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Chomerics Division
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Telephone: (781) 935-4580

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SECTION 1. IDENTIFICATION

Product identifier used on the label
: **CHO-BOND® 29 EPOXY HARDENER**

Product Code(s) : Hardener 29

Recommended use of the chemical and restrictions on use
: Hardener.
No restrictions on use known.

Chemical family : Mixture of: Amines; Phenol

SDS number : PHC-048

Name, address, and telephone number of the manufacturer:

Parker Hannifin Corp.
Chomerics Division
77 Dragon Court
Woburn, MA, USA
01888

Manufacturer's Telephone # : (781) 935-4580

Name, address, and telephone number of the supplier:

Refer to manufacturer

24 Hr. Emergency Tel # : INFOTRAC - (800) 535-5053 (Within Continental US); (352) 323-3500 (Outside US)

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Amber liquid. Amine odor.

Most important hazards:
Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.
Harmful to aquatic life with long lasting effects. Avoid release to the environment. See Section 12 for more environmental information.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
- Acute toxicity - Category 4 (Dermal)
- Skin corrosion/irritation - Category 1B
- Skin sensitization - Category 1
- Specific target organ toxicity, single exposure - Category 3 (Respiratory irritation)

Label elements

Hazard pictogram(s)

Signal Word
DANGER!

Hazard statement(s)
Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation.

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Precautionary statement(s)

Do not breath mist or vapor. Wash hands and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/clothing and eye/face protection.

Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:
May burn if heated to extreme temperatures. Vapors are heavier than air and may spread along floors. Toxic fumes, gases or vapors may evolve on burning. Exposure to low vapor concentrations may cause swelling (edema) of the eyes, resulting in blurring of vision with a bluish haze and/or appearance of halos around lights. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights. Do not add nitrites or other nitrosating agents. A nitrosamine, which may cause cancer, could be formed.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
Triethylenetetramine, propoxylated	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-, polymer with methyloxirane	26950-63-0	**60.0 - 100.0**
Triethylenetetramine	N,N'-Bis(2-aminoethyl)ethylenediamine TETA	112-24-3	**15.0 - 40.0**
2,4,6-tris(dimethylaminomethyl)phenol	Mesitol, alpha,alpha',alpha''-tris(dimethylamino)-	90-72-2	**5.0 - 10.0**
N-(3-(trimethoxysilyl)propyl)ethylenediamine	N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine Aminoethylamino propyltrimethoxy silane	1760-24-3	**< 1.0**

The exact concentrations of the above listed chemicals are being withheld as a trade secret as allowed by 29CFR1910.1200.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to an unconscious person.

Inhalation : If inhaled: Remove person to fresh air and keep comfortable for breathing. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Immediately call a POISON CENTER or doctor/physician.

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Skin contact : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Flush with large amounts of water for 15 minutes. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Flush eyes with water for at least 15 minutes. Do not rub area of contact. Immediately call a POISON CENTER or doctor/physician.

Most important symptoms and effects, both acute and delayed

: Harmful in contact with skin. Symptoms may include pain, nausea, vomiting, muscle weakness, loss of coordination, shock and collapse.
Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. .
Direct eye contact may produce severe irritation with possible eye damage. Symptoms may include severe pain, tearing, redness, swelling and blurred vision. May cause irreversible eye damage.
May cause severe skin sensitization with allergic contact dermatitis symptoms such as swelling, rash and eczema.
May cause respiratory irritation. Symptoms may include coughing, choking and wheezing.
Exposure to low vapor concentrations may cause swelling (edema) of the eyes, resulting in blurring of vision with a bluish haze and/or appearance of halos around lights.
May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations and bleeding.
Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.
Do not add nitrites or other nitrosating agents. A nitrosamine, which may cause cancer, could be formed.

Indication of any immediate medical attention and special treatment needed

: Immediate medical attention is required. Causes burns.
Provide general supportive measures and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

: Not considered flammable. However, may burn if exposed to extreme heat and flame. Vapors are heavier than air and may spread along floors. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes, gases or vapors may evolve on burning.

Flammability classification (OSHA 29 CFR 1910.106)

: Not classified as flammable.

Hazardous combustion products

: Carbon oxides; Nitrogen oxides (NOx); Ammonia; Hydrogen cyanide (hydrocyanic acid); Aldehydes; Ketones; Other unidentified organic compounds .

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

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Special fire-fighting procedures

: Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear chemically resistant personal protective equipment during cleanup. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Avoid release to the environment. Prevent product from entering drains, sewers, waterways and soil. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

: Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities. For waste disposal, see Section 13 of the SDS.

Special spill response procedures

: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
US CERCLA Reportable quantity (RQ): None known.

In Canada: Contact appropriate local and provincial environmental authorities for assistance and/or reporting requirements.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Persons with recurrent skin eczema or sensitization problems should be excluded from working with this product. Once a person is sensitized, no further exposure to the material that caused the sensitization should be permitted.
Use only outdoors or in a well-ventilated area. Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Keep away from incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Empty containers retain residue (liquid and/or vapor) and can be dangerous.

