



# BDC EPOXY SYSTEMS

GHS Safety Data Sheet

Date of Preparation: 05/07/15

## 1. Product and Company Identification

**Product Names:** BDC Vapor Seal - Pigmented - Resin

**Product Class:** Epoxy Resin

**Manufacturer:** B. D. Classic Enterprises, Inc.  
12903 Sunshine Avenue  
Santa Fe Springs, CA 90670

**Telephone:** 562-944-6177

**Emergency:** 800-424-9300 (ChemTrec)

## 2. Hazard Identification

**Form:** Viscous liquid.

**OSHA/HCS status:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin irritation – Category 2

Eye irritation – Category 2A

Skin sensitization – Sub category 1B

Acute aquatic toxicity – Category 2

Chronic aquatic toxicity – Category 2

### Label Elements



**Hazard pictograms:**

**Emergency Overview:** **WARNING!**

**Hazards**

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Toxic to aquatic life with long lasting effects.

### Precautionary statements

**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash skin thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.

Wear eye protection/face protection.

**Response:**

**IF ON SKIN:** Wash with plenty of soap and water.

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**If skin irritation or rash occurs:** Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.  
Take off contaminated clothing and wash before reuse.  
Collect spillage.

Disposal:  
Dispose of contents/ container to an approved waste disposal plant.

Other hazards:  
No data available  
See Section 11 for more detailed information on health effects and symptoms.

### 3. Composition/Information on Ingredients

Synonyms: Liquid Epoxy Resin

This product is a substance.

Ingredient Name	CAS Number	%
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	70-100%
OXIRANE, MOMO [(C12-14-ALKYLOXY)METHYL] DERVIS	68609-97-2	<15%
Titanium Dioxide	13463-67-7	2-30%
Proprietary		< 15%

### 4. First Aid Measures

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
Skin Contact:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. For contact with hot product, flush contaminated skin with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze. Get medical attention immediately.
Inhalation:	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing air to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion:	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

<b>Protection of First Aid Personnel:</b>	In the event of body contact with molten material, immediately cool with running water; do not attempt to remove material from skin. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
<b>Notes to Physician:</b>	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

## 5. Fire-Fighting Measures

<b>Flammability of Product:</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b><u>Extinguishing Media:</u></b>	
<b>Suitable</b>	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. Water fog, applied gently may be used as a blanket for fire extinguishment.
<b>Not Suitable</b>	Do not use direct water stream. May spread fire.
<b>Special Exposure Hazards:</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Smoke may contain the original material in addition to combustion products of varying compositions which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics, Carbon monoxide, Carbon dioxide. No action shall be taken involving any personal risk or without suitable training.
<b>Hazardous Combustion Products</b>	Decomposition products may include the following materials: carbon oxides. Container may rupture from gas generation in a fire situation. 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.
<b>Special Protective Equipment for Fire Fighters:</b>	Fire-Fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental Release Measures

<b>Personal Precautions:</b>	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
<b>Environmental Precautions:</b>	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
<b>Large Spill:</b>	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a

<b>Small Spill:</b>	designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Stop leak if without risk. Move containers from spill area. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
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## 7. Handling and Storage

<b>Handling:</b>	Avoid prolonged or repeated contact with skin. Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of liquid epoxy resin to explode and catch fire. Application of a direct flame to a container of liquid epoxy resin can also cause explosion and/or fire. See Section 8, Exposure Controls and Personal Protection
<b>Storage:</b>	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Note: This resin may be handled, shipped and stored at elevated temperature in bulk. Recommended pumping and storage temperature for bulk shipments if 60 degrees C (140 degrees F). Storage temperature: 2 – 43 degrees C (36 – 109 degrees F) Shelf Life – Use within 24 months

## 8. Exposure Controls/Personal Protection

<b>Control Parameters:</b>	None established
<b>Recommended Monitoring Procedures:</b>	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
<b>Engineering Measures:</b>	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
<b>Hygiene Measures:</b>	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing

	before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Respiratory:</b>	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. In most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vap or cartridge with a particulate pre-filter.
<b>Eyes:</b>	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
<b>Skin:</b>	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Environmental Exposure Controls:</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9. Physical and Chemical Properties

