUATIC INVERTEBRATES

EC50, daphnia magna (water flea), static test, 48 HR, 1.8 mg/l

ACUTE TOXICITY TO ALGAE/AQUATIC PLANTS

ErC50, scenedesmus capricornutum (fresh water algae), static test, 72 HR, growth rate inhibition 11mg/L

TOXICITY TO BACTERIA

IC50, bacteria, 18 HR, respiration rates > 42.6 mg/l

CHRONIC AQUATIC TOXICITY

CHRONIC TOXICITY TO AQUATIC INVERTEBRATES

MATC (maximum acceptable toxicant level), daphnia magna, semi static test, 21 D, number of offspring, 0.55 mg/l

Persistence and degradability

BIODEGRADABILITY: Based on stringent OECD test guidelines, this material cannot be considered readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10 day window: NA

BIODEGRADATION: 12%

EXPOSURE TIME: 28 days

METHOD: OECD test guideline 302B or equivalent

THEORETICAL OXYGEN DEMAND: 2.35 mg/mg estimated

PHOTODEGRADATION

TEST TYPE: HALF-LIFE (Indirect photolysis)

SENSITIZER: OH radicals

ATMOSPHERIC HALF-LIFE: 1.92 HR

METHOD: Estimated

Bioaccumulative potential	BIOACCUMULATION: Bioconcentration potential is moderate (BCF between 100 and 3000 or LOG POW between 3 and 5) PARTITION COEFFECIENT: N-OCTANOL/WATWER(LOG POW): 3.242 @25°C estimated
Mobility in soil	Potential for mobility in soil is low (Koc between 500 AND 2000) given its very low Henry's constant, volatization from natural bodies of water or moist soil is not expected to be an important fate process PARTITION COEFFICIANT (Koc): 1800-4400 estimated
Other adverse effects	Not applicable

13 DISPOSAL CONSIDERATIONS

Disposal instructions Not a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with all federal, state and local regulations.

14 TRANSPORT INFORMATION

USDOT Resin compound, not regulated

HAZARD CLASS: NA **UN NUMBER: NA** **PACKING GROUP: NA**

IATA UN 3082 environmentally hazardous substance, liquid N.O.S. (epoxy resin) , 9, PGIII

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code UN 3082 environmentally hazardous substance, liquid N.O.S. (epoxy resin) , 9, PGIII

15 REGULATORY INFORMATION

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not data

CERCLA Hazardous Substance List (40 CFR 302.4)

No data

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard – No
Pressure Hazard – No
Reactivity Hazard - No

SARA 311/312 Hazardous chemical

Acute

SARA 313 (TRI reporting)

None above de Minimus levels

US state regulations

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): CAS # 013463-67-7

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

16 OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF LAST REVISION

Issue date 12 November 2015

Revision date 30 November 2015

Version # 01

HMIS® ratings Health: 1
Flammability: 1
Reactivity: 2

Disclaimer The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the accuracy of the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects, which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations and orders.



Safety Data Sheet

1 IDENTIFICATION

Product identifier CTS TXP FAST PART B

Other means of identification

Product code 185040000

Recommended use Industrial use

Recommended restrictions TXP Fast is packaged in pre-measured kits. **Proper proportioning and homogenization are absolutely critical for success. Do not attempt to hand mix.** Use only with adequate ventilation.

Manufacturer/Importer/Supplier/Distributor information

Company name CTS Cement Manufacturing Corporation

Address 11065 Knott Ave Suite A
Cypress, CA 90630
United States

Telephone 1-800-929-3030

E-mail info@ctscement.com

Contact person Safety Officer

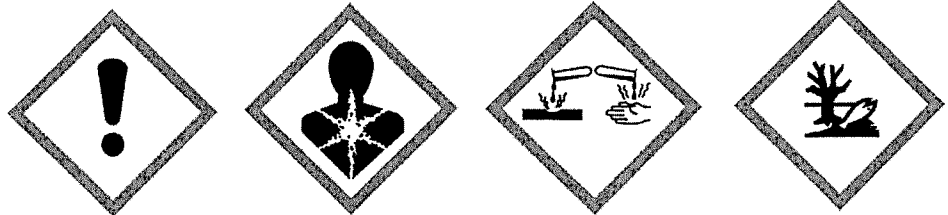
Emergency telephone number 1-800-929-3030 (8 AM - 5 PM)

2 HAZARDS IDENTIFICATION

Health Hazards	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Skin sensitization	Sub-category 1B
	Aquatic toxicity	Category 1
	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Reproductive toxicity	Category 2

Label elements

Pictogram(s):



Signal Word

Danger!

