BLUE CUBE OPERATIONS LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
D.E.H.™ 613 Epoxy Curing Agent

COMPANY IDENTIFICATION
BLUE CUBE OPERATIONS LLC
2030 DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 1 800 424 9300
Local Emergency Contact: 800-424-9300

2. Hazards Identification

Emergency Overview
Color: Colorless
Physical State: Liquid.
Odor: Amine.
Hazards of product:

DANGER! Causes severe eye burns. Causes severe skin burns. Causes burns of the mouth and throat. May cause allergic skin reaction. Causes respiratory tract irritation. Evacuate area. Keep upwind of spill.

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapor or mist may cause eye irritation.
Skin Contact: Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage. May cause depigmentation (white patches on skin).
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: Skin contact may cause an allergic skin reaction. Contains component(s) which have caused allergic skin sensitization in guinea pigs.
Inhalation: Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs.
Ingestion: Low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration. Swallowing may result in burns of the mouth and throat.
Effects of Repeated Exposure: For the component(s) tested: In animals, effects have been reported on the following organs: Gastrointestinal tract.
Cancer Information: Ethanol when not consumed in an alcoholic beverage is not classifiable as a human carcinogen.
Birth Defects/Developmental Effects: Ethanol has been shown to cause birth defects and toxicity to the fetus in laboratory animal tests. It has also been shown to cause human fetotoxicity and/or birth defects when ingested during pregnancy.
Reproductive Effects: In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals. For the minor component(s) Ethanol. In animal studies, has been shown to interfere with fertility in males.

3. Composition Information

Component	CAS #	Amount
1,3-Benzenedimethanamine	1477-55-0	>= 20.0 - < 50.0 %
P-tert-butylphenol	98-54-4	>= 25.0 - < 50.0 %
Mannich base	Trade secret	>= 20.0 - < 50.0 %
Trimethyl-1,6-hexanediamine	25620-58-0	>= 5.0 - < 15.0 %
Ethanol	64-17-5	<= 2.0 %
Calcium nitrate	10124-37-5	1.0 - < 5.0 %

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
Skin Contact: Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.
Eye Contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.
Ingestion: Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.
Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. Fire Fighting Measures

Suitable extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Extinguishing Media to Avoid: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide.
Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep upwind of spill. Ventilate area of leak or spill. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Sand. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Do not get in eyes, on skin, on clothing. Avoid breathing vapor. Avoid prolonged or repeated contact with skin. Do not swallow. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Store in a cool, dry place.

Shelf life: Use within	**Storage temperature:**
12 Months	-20 - 30 °C -4 - 86 °F

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
1,3-Benzenedimethanamine	ACGIH	Ceiling	0.1 mg/m3 SKIN
Ethanol	OSHA Table Z-1	PEL	1,900 mg/m3 1,000 ppm
	ACGIH	STEL	1,000 ppm

A “skin” notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.
It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Neoprene. Polyethylene. Ethyl vinyl alcohol laminate (“EVAL”). Polyvinyl chloride (“PVC” or “vinyl”). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Natural rubber (“latex”). Nitrile/butadiene rubber (“nitrile” or “NBR”). Polyvinyl alcohol (“PVA”). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Appearance	
Physical State	Liquid.
Color	Colorless
Odor	Amine.
Odor Threshold	No test data available
pH	8 - 11 *Calculated*
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	> 200 °C (> 392 °F) *Literature* .
Flash Point - Closed Cup	> 100 °C (> 212 °F) *Literature*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Vapor Pressure	< 5 hPa @ 50 °C *Literature*
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	1.25 *Calculated*
Solubility in water (by weight)	Soluble
Partition coefficient, n-octanol/water (log Pow)	No data available for this product. See Section 12 for individual component data.
Autoignition Temperature	No test data available
Decomposition Temperature	No test data available
Dynamic Viscosity	1,500 mPa.s @ 20 °C *Calculated*
Kinematic Viscosity	No test data available
Explosive properties	No
Oxidizing properties	No
Molecular Weight	316 - 1264 g/mol *Literature* Average

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose.

Incompatible Materials: Avoid contact with: Acids. Halogenated hydrocarbons. Oxidizers.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aromatic compounds. Amines. Hydrocarbons. Phenolics.

11. Toxicological Information

Acute Toxicity

Ingestion

As product: Single dose oral LD50 has not been determined. Based on information for component(s): Estimated. LD50, rat > 2,000 mg/kg

Dermal

As product: The dermal LD50 has not been determined. Based on information for component(s): Estimated. rabbit > 2,000 mg/kg

Inhalation

For the major component(s): Estimated. , rat 2.55 mg/l

Eye damage/eye irritation

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapor or mist may cause eye irritation.