<b>Appearance</b>	Viscous liquid
<b>Flash Point</b>	Closed cup 264-268 degree C (507-514 degrees F) at 102.89 hPaEC Method A9
<b>Auto-Ignition Temperature</b>	Not Available
<b>Flammable limits</b>	
<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable
<b>Color</b>	Colorless to yellow
<b>pH</b>	Not available
<b>Boiling Point</b>	320 degrees C (608 degrees F) Differential Scanning Calorimetry (DSC) Decomposition
<b>Relative Density</b>	1.16 at 20 degrees C (68 degrees F)/20 degrees C Literature
<b>Vapor Pressure</b>	<0.0000001 Pa EC Method A4
<b>Odor Threshold</b>	Not available
<b>Viscosity</b>	Dynamic – 11,000 – 14,000 mPa.s at 25 degrees C (77 degrees F) ASTM D 445
<b>Water Solubility</b>	5.4 – 8.4 mg/l at 20 degree C (68 degrees F) EU Method A.6
<b>Partition coefficient: n-Octanol/water</b>	Log Pow: 3.242 Estimated
<b>Evaporation rate</b>	Not available
<b>Vapor Density</b>	Not available

## 10. Stability and Reactivity

<b>Chemical Stability</b>	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
<b>Conditions to Avoid</b>	Avoid short term exposures to temperatures above 300 degrees C. Potentially violent decomposition can occur above 350 degrees C. Avoid prolonged exposure to temperatures above 250 degrees C. Generation of gas during decomposition can cause pressure in closed systems.

	Pressure build up can be rapid. Avoid contact with oxidizing materials. Avoid contact with: Acids, Bases. Avoid unintended contact with amines.
Materials to Avoid	Reactive or incompatible with the following materials: oxidizing materials, strong acids, strong alkalis
Other Hazards	Reacts with considerable heat release with some curing agents
Hazardous Decomposition Products	Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.
Reactivity	No data available

## 11. Toxicological Information

<u>Acute toxicity</u>	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.									
	<table><tr><td>LD50 Oral</td><td>Rat</td><td>30,000 mg/kg</td></tr><tr><td>LD50 Oral</td><td>Mouse</td><td>20,000 mg/kg</td></tr><tr><td>LD50 Oral</td><td>Rabbit</td><td>19.8 mg/kg</td></tr></table>	LD50 Oral	Rat	30,000 mg/kg	LD50 Oral	Mouse	20,000 mg/kg	LD50 Oral	Rabbit	19.8 mg/kg
LD50 Oral	Rat	30,000 mg/kg								
LD50 Oral	Mouse	20,000 mg/kg								
LD50 Oral	Rabbit	19.8 mg/kg								
<u>Acute dermal toxicity</u>	Prolonged skin contact is unlikely to result in absorption of harmful amounts.									
	<table><tr><td>LD50 Dermal</td><td>Rabbit</td><td>23,000 mg/kg</td></tr><tr><td>LD50 Dermal</td><td>Rat</td><td>&gt;1,200 mg/kg</td></tr><tr><td>LD50 Dermal</td><td>Mouse</td><td>&gt; 1,270 mg/kg</td></tr></table>	LD50 Dermal	Rabbit	23,000 mg/kg	LD50 Dermal	Rat	>1,200 mg/kg	LD50 Dermal	Mouse	> 1,270 mg/kg
LD50 Dermal	Rabbit	23,000 mg/kg								
LD50 Dermal	Rat	>1,200 mg/kg								
LD50 Dermal	Mouse	> 1,270 mg/kg								
<u>Acute inhalation toxicity</u>	At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material, mist or aerosols may cause respiratory irritation. The LC50 has not been determined.									
<u>Skin Corrosion/irritation</u>	Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness									
<u>Serious eye damage/eye irritation</u>	May cause eye irritation. Corneal injury is unlikely.									
<u>Sensitization</u>	For similar material(s): Has caused allergic skin reactions in humans. Has demonstrated the potential for contact allergy in mice. For respiratory sensitization: No relevant data found.									
<u>Specific Target Organ Systemic Toxicity (single Exposure)</u>	Evaluation of available data suggests that this material is not an STOT-SE toxicant.									
<u>Specific Target Organ Systemic Toxicity (Repeated Exposure)</u>	Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.									
<u>Teratogenicity</u>	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.									

