



# Material Safety Data Sheet

BLUE CUBE OPERATIONS LLC

Product Name: D.E.R.™ 755 EPOXY RESIN

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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.R.™ 755 EPOXY RESIN

### 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: Yellow

Physical State: viscous liquid to semi solid

Odor: Ether

Hazards of product:

**WARNING!** May cause allergic skin reaction. Isolate area.

### 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 slight temporary eye irritation. Corneal injury is unlikely. Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

**Skin Contact:** Prolonged exposure not likely to cause significant skin irritation. Repeated contact may cause skin irritation with local redness.

**Skin Absorption:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.

**Skin Sensitization:** Has caused allergic skin reactions in humans.

**Inhalation:** Vapor from heated material may cause respiratory irritation.

**Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

**3. Composition Information**

Component	CAS #	Amount
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxy methylene)]bis[oxiran)e] (DGEBA-based polymer)	25036-25-3	50.0 %
Polypropylene glycol diepoxide resin	26142-30-3	50.0 %

**4. First-aid measures**

**Eye Contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Skin Contact:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

**Notes to Physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

**5. Fire Fighting Measures**

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

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. 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. Water fog, applied gently may be used as a blanket for fire extinguishment. 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.

**Unusual Fire and Explosion Hazards:** Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen.

**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: Phenolics. Carbon monoxide. Carbon dioxide.

## 6. Accidental Release Measures

**Steps to be Taken if Material is Released or Spilled:** Contain spilled material if possible. Absorb with materials such as: Sand. Polyethylene fiber products. Polypropylene fiber products. Collect in suitable and properly labeled containers. Remove residual with soap and hot water. Residual can be removed with solvent. Solvents are not recommended for clean-up unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent Safety Data Sheet for handling information and exposure guidelines. See Section 13, Disposal Considerations, for additional information.

**Personal Precautions:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

**Environmental Precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

## 7. Handling and Storage

### Handling

**General Handling:** Avoid prolonged or repeated contact with skin. 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 dry place.

**Shelf life: Use within**      **Storage temperature:**  
24 Months                      2 - 43 °C

## 8. Exposure Controls / Personal Protection

### Exposure Limits

None established

### Personal Protection

**Eye/Face Protection:** Use safety glasses. 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. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL").

Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl").

**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 most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge.

**Ingestion:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands 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

Physical State	viscous liquid to semi solid
Color	Yellow
Odor	Ether
Flash Point - Closed Cup	154 °C (309 °F) <i>Pensky-Martens Closed Cup ASTM D 93</i>
Flammable Limits In Air	<b>Lower:</b> No test data available <b>Upper:</b> No test data available
Autoignition Temperature	No test data available
Vapor Pressure	1.4 mmHg @ 80 °C <i>Literature</i>
Boiling Point (760 mmHg)	>= 200 °C (>= 392 °F) <i>Literature</i> .
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	1.06 <i>Literature</i>
Freezing Point	No test data available
Melting Point	Not applicable
Solubility in Water (by weight)	Insoluble
pH	No test data available
Dynamic Viscosity	1,000 - 2,000 cPs @ 25 °C <i>ASTM D445</i>
Saturated Vapor Concentration	No test data available

## 10. Stability and Reactivity

#### Stability/Instability

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

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

**Incompatible Materials:** Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases. Avoid unintended contact with amines.

#### Hazardous Polymerization

Will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.

#### Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

## 11. Toxicological Information

### Acute Toxicity

#### Ingestion

LD50, Rat > 2,000 mg/kg

#### Skin Absorption

The dermal LD50 has not been determined.

### Sensitization

#### Skin

Has caused allergic skin reactions in humans.

### Repeated Dose Toxicity

Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

### Chronic Toxicity and Carcinogenicity

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic.

### Developmental Toxicity

Resins based on the diglycidyl ether of bisphenol A (DGEBA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

### Reproductive Toxicity

The data presented are for the following material: Diglycidyl ether of Bisphenol A. In animal studies, did not interfere with reproduction.

### Genetic Toxicology

The data presented are for the following material: Diglycidyl ether of Bisphenol A. In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

## 12. Ecological Information

### CHEMICAL FATE

#### Movement & Partitioning

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is low (Koc between 500 and 2000). No bioconcentration is expected because of the relatively high water solubility.

#### Persistence and Degradability

Based largely or completely on data for major component(s): 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.

#### ECOTOXICITY

Based largely or completely on data for major component(s): Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).

## 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. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

## 14. Transport Information

**DOT Non-Bulk**  
NOT REGULATED

**DOT Bulk**  
NOT REGULATED

**IMDG**  
NOT REGULATED

**ICAO/IATA**  
NOT REGULATED

*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:

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 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.

#### European Inventory of Existing Commercial Chemical Substances (EINECS)

Components of this product are not listed on EINECS because they are polymers or "no-longer polymers" marketed before the enforcement of the 7<sup>th</sup> Amendment to Directive 67/548/EEC.

#### 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

#### CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

## 16. Other Information

#### Hazard Rating System

NFPA	Health	Fire	Reactivity
	1	1	1

#### Recommended Uses and Restrictions

Used in applications such as: Adhesives. Casting. Tooling. Civil engineering. Composites. Marine and protective coatings. Potting and encapsulation.

#### Revision

Identification Number: 50419 / A476 / Issue Date 04/16/2015 / Version: 2.1

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.

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.