Hazard statement	H302+H312: Harmful in contact with skin or if swallowed H314: Causes severe skin burns and eye damage H317: May cause an allergic skin reaction H335: May cause respiratory tract irritation H361: Suspected of damaging fertility or the unborn child H410: Very toxic to aquatic life with long lasting effects
Precautionary statement	
Prevention	P201: Obtain special instructions before use. P202: Do not handle until safety precautions have been read and understood P261: Avoid breathing dust/fume/gas/mist/vapors/spray P264: Wash skin thoroughly after handling P270: Do not eat, drink or smoke when using this product P272: Contaminated work clothing should not be allowed out of the workplace P273: Avoid release to environment P280: Wear protective gloves/ protective clothing/ eye protection/ face protection
Response	P308+P313: If exposed or concerned: get medical advice/attention. P303+P361+353: IF ON SKIN (OR HAIR): remove/take off immediately all contaminated clothing. Rinse skin with water/shower P305+P351+P338: IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. P304+P340 IF INHALED: remove person to fresh air and keep comfortable for breathing P301+P331: If swallowed: rinse mouth. Do not induce vomiting P337+P313: If eye irritation persists: get medical advice/attention P361+P364: Take off contaminated clothing and wash before reuse P391: Collect spillage
Storage	P405: Store locked up
Disposal	P501: Dispose of contents/container to an approved waste disposal plant
Hazard(s) not otherwise classified (HNOC)	No data available

3 COMPOSITIONS/INFORMATION ON INGREDIENTS

Mixtures

Chemical name	CAS number	Concentration
1,3-cyclohexanedimethanamine	002579-20-6	30 - 60
Benzyl alcohol	000100-51-6	20 - 40
Epoxy polyamine adduct	Not available	10 - 30
Nonylphenol	025154-52-3	5 - 10

4 FIRST-AID MEASURES

Inhalation	Move to fresh air. Give assisted respiration if breathing has stopped or is labored (call a physician).
Skin contact	Remove product and flush affected area with water for 15 minutes. If irritation persists get medical attention.

Eye contact	Flush with water for 15 minutes. Get medical attention.
Ingestion	Give 3 – 4 glasses of water or milk if person conscious. <u>DO NOT INDUCE VOMITING!</u> Obtain medical care and treatment.
General information	Remove person from affected area and make comfortable. Treat symptomatically.

5 FIRE-FIGHTING MEASURES

OSHA Class	IIIB
Suitable extinguishing media	Ignition may give rise to a Class B fire. In case of fire use: water fog, carbon dioxide, dry chemical, alcohol foam.
Unsuitable extinguishing media	None
Specific hazards arising from the chemical	CO, CO ₂ , NH ₃ . Nitrogen oxides can be produced if heated, burned or reacted with incompatible materials. Nitrogen oxides can react with water vapors to form corrosive nitric acid.
Special protective equipment	Wear self-contained breathing apparatus and protective clothing.
Fire fighting equipment/instructions	None likely with small quantities. For large quantities, firefighters and others exposed to vapors or products of combustion should wear butyl rubber boots, gloves and body suit.
General fire hazards	May generate toxic or irritating combustion products. Sudden reaction and fire may result if product is mixed with an oxidizing agent.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Shut off sources of ignition. Avoid skin contact. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Cover spills with absorbent materials. Place in metal containers for recovery or disposal.
Environmental precautions	Prevent entry into sewers, storm drains, and waterways.