Skin corrosion/irritation

Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage. May cause depigmentation (white patches on skin).

Sensitization

Skin

Skin contact may cause an allergic skin reaction. Contains component(s) which have caused allergic skin sensitization in guinea pigs.

Respiratory

No relevant data found.

Repeated Dose Toxicity

For the component(s) tested: In animals, effects have been reported on the following organs: Gastrointestinal tract.

Chronic Toxicity and Carcinogenicity

Ethanol when not consumed in an alcoholic beverage is not classifiable as a human carcinogen.

Developmental Toxicity

Ethanol has been shown to cause birth defects and toxicity to the fetus in laboratory animal tests. It has also been shown to cause human fetotoxicity and/or birth defects when ingested during pregnancy. Contains component(s) which did not cause birth defects in laboratory animals.

Reproductive Toxicity

In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals. For the minor component(s) Ethanol. In animal studies, has been shown to interfere with fertility in males.

Genetic Toxicology

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Contains a component(s) which were negative in in vitro genetic toxicity studies. The data presented are for the following material: Ethanol. Animal genetic toxicity studies were negative in some cases and positive in other cases. Contains component(s) which were negative in animal genetic toxicity studies.

12. Ecological Information

Toxicity

Data for Component: **1,3-Benzenedimethanamine**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Leuciscus idus (Golden orfe), 96 h: 75 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: 15.2 mg/l

Aquatic Plant Toxicity

EC50, alga Scenedesmus sp., static test, biomass growth inhibition, 72 h: 12 mg/l

Data for Component: **P-tert-butylphenol**

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).

Fish Acute & Prolonged Toxicity
LC50, Leuciscus idus (Golden orfe), 48 h: 1.6 mg/l
LC50, Oryzias latipes (Orange-red killifish): 23.4 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 48 h, immobilization: 3.9 - 6.7 mg/l
Aquatic Plant Toxicity
EC50, Pseudokirchneriella subcapitata (green algae), biomass growth inhibition, 72 h: 14 - 22.7 mg/l
Toxicity to Micro-organisms
EC50; Bacteria, 16 h: 227 mg/l
Aquatic Invertebrates Chronic Toxicity Value
Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, NOEC: 0.73 mg/l

Data for Component: **Mannich base**

No relevant data found.

Data for Component: **Trimethyl-1,6-hexanediamine**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested). May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

Fish Acute & Prolonged Toxicity
LC50, Leuciscus idus (Golden orfe), static test, 48 h: 172 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 24 h, immobilization: 31.5 mg/l
Aquatic Plant Toxicity
ErC50, alga Scenedesmus sp., Growth rate inhibition, 72 h: 29.5 mg/l
Toxicity to Micro-organisms
EC50; Bacteria, 17 h: 89 mg/l

Data for Component: **Ethanol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 h: 11,200 - 13,000 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), 48 h, immobilization: 5,414 mg/l
Aquatic Plant Toxicity
EbC50, Skeletonema costatum, biomass growth inhibition, 5 d: 10,943 - 11,619 mg/l

Data for Component: **Calcium nitrate**

For similar material(s): Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).
For similar material(s): Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species).

Fish Acute & Prolonged Toxicity
For similar material(s): LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: > 98.9 mg/l
Aquatic Invertebrate Acute Toxicity
For similar material(s): EC50, Daphnia magna (Water flea), 48 h, immobilization: 490 mg/l

Persistence and Degradability

Data for Component: **1,3-Benzenedimethanamine**

Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability). Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
49 %	28 d	OECD 301B Test	fail
22 %	28 d	OECD 302C Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
7.141E-11 cm3/s	0.15 d	Estimated.

Theoretical Oxygen Demand: 3.17 mg/mg

Data for Component: **P-tert-butylphenol**

Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
60 %	28 d	OECD 301F Test	fail

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
4.062E-11 cm3/s	0.263 d	Estimated.

Theoretical Oxygen Demand: 2.77 mg/mg

Data for Component: **Mannich base**

No relevant data found.

Data for Component: **Trimethyl-1,6-hexanediamine**

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

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
37 %	21 d	OECD 301E Test	fail
13 %	28 d	OECD 302B Test	Not applicable
2.2 %	3 d	OECD 303A Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
8.407E-11 cm3/s	0.127 d	Estimated.

Theoretical Oxygen Demand: 3.44 mg/mg

Data for Component: **Ethanol**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
> 70 %	5 d	OECD 301D Test	pass

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
3.58E-12 cm3/s	2.99 d	Estimated.