<b><u>Reproductive toxicity</u></b>	In animal studies, did not interfere with reproduction.
<b><u>Mutagenicity</u></b>	In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.
<b><u>Aspiration Hazard</u></b>	Based on physical properties, not likely to be an aspiration hazard.
<b><u>Other Toxicological Information</u></b>	
<b><u>Carcinogenicity</u></b> Classification	Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). The most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that GDEBPA 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. ACGIH Not Classified IARC Not Classified NTP Not Classified OSHA Not Classified EEC Not Classified

## 12. Ecological Information

<b>Toxicity</b>	Acute toxicity to fish. Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50) between 1 and 10 mg/L in the most sensitive species tested) LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 2 mg/l.
	Acute toxicity to aquatic invertebrates. EC50, Daphnia magna (Water flea), static test, 48 hour, 1.8 mg/l
	Acute toxicity to algae/aquatic plants C50, Scenedesmus capricornutum (fresh water algae, static test, 72 Hour, Growth rate inhibition, 1 mg/l
	Toxicity to bacteria IC50, Bacteria, 18 Hour, Respiration rates, >42.6 mg/l
	Chronic aquatic toxicity Chronic toxicity to aquatic invertebrates MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 0.55 mg/l
<b>Persistence and degradability</b>	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. 10-day Window: Not applicable Biodegradation: 12% Exposure time: 28d Method: OECD Test Guideline 302B or Equivalent.  Theoretical Oxygen Demand: 2.35 mg/mg Estimated.

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitizer:** OH radicals

**Atmospheric half-life:** 1.92 hour

**Method:** Estimated.

**Bioaccumulative potential**

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Lo Pow between 3 and 5

**Partition coefficient:** n-octanol/water(log Pow): 3.242 at 25 degrees C Estimated.

**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 (Koc):** 1800-4400 Estimated.

**Other Adverse effects**

No known significant effects or critical hazards

### 13. Disposal Considerations

**Waste Disposal**

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. 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 the SDS Section: Composition Information. For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

### 14: Transport Information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

DOT

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

**Proper shipping name:**

**ENVIRONMENTALLY HAZARDOUS SUB-STANCE, LIQUID, N.O.S. (EPOXY RESIN)**

**UN Number**

**UN 3082**

**Class**

**9**

**Packing group**

**III**

**Marine pollutant**

**Epoxy Resin**

**Transport in bulk**

**Consult IMO regulations before transporting**

**According to Annex**

**ocean bulk**



I or II of MARPOL  
73/78 and the IBC or  
IGC Code

**Classification for AIR transport (IATA/ICAO):**

Proper Shipping name:	ENVIRONMENTALLY HAZARDOUS SUB-STANCE, LIQUID, N.O.S. (EPOXY RESIN)
UN Number	UN 3082
Class	9
Packing Group	III

CFR	Non-Regulated
TDG	Non-Regulated

## 15. Regulatory Information

### US Regulations

OSHA Hazard  
Communication  
Standard

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

U.S. Federal  
Regulations

Superfund Amendments and Reauthorization Act of 1986 Title III  
(Emergency Planning and Community Right –to-Know Act of 1986)  
Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA Sections 311 and 312  
Acute Health Hazard

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

State Regulations

SARA 301 Extremely Hazardous Substances – None required  
Massachusetts RTK Substances – None required

New jersey RTK Hazardous Substances – None required

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

California Prop. 65: 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.

### Canada

WHMIS (Canada)  
Canadian lists

Class D-2B: material causing other toxic effects (Toxic)  
Canadian NPRI: None Required.

### International Regulations

Chemical Inventories

Europe inventory – All components are listed or exempted  
Australia inventory (AICS) – All components are listed or exempted  
China inventory ( IECSC) – All components are listed or exempted  
Korea inventory (KECI) – All components are listed or exempted  
Philippines inventory (PICCS) – All components are listed or exempted

Japan inventory ( ENCS) – All components are listed or exempted  
Canada inventory – All components are listed or exempted  
United States inventory (TSCA 8b)– All components are listed or exempted

<b>16. Other Information</b>
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<b>Hazardous Material Information System III (U.S.A.)</b>	<b>Health: 1 Flammability: 1 Reactivity: 2 Chronic:</b>
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Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS ratings are not required on MSDSs under CFR 1910.1200, the preparer may choose to provide them. HMIS ratings are to be used with a fully implemented HMIS program. HMIS is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material

The information provided herein was believed by B. D. Classic Enterprizes, Inc. (B. D. Classic) to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by B. D. Classic are subject to B. D. Classic's terms and conditions of sale. **B. D. CLASSIC MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY B. D. CLASSIC**, except that the product shall conform to B. D. Classic specifications. Nothing contained herein constitutes an offer for the sale of any product.

# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

Revision date: 2015/08/20

### 1. Identification

**Product identifier used on the label**

**BDC VAPOR SEAL HARDENER**

**Recommended use of the chemical and restriction on use**

#### Floor Coating

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

##### Company:

B.D. Classic Enterprises  
P.O. 2445  
Santa Fe Springs, CA 90670

562-944-6177

#### Emergency telephone number

CHEMTREC: 1-800-424-9300

#### Other means of identification

Chemical family: mixed amine  
Synonyms: mixed amine

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### 2. Hazards Identification

#### According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR Part 1910.1200

##### **Classification of the product**

FLAMMABLE LIQUIDS	- Category 4
SKIN CORROSION/IRRITATION	- Category 1B
SERIOUS EYE DAMAGE/ EYE IRRITATION	- Category 1
SKIN SENSITIZATION	- Category 1
TOXIC TO REPRODUCTION (Unborn child)	- Category 1B
TOXIC TO REPRODUCTION (Fertility)	- Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)	- Category 2
AQUATIC HAZARD (ACUTE)	- Category 2
AQUATIC HAZARD (LONG-TERM)	- Category 1

Label Elements

Pictogram:



# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

Revision date: 2015/08/20

Signal Word: Danger

Hazard Statement:

Combustible liquid.

Causes severe skin burns and eye damage. May cause an allergic skin reaction.

May damage the unborn child. Suspected of damaging fertility.

May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash hands thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements (Response):

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Precautionary Statements (Disposal):

Disposal of contents/container to be specified in accordance with regulations.

### 3. Composition / Information on Ingredients

Ingredient name	%	CAS number
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	25 - 70	186321-96-0
Benzyl Alcohol	10 – 35	100-51-6
Isophorone diamine	5 – 15	2855-13-2
metaxylenediamine	5 – 10	1477-55-0
Bisphenol A	5 – 10	80-05-7
3-aminopropyldimethylamine	1 – 5	109-55-7
2,4,6-tris(dimethylaminomethyl)phenol	1 – 5	90-72-2
Salicylic acid	1 - 5	69-72-7
Proprietary	< 15	Trade Secret

### 4. First-Aid Measures

#### Description of first aid measures

##### General advice:

Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental

# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

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Revision date: 2015/08/20

oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

### **If inhaled:**

If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.

### **If on skin:**

Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Take off contaminated clothing and shoes immediately.

### **If in eyes:**

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eyespecialist.

### **If swallowed:**

Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position. Prevent aspiration of vomit. Turn victim's head to the side.

### **Most important symptoms and effects, both acute and delayed:**

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Neurological disorders. Asthma. Skin disorders and Allergies. Eye disease.

### Note to physician

Treatment: Application of corticosteroid cream has been effective in treating skin irritation.

## **5. Fire-Fighting Measures**

### **Flash Point**

Closed cup: 85.5°C (185.9°F) [DIN 51758 EN 22719 (Pensky-Martens Closed Cup)]

### **Extinguishing media**

Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam

### **Unsuitable Extinguishing Media**

Do not use water jet

### **Special hazards arising from the substance or mixture**

Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

### **Advice for fire-fighters**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

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Revision date: 2015/08/20

### Special Protective Equipment for Fire-Fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

### Impact Sensitivity:

Remarks: No data available.

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Use self-contained breathing apparatus and chemically protective clothing. Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.

### Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage

### Methods and material for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13).

Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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## 7. Handling and Storage

### Handling

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 2 to 40°C (35.6 to 104°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up.

# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

Revision date: 2015/08/20

Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination..

Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Keep container tightly closed and in a well-ventilated place. Keep away from sources of ignition - No smoking. Keep container tightly closed.

Storage stability: Do not store in reactive metal containers. Keep container dry because product takes up the humidity of air.

### 8. Exposure Controls/Personal Protection

#### Engineering Measures

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### Personal protective equipment

##### Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator when ventilation is inadequate. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

##### Hand protection:

Butyl-rubber, nitrile rubber, neoprene, PVC disposable, or otherwise impervious gloves should be worn.

Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

##### Eye protection:

Wear face shield or tightly fitting safety goggles (chemical goggles).

##### Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit, long-sleeve shirts, trousers without cuffs.

##### General safety and hygiene measures:

Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Hands and/or face should be washed before breaks and at the end of the shift. When using, do not eat, drink or smoke. Remove contaminated clothing. Discard contaminated leather articles.