7 HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink or smoke.
Conditions for safe storage, including any incompatibilities	Keep away from oxidizers, heat or flame. Store in steel containers. Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. OSHA Table Z-1 (29 CFR 1910.1000)

Components (CAS)	Type	Value	Form
002579-20-6	TWA	Not established	
	STEL	Not established	
000100-51-6	TWA	Not established	
	STEL	Not established	
025154-52-3	TWA	Not established	
	STEL	Not established	

US. ACGIH Threshold Limit Values

Components (CAS)	Type	Value	Form
002579-20-6	TWA	Not established	
	STEL	Not established	
000100-51-6	TWA	Not established	
	STEL	Not established	
025154-52-3	TWA	Not established	
	STEL	Not established	

Appropriate engineering controls No specific controls needed. General and local exhaust recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Splash-proof goggles or chemical safety glasses

Skin protection

Hand protection Nitrile rubber gloves

Other Long sleeved shirts and trousers. Emergency showers and eye wash stations should be readily accessible.

Respiratory protection None required in adequately ventilated areas. If vapor concentration exceeds 20ppm for longer than 15 minutes, a NIOSH approved respirator for organic vapors is recommended.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid
Color	Clear to Amber
Odor	Ammoniacal
Odor threshold	No data
pH	Not established (Alkaline)
Melting point/freezing point	0°C (32°F)
Initial boiling point and boiling range	260°C (500°F)
Flash point	121°C (250°F) – PMCC

Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not established
Flammability limit – upper (%)	Not established
Vapor pressure	No data
Vapor density	No data (Air = 1)
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	No data
Decomposition temperature	No decomposition if stored and handled as prescribed/indicated
Mixed Viscosity	800 cps @ 77°F
Other information	
Partition coefficient (oil/water)	No data
VOC (weight %)	0%
VOC as part of multi-component system	0%

10 STABILITY AND REACTIVITY

Chemical stability	Stable
Conditions to avoid	Avoid elevated temperatures
Incompatible materials	Oxidizing agents (peroxides, nitrates), acids
Hazardous decomposition products	
Decomposition products	None known

11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	ACUTE – Vapors may cause damage to contacted tissue and produce scarring. CHRONIC – Repeated and/or prolonged exposures can cause tightness of chest, shortness of breath and cough.
Skin contact	ACUTE – Undiluted product quickly causes irritation. May cause chemical burns. CHRONIC – May cause allergic reaction/sensitization, defatting of skin, rash and irritation.

Eye contact ACUTE – Severe irritant. May cause burns. Vapor may cause lacrimation and reversible corneal edema.
 CHRONIC – Conjunctivitis or corneal damage.

Ingestion ACUTE – May cause irritation and bleeding of the gastrointestinal tract
 CHRONIC – Scarring of the affected tissues may occur

Information on toxicological effects

Acute Toxicity No data on the product itself

Acute Oral Toxicity

Components	Species	Test Results
1,3 Cyclohexanamine	Rat	LD50: 700 mg/kg
Benzyl alcohol	Rat	LD50: 1230 mg/kg
Nonylphenol	Rat	LD50: 1604 mg/kg

Acute Dermal Toxicity

Components	Species	Test Results
1,3 Cyclohexanamine	Rabbit	LD50: 1700 mg/kg
Benzyl alcohol	Rabbit	LD50: 2000 mg/kg
Nonylphenol	Rat	LD50: 2031 mg/kg

Acute Inhalation Toxicity

Components	Species	Test Results
1,3 Cyclohexanamine		No data
Benzyl alcohol	Rat	LC50 (4HR): > 4.178mg/l OECD test guideline 403
Nonylphenol		No data

Skin corrosion/irritation Dot skin corrosion study: corrosive in all rabbits at 3 minutes exposure

Serious eye damage/eye irritation Severe eye irritation

Respiratory or skin sensitization

Respiratory sensitization Not classified but possible due to skin sensitization effect

Skin sensitization May cause an allergic reaction after a single exposure or with repeated or prolonged skin contact

Germ cell mutagenicity Animal testing on third substance indicate possible mutagen; tests on bacterial and mammalian cell cultures did not show mutagenic effects.

Carcinogenicity Not classified as carcinogenic. Not listed by OSHA/NTP/IARC

Reproductive toxicity Suspected of damaging fertility or the unborn child. Avoid exposure to woman during early pregnancy.