Conditions for safe storage : Store in cool/well-ventilated place. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Keep away from incompatibles.

Incompatible materials : Strong oxidizing agents; Strong acids; Aldehydes; Ketones; Nitrogen compounds.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Triethylenetetramine, propoxylated	N/Av	N/Av	N/Av	N/Av
Triethylenetetramine	1 ppm (AIHA WEEL) (skin)	N/Av	N/Av	N/Av
2,4,6-tris(dimethylaminomethyl)phenol	N/Av	N/Av	N/Av	N/Av
N-(3-(trimethoxysilyl)propyl)ethylenediamine	N/Av	N/Av	N/Av	N/Av

ACGIH - Biological Exposure Indices:
No biological exposure limits noted for the ingredient(s).

Exposure controls

Ventilation and engineering measures
: Use only in well-ventilated areas. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

Skin protection : Wear protective gloves/clothing. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear resistant clothing and boots. Depending on conditions of use, an impervious apron should be worn.

Eye / face protection : Wear eye/face protection. Chemical splash goggles are recommended. A full face shield may also be necessary.

Other protective equipment : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations
: Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice. Contaminated work clothing must not be allowed out of the workplace.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Amber liquid.
Odor : amine-like
Odor threshold : N/Av
pH : N/Av
Melting/Freezing point : N/Av
Initial boiling point and boiling range
: > 130°C (266°F) (based on ingredients)
Flash point : > 93.3°C (200°F)

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Flashpoint (Method)	:	closed cup
Evaporation rate (BuAe = 1)	:	N/Av
Flammability (solid, gas)	:	Not applicable.
Lower flammable limit (% by vol.)	:	N/Av
Upper flammable limit (% by vol.)	:	N/Av
Oxidizing properties	:	None known.
Explosive properties	:	Not explosive
Vapor pressure	:	N/Av
Vapor density	:	> 1 (Air = 1)
Relative density / Specific gravity	:	1
Solubility in water	:	Not miscible.
Other solubility(ies)	:	N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution	:	N/Av
Auto-ignition temperature	:	N/Av
Decomposition temperature	:	N/Av
Viscosity	:	N/Av
Volatiles (% by weight)	:	N/Av
Volatile organic Compounds (VOC's)	:	N/Av
Absolute pressure of container	:	N/Ap
Flame projection length	:	N/Ap
Other physical/chemical comments	:	No additional information.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not normally reactive. Do not add nitrites or other nitrosating agents. A nitrosamine, which may cause cancer, could be formed.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.
Incompatible materials	:	Strong oxidizing agents; Strong acids; Aldehydes; Ketones; Nitrogen compounds
Hazardous decomposition products	:	None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation	:	YES
Routes of entry skin & eye	:	YES
Routes of entry Ingestion	:	YES
Routes of exposure skin absorption	:	YES

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Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: May cause respiratory irritation. Symptoms may include coughing, choking and wheezing.

Sign and symptoms ingestion

: May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include severe abdominal pain, vomiting, burns and bleeding.

Sign and symptoms skin : Causes burns. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Can be absorbed through skin.

Sign and symptoms eyes : Causes burns. Prolonged contact may cause corrosive burns and eye damage. Exposure to low vapor concentrations may cause swelling (edema) of the eyes, resulting in blurring of vision with a bluish haze and/or appearance of halos around lights.

Potential Chronic Health Effects

: Chronic skin contact with low concentrations may cause dermatitis.
Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

Mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity : Not classifiable as a human carcinogen, based on currently available data. No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: This product is not expected to cause reproductive or developmental effects.

Sensitization to material : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Skin sensitization - Category 1. May cause an allergic skin reaction.
May cause severe skin sensitization with allergic contact dermatitis symptoms such as swelling, rash and eczema.
Not expected to be a respiratory sensitizer.

Specific target organ effects : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Specific target organ toxicity, single exposure - Category 3. May cause respiratory irritation.

According to the classification criteria of U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause target organ toxicity through repeated exposures.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials : None known or reported by the manufacturer.

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Toxicological data : Not classified for acute toxicity based on available data.
No data is available on the product itself. The calculated ATE values for this mixture are:
ATE oral = 2749 - 3360 mg/kg
ATE dermal = 1541 - 2149 mg/kg

See below for individual ingredient acute toxicity data.

Chemical name	LC_{50} (4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Triethylenetetramine, propoxylated	N/Av	> 2000 mg/kg	N/Av
Triethylenetetramine	N/Av	4340 mg/kg	805 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol	N/Av	2169 mg/kg	1280 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	> 1.49, < 2.44 mg/L (aerosol)	1897 mg/kg	16 160 mg/kg

Other important toxicological hazards
: Do not add nitrites or other nitrosating agents. A nitrosamine, which may cause cancer, could be formed. Under certain conditions, nitrites (a nitrosating agent), can react with amines to form nitrosamines, many of which are carcinogenic in animal tests.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Harmful to aquatic life with long lasting effects. No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. The product contains the following substances which are hazardous for the environment: Triethylenetetramine; N-(3-(trimethoxysilyl)propyl)ethylenediamine.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Triethylenetetramine, propoxylated	26950-63-0	N/Av	N/Av	None.
Triethylenetetramine	112-24-3	570 mg/L (Guppy)	N/Av	None.
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	180 - 240 mg/L (Rainbow trout)	N/Av	None.
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	> 100 mg/L (Rainbow trout)	N/Av	None.