Theoretical Oxygen Demand: 2.08 mg/mg

Data for Component: **Calcium nitrate**

No relevant information found.

Bioaccumulative potential

Data for Component: **1,3-Benzenedimethanamine**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 0.18 Shake flask (OECD 107 Test)

Bioconcentration Factor (BCF): < 3; Cyprinus carpio (Carp); Measured

Data for Component: **P-tert-butylphenol**

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient, n-octanol/water (log Pow): 3.29 Shake flask (OECD 107 Test)

Bioconcentration Factor (BCF): 48 - 88; Cyprinus carpio (Carp); Measured
120; Leuciscus idus (Golden orfe); Measured

Data for Component: **Mannich base**

Bioaccumulation: No relevant data found.

Data for Component: **Trimethyl-1,6-hexanediamine**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): 0.77 Measured

Data for Component: **Ethanol**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient, n-octanol/water (log Pow): -0.31 Measured

Data for Component: **Calcium nitrate**

Bioaccumulation: No relevant data found.

Mobility in soil

Data for Component: **1,3-Benzenedimethanamine**

Mobility in soil: Potential for mobility in soil is low (Koc between 500 and 2000)., Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Partition coefficient, soil organic carbon/water (Koc): 910 Estimated.
Henry's Law Constant (H): 6.94E-11 atm*m3/mole; 25 °C Estimated.

Data for Component: **P-tert-butylphenol**

Mobility in soil: Potential for mobility in soil is low (Koc between 500 and 2000).
Partition coefficient, soil organic carbon/water (Koc): 582 Estimated.
Henry's Law Constant (H): 1.19E-06 atm*m3/mole; 25 °C Measured
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
76 %	22 %	< 0.1 %	3.7 %	3.5 %

Data for Component: **Mannich base**

Mobility in soil: No relevant data found.

Data for Component: **Trimethyl-1,6-hexanediamine**

Mobility in soil: Potential for mobility in soil is low (Koc between 500 and 2000)., Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Partition coefficient, soil organic carbon/water (Koc): 1,200 Estimated.
Henry's Law Constant (H): 3.12E-09 atm*m3/mole; 25 °C Estimated from vapor pressure and water solubility.
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
0.011 %	99.898 %	< 0.01 %	0.047 %	0.044 %

Data for Component: **Ethanol**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient, soil organic carbon/water (Koc): 1.0 Estimated.
Henry's Law Constant (H): 5.00E-06 atm*m3/mole; 25 °C Measured

Data for Component: **Calcium nitrate**

Mobility in soil: No relevant data found.

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED

PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

14. Transport Information

DOT Non-Bulk
Proper Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
Technical Name: 1,3-Benzenedimethanamine, Trimethyl-1,6-hexanediamine, P-tert-butylphenol
Hazard Class: 8 **ID Number:** UN3267 **Packing Group:** PG II

DOT Bulk
Proper Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
Technical Name: 1,3-Benzenedimethanamine, Trimethyl-1,6-hexanediamine, P-tert-butylphenol
Hazard Class: 8 **ID Number:** UN3267 **Packing Group:** PG II

IMDG
Proper Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
Technical Name: 1,3-Benzenedimethanamine, Trimethyl-1,6-hexanediamine, P-tert-butylphenol
Hazard Class: 8 **ID Number:** UN3267 **Packing Group:** PG II
EMS Number: F-A,S-B
Marine pollutant: Yes

ICAO/IATA
Proper Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
Technical Name: 1,3-Benzenedimethanamine, Trimethyl-1,6-hexanediamine, P-tert-butylphenol
Hazard Class: 8 **ID Number:** UN3267 **Packing Group:** PG II
Cargo Packing Instruction: 855
Passenger Packing Instruction: 851
Additional Information

MARINE POLLUTANT (P-tert-butylphenol)

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Calcium nitrate	10124-37-5	1.0 - < 5.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
1,3-Benzenedimethanamine	1477-55-0	>= 20.0 - < 50.0 %
Ethanol	64-17-5	<= 2.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS #	Amount
Ethanol	64-17-5	<= 2.0 %

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

Component	CAS #	Amount
Ethanol	64-17-5	<= 2.0 %

US. Toxic Substances Control Act
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

Remarks:
The generic CAS 25620-58-0 covers all trimethyl-1,6-hexanediamine(TMD) isomers of CAS# 25513-64-8, 3236-54-2 and 3236-53-1.

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	3	1	0

Recommended Uses and Restrictions

Identified uses
Hardener for epoxy resin.

Revision

Identification Number: 1024433 / A476 / Issue Date 04/16/2015 / Version: 7.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average

ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

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