Specific target organ toxicity – single exposure No data

Specific target organ toxicity – repeated exposure No data

12 ECOLOGICAL INFORMATION

Ecotoxicity

AQUATIC TOXICITY: No data on the product itself

ACUTE TOXICITY TO FISH: COMPONENTS

Components	Species	Test Results
1,3 Cyclohexanamine	GOLDEN ORFE	LC50 (96 HRS): 130 mg/l
Benzyl alcohol	FATHEAD MINNOW	LC50 (96 HRS): 460 mg/l
Nonylphenol	PIMEPHALES PROMELAS	LC50 (96HRS): 0.14 mg/l

ACUTE TOXICITY TO AQUATIC INVERTEBRATES: COMPONENTS

Components	Species	Test Results
1,3 Cyclohexanamine	DAPHNIA MAGNA	EC50 (72 HRS): 33.1 mg/l
Benzyl alcohol	DAPHNIA MAGNA	EC50 (72 HRS): 12 mg/l
Nonylphenol	DAPHNIA MAGNA	EC50 (48 HRS): 0.035 mg/l

ACUTE TOXICITY TO ALGAE/AQUATIC PLANTS: COMPONENTS

Components	Species	Test Results
1,3 Cyclohexanamine	FRESH WATER ALGAE	EC50 (72 HRS): 56.7 mg
Benzyl alcohol	FRESH WATER ALGAE	EC50 (72 HRS): 700 mg/l
Nonylphenol	FRESH WATER ALGAE	LC50 (72 HRS): 0.056 mg/l

TOXICITY TO BACTERIA: COMPONENTS

Components	Species	Test Results
1,3 Cyclohexanamine	ACTIVATED SLUDGE	EC50: > 1000mg/l
Benzyl alcohol		ND
Nonylphenol	ACTVATED SLUDGE	EC50: 950 mg/l

CHRONIC AQUATIC TOXICITY

CHRONIC TOXICITY TO AQUATIC INVERTEBRATES

Long lasting adverse effects to aquatic organisms

Persistence and degradability

BIODEGRADABILITY: Based on stringent OECD test guidelines, this material cannot be considered readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

BIODEGRADATION: 29%

EXPOSURE TIME: 28 days

METHOD: OECD test guideline 301B or equivalent

Bioaccumulative potential

BIOACCUMULATION: Bioconcentration potential is moderate (BCF between 100 and 3000 or LOG P_{ow} between 3 and 5)

PARTITION COEFFICIENT: N-OCTANOL/WATER(LOG P_{ow}): 3.16 @21.5°C ESTIMATED

Mobility in soil

Product is soluble in water

PARTITION COEFFICIENT (K_{oc}): 1.473 estimated

13 DISPOSAL CONSIDERATIONS

Disposal instructions Incineration is preferred. This product should not be allowed to enter drains, water courses or the soil. Place in an appropriate disposal facility in compliance with all federal, state and local regulations.

14 TRANSPORT INFORMATION

USDOT Amines, liquid, corrosive, N.O.S. (1,3-cyclohexanedimethanamine)
HAZARD CLASS: 8 **UN NUMBER: UN 2735** **PACKING GROUP: III**
IATA UN2735, amines, liquid, corrosive, N.O.S. (1,3-cyclohexanedimethanamine), 8, PG III
IMDG UN2735, amines, liquid, corrosive, N.O.S. (1,3-cyclohexanedimethanamine), 8, PG III

15 REGULATORY INFORMATION

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Listed

CERCLA Hazardous Substance List (40 CFR 302.4)

No data

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard – No
Pressure Hazard – No
Reactivity Hazard - No

SARA 311/312 Hazardous chemical

Acute

SARA 313 (TRI reporting)

Phenol

US state regulations

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): None

16 OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF LAST REVISION

Issue date 12 November 2015

Revision date 30 November 2015

Version # 01

HMIS® ratings Health: 3
Flammability: 1
Reactivity: 0

Disclaimer The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the accuracy of the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects, which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations and orders.