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Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Triethylenetetramine, propoxylated	26950-63-0	N/Av	N/Av	None.
Triethylenetetramine	112-24-3	31.1 mg/L (Daphnia magna)	N/Av	None.
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	718 mg/L (grass shrimp)	N/Av	None.
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	90 mg/L (Daphnia magna)	≥ 1 mg/L	None.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Triethylenetetramine, propoxylated	26950-63-0	N/Av	N/Av	None.
Triethylenetetramine	112-24-3	20 mg/L/72hr (Green algae)	N/Av	None.
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	84 mg/L/72hr (Green algae)	N/Av	None.
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	8.8 mg/L/72hr (Green algae)	3.1 mg/L/72hr	None.

Persistence and degradability

: The product itself has not been tested.
Contains the following chemicals which are not readily biodegradable: Triethylenetetramine; 2,4,6-tris(dimethylaminomethyl)phenol; N-(3-(trimethoxysilyl)propyl)ethylenediamine.

Bioaccumulation potential : The product itself has not been tested. See the following data for ingredient information.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Triethylenetetramine (CAS 112-24-3)	- 1.4	N/Av
2,4,6-tris(dimethylaminomethyl)phenol (CAS 90-72-2)	0.219	3.0 (Fish) (calculated)
N-(3-(trimethoxysilyl)propyl)ethylenediamine (CAS 1760-24-3)	1.67	N/Av

Mobility in soil : The product itself has not been tested.

Other Adverse Environmental effects

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8. This material and its container must be disposed of in a safe way.
Empty containers retain residue (liquid and/or vapor) and can be dangerous. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Methods of Disposal : Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	UN2735	Amines, liquid, corrosive, n.o.s. (Triethylenetetramine; Triethylenetetramine, propoxylated)	8	II	
49CFR/DOT Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Refer to 49 CFR Section 173.154.				
TDG	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S. (Triethylenetetramine; Triethylenetetramine, propoxylated)	8	II	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Under the TDG, refer to Section 1.17 for additional exemption requirements, if shipping under this exemption.				
ICAO/IATA	UN2735	Amines, liquid, corrosive, n.o.s. (Triethylenetetramine; Triethylenetetramine, propoxylated)	8	II	
ICAO/IATA Additional information	Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material.				
IMDG	UN2735	AMINES, LIQUID, CORROSIVE, N.O.S. (Triethylenetetramine; Triethylenetetramine, propoxylated)	8	II	
IMDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass.				

Special precautions for user : Appropriate advice on safety must accompany the package. Avoid release to the environment.

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

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SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Triethylenetetramine, propoxylated	26950-63-0	Yes	N/Ap	N/Av	No	NS
Triethylenetetramine	112-24-3	Yes	None.	None.	No	N/Ap
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Yes	None.	None.	No	N/Ap
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Yes	None.	None.	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:
Health hazards (Acute toxicity - Dermal; Skin corrosion; Skin sensitization; Eye Damage; Specific target organ toxicity, single exposure)
Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Triethylenetetramine, propoxylated	26950-63-0	No	N/Ap	No	No	No	No	No	No
Triethylenetetramine	112-24-3	No	N/Ap	No	Yes	No	Yes	Yes	No
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	No	N/Ap	No	No	No	No	No	No
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	No	N/Ap	No	No	No	No	No	No

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product does not contain any substances listed on the NPRI.

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

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International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Triethylenetetramine, propoxylated	26950-63-0	500-055-5	Present		(7)-1154	KE-02914	Present	
Triethylenetetramine	112-24-3	203-950-6	Present	Present	(2)-163	KE-02911	Present	HSR003570
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	202-013-9	Present	Present	(3)-776; (3)-762; (3)-714	KE-34802	Present	HSR003549
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	217-164-6	Present	Present	(2)-2083; (2)-2059	KE-34385	Present	HSR003831

SECTION 16. OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
AIHA: American Industrial Hygiene Association
ATE: Acute Toxicity Estimate
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
EC50: Effective Concentration 50%
EINECS: European Inventory of Existing Commercial chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
ICAO: International Civil Aviation Organisation
IECSC: Inventory of Existing Chemical Substances
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
IOC: Inventory of Chemicals
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances

SAFETY DATA SHEET

QSAR: Quantitative structure-activity relationship
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SCBA: Self-Contained Breathing Apparatus
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WEEL: Workplace Environmental Exposure Level
WHMIS: Workplace Hazardous Materials Identification System

References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2017.
2. International Agency for Research on Cancer Monographs, searched 2017.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2017 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - March 2015 version.
6. California Proposition 65 List - January 27, 2017 version.
7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2017.

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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

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