



# Material Safety Data Sheet

BLUE CUBE OPERATIONS LLC

**Product Name:** D.E.H.™ 4909 Epoxy Hardener

**Issue Date:** 04/16/2015

**Print Date:** 01 Jun 2015

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.™ 4909 Epoxy Hardener

### COMPANY IDENTIFICATION

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

### Customer Information Number:

800-258-2436

[SDSQuestion@dow.com](mailto: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 skin burns. Causes burns of the mouth and throat. Harmful if absorbed through skin. 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.

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**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.

**Skin Contact:** Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

**Skin Absorption:** Prolonged or widespread skin contact may result in absorption of harmful amounts.

**Skin Sensitization:** A component in this mixture has caused allergic skin reactions in humans.

Contains component(s) which have caused allergic skin sensitization in guinea pigs.

**Inhalation:** At room temperature, exposure to vapor is minimal due to low volatility; vapor from heated material may cause respiratory irritation. 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.

**Aspiration hazard:** Based on physical properties, not likely to be an aspiration hazard.

**Effects of Repeated Exposure:** For the component(s) tested: In animals, effects have been reported on the following organs: Respiratory tract. Lung.

**Reproductive Effects:** In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals.

**3. Composition Information**

Component	CAS #	Amount
Polyoxypropylene diamine,	9046-10-0	> 25.0 - < 55.0 %
3-Aminomethyl-3,5,5-trimethylcyclohexylamine (isophoronediamine)	2855-13-2	> 5.0 - < 10.0 %
P-tert-butylphenol	98-54-4	> 10.0 - < 20.0 %
1,3-Benzenedimethanamine	1477-55-0	> 10.0 - < 25.0 %
2,4,6-Tris[(dimethylamino)methyl]phenol	90-72-2	> 2.5 - < 10.0 %

**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:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles 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**

Maintain adequate ventilation and oxygenation of the patient. 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. 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.

### 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. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

**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. Do not swallow. Avoid prolonged or repeated contact with skin. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

### Storage

Store in a cool, dry place.

<b>Shelf life:</b>	<b>Use within</b>	<b>Storage temperature:</b>
	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/m <sup>3</sup> SKIN

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.

**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: Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate (“EVAL”). Styrene/butadiene rubber. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber (“latex”). Neoprene. Nitrile/butadiene rubber (“nitrile” or “NBR”). Polyvinyl chloride (“PVC” or “vinyl”). Viton. Avoid gloves made of: 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 <i>Calculated</i>
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	> 200 °C (> 392 °F) <i>Literature</i> .
Flash Point - Closed Cup	> 110 °C (> 230 °F) <i>Literature</i>
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	<b>Lower:</b> No test data available <b>Upper:</b> No test data available
Vapor Pressure	< 5 hPa @ 50 °C <i>Literature</i>
Vapor Density (air = 1)	No test data available
Specific Gravity (H <sub>2</sub> O = 1)	1.05 <i>Calculated</i>
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	350 mPa.s @ 20 °C <i>Calculated</i>
Kinematic Viscosity	No test data available
Explosive properties	no data available
Oxidizing properties	no data available

## 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 LD<sub>50</sub> has not been determined. For the component(s) tested:

Estimated. LD<sub>50</sub>, Rat > 2,000 mg/kg

#### Dermal

As product: The dermal LD50 has not been determined. For component(s) tested. Estimated. LD50, Rabbit > 2,000 mg/kg

**Inhalation**

The LC50 has not been determined.

**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.

**Skin corrosion/irritation**

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

**Sensitization****Skin**

A component in this mixture has caused allergic skin reactions in humans. 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: Respiratory tract. Lung.

**Chronic Toxicity and Carcinogenicity**

No relevant information found.

**Developmental Toxicity**

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.

**Genetic Toxicology**

Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

## 12. Ecological Information

### Toxicity

Data for Component: **Polyoxypropylene diamine,**

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, golden orfe (*Leuciscus idus*), 48 h: > 220 mg/l

Data for Component: **3-Aminomethyl-3,5,5-trimethylcyclohexylamine (isophoronediamine)**

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, golden orfe (*Leuciscus idus*), static renewal, 96 h: 110 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea *Daphnia magna*, 48 h, immobilization: 23 mg/l

**Aquatic Plant Toxicity**

EbC50, alga *Scenedesmus* sp., biomass growth inhibition, 72 h: 37 mg/l

**Toxicity to Micro-organisms**

EC10; bacteria, 18 h: 1,120 mg/l

**Aquatic Invertebrates Chronic Toxicity Value**

water flea *Daphnia magna*, 21 d, number of offspring, NOEC: 3 mg/l, LOEC: 10 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, golden orfe (*Leuciscus idus*), 48 h: 1.6 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea *Daphnia magna*, 48 h, immobilization: 3.9 - 6.7 mg/l

**Aquatic Plant Toxicity**

EC50, green alga *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum*), 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**

water flea *Daphnia magna*, static renewal, 21 d, number of offspring, NOEC: 0.73 mg/l

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, golden orfe (*Leuciscus idus*), 96 h: 75 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea *Daphnia magna*, static, 48 h, immobilization: 15.2 mg/l

**Aquatic Plant Toxicity**

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

Data for Component: **2,4,6-Tris[(dimethylamino)methyl]phenol**

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). May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

**Fish Acute & Prolonged Toxicity**

LC50, rainbow trout (*Oncorhynchus mykiss*), static, 96 h: 180 - 240 mg/l

**Persistence and Degradability**

Data for Component: **Polyoxypropylene diamine**

No appreciable biodegradation is expected.

Data for Component: **3-Aminomethyl-3,5,5-trimethylcyclohexylamine (isophoronediamine)**

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
8 %	28 d	OECD 301A Test	fail
42 %	3 h	OECD 303A Test	Not applicable

**Indirect Photodegradation with OH Radicals**

Rate Constant	Atmospheric Half-life	Method
8.472E-11 cm <sup>3</sup> /s	0.126 d	Estimated.

**Theoretical Oxygen Demand:** 3.38 mg/mg

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

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

**OECD Biodegradation Tests:**

Biodegradation	Exposure Time	Method	10 Day Window
60 %	28 d	OECD 301F Test	fail
98 %	28 d	OECD 301A Test	pass

**Indirect Photodegradation with OH Radicals**

Rate Constant	Atmospheric Half-life	Method
4.062E-11 cm <sup>3</sup> /s	0.263 d	Estimated.

**Theoretical Oxygen Demand:** 2.77 mg/mg

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 cm <sup>3</sup> /s	0.15 d	Estimated.

**Theoretical Oxygen Demand:** 3.17 mg/mg

**Data for Component: 2,4,6-Tris(dimethylamino)methylphenol**

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
4 %	28 d	OECD 301D Test	fail

**Theoretical Oxygen Demand:** 3.01 mg/mg

**Bioaccumulative potential****Data for Component: Polyoxypropylene diamine,**

**Bioaccumulation:** No relevant data found.

**Data for Component: 3-Aminomethyl-3,5,5-trimethylcyclohexylamine (isophoronediamine)**

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

**Partition coefficient, n-octanol/water (log Pow):** 0.79 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; common carp (Cyprinus carpio); Measured  
120; golden orfe (Leuciscus idus); Measured

**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; common carp (Cyprinus carpio); Measured

**Data for Component: 2,4,6-Tris(dimethylamino)methylphenol**

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

**Partition coefficient, n-octanol/water (log Pow):** 0.77 Estimated.

**Bioconcentration Factor (BCF):** 3; Estimated.

**Mobility in soil****Data for Component: Polyoxypropylene diamine,**

**Mobility in soil:** No relevant data found.

**Henry's Law Constant (H):** 1.06E-19 atm\*m<sup>3</sup>/mole; 25 °C Estimated.

**Data for Component: 3-Aminomethyl-3,5,5-trimethylcyclohexylamine (isophoronediamine)**

**Mobility in soil:** Potential for mobility in soil is medium (Koc between 150 and 500)., 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):** 340 Estimated.

**Henry's Law Constant (H):** 3.36E-09 atm\*m<sup>3</sup>/mole; 25 °C Estimated.

**Distribution in Environment: Mackay Level 1 Fugacity Model:**

Air	Water.	Biota	Soil	Sediment
0.01 %	99.89 %	< 0.01 %	0.05 %	0.04 %

**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\*m<sup>3</sup>/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: 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: 2,4,6-Tris(dimethylamino)methylphenol**

**Mobility in soil:** Expected to be relatively immobile in soil (Koc > 5000)., 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):** 15,130 Estimated.

**Henry's Law Constant (H):** 9.19E-17 atm\*m3/mole; 25 °C Estimated.

## 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:** AMINES, LIQUID, CORROSIVE, N.O.S.

**Technical Name:** POLYOXYPROPYLENE DIAMINE, 1,3-BENZENEDIMETHANAMINE

**Hazard Class:** 8 **ID Number:** UN2735 **Packing Group:** PG II

**DOT Bulk**

**Proper Shipping Name:** AMINES, LIQUID, CORROSIVE, N.O.S.

**Technical Name:** POLYOXYPROPYLENE DIAMINE, 1,3-BENZENEDIMETHANAMINE

**Hazard Class:** 8 **ID Number:** UN2735 **Packing Group:** PG II

**IMDG**

**Proper Shipping Name:** AMINES, LIQUID, CORROSIVE, N.O.S.

**Technical Name:** POLYOXYPROPYLENE DIAMINE, 1,3-BENZENEDIMETHANAMINE

**Hazard Class:** 8 **ID Number:** UN2735 **Packing Group:** PG II

**EMS Number:** F-A,S-B

**ICAO/IATA**

**Proper Shipping Name:** AMINES, LIQUID, CORROSIVE, N.O.S.

**Technical Name:** POLYOXYPROPYLENE DIAMINE, 1,3-BENZENEDIMETHANAMINE

**Hazard Class:** 8 **ID Number:** UN2735 **Packing Group:** PG II

**Cargo Packing Instruction:** 855

**Passenger Packing Instruction:** 851

*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	No
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

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

### 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	> 10.0 - < 25.0 %

### 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)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

### 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

## 16. Other Information

### Recommended Uses and Restrictions

Hardener for epoxy resin. Civil engineering. Primer. Coatings.

### Revision

Identification Number: 1026126 / A476 / Issue Date 04/16/2015 / Version: 2.0

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

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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.

BLUE CUBE OPERATIONS LLC *urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.*