##### Exposure limit(s)

Metaxylenediamine	ACGIH TLV (United States, 4/2014). Absorbed through skin.	0.1 mg/m
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# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

Revision date: 2015/08/20

### 9. Physical and Chemical Properties

Form:	liquid
Odor:	Ammoniacal
Color:	Amber, Brown
pH value:	Alkaline, 11
Melting point:	No data available
Boiling point:	> 135 °C
Flash point:	> 85 °C (DIN 51758 EN 22719 (Pensky-Martens Closed Cup)
Flammability:	Not flammable
Lower explosion limit:	Not applicable
Upper explosion limit:	Not applicable
Autoignition:	No data available
Vapor pressure:	Not available
Density:	1.03 g/cm <sup>3</sup> at 68 °F (20 °C)
Viscosity, Dynamic	500-1400 CPS
Solubility in Water	Partially soluble
Evaporation rate:	< Ether

### 10. Stability and Reactivity

Chemical Stability:  
Stable under normal conditions.

Conditions to avoid:  
Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid:  
Reactive or incompatible with oxidizing materials.

Hazardous decomposition products:  
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous Reactions/Reactivity:  
No data available.

### 11. Toxicological information

Acute Toxicity:

Product/ingredient name	Test	Endpoint	Species	Result
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat - Male, Female	>2000 mg/kg



# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

Revision date: 2015/08/20

Benzyl Alcohol	OECD 423 Acute Oral toxicity - Acute Toxic Class Method	LD50 Oral	Rat - Female	>2000 mg/kg
	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat - Male, Female	>4178 mg/m <sup>3</sup>
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male	1620 mg/kg
Isophorone diamine	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male	1030 mg/kg
metaxylenediamine	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat - Male, Female	1.34 mg/l
	No official guidelines Internal method	LD50 Dermal	Rat - Male, Female	>3100 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	930 mg/kg
Bisphenol A	Unknown guidelines	LC50 Inhalation Dusts and mists	Rat - Male, Female	>170 mg/m <sup>3</sup>
	Unknown guidelines	LD50 Dermal	Rabbit - Male	6400 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	2000 to 5000 mg/kg
3-aminopropyldimethylamine	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat - Male, Female	24.8 mg/l
	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat	>1000 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	410 mg/kg
2,4,6-tris (dimethylaminomethyl) phenol	Unknown guidelines	LD50 Dermal	Rat - Male	>971 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	2169 mg/kg
Salicylic acid	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat - Male, Female	>2000 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat	891 mg/kg

### Irritation/Corrosion:

Product/ingredient name	Test	Species	Result
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	OECD OECD 439- In Vitro Skin Irritation - Reconstructed Human Epidermis Test Method	Human skin model	Skin - Irritant
	OECD Bovine Corneal Opacity and Permeability Test Method for Identifying Ocular Corrosives and Severe Irritants	Mammal - species unspecified	Eyes - Severe irritant
	OECD 404 Acute Dermal	Rabbit	Skin - Non-irritant.
Benzyl Alcohol	Irritation/Corrosion OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Irritant

# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

Revision date: 2015/08/20

Isophorone diamine	-	Rabbit	Skin - Corrosive
metaxylenediamine	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Corrosive
Bisphenol A	EU	Rat	Skin - Corrosive
	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Severe irritant
3-aminopropyldimethylamine	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Corrosive
2,4,6-tris(dimethylaminomethyl) phenol	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Corrosive
Salicylic acid	EPA CFR	Rabbit	Eyes - Corrosive
	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.
	-	Rabbit	Eyes - Severe irritant

### Information on toxicological effects

#### Likely routes of exposure

##### Effects on Eye:

Severe eye irritation.

##### Effects on Skin:

If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties.

##### Inhalation Effects:

May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

##### Ingestion Effects:

Harmful if swallowed. May cause central nervous system effects, such as headache, nausea, vomiting, abdominal pain, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure.

##### Symptoms:

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause Sore throat. Neurological disorders, Asthma, Skin disorders and Allergies, Eye disease.

#### Acute toxicity

Acute Oral Toxicity: LD50 : 1,000 mg/kg Species : Rat.

#### Inhalation:

No data is available on the product itself. Inhalation - Components  
Benzyl alcohol: LC50 (4 h): > 4.178 mg/l OECD Test Guideline 403  
Species: Rat.

#### Acute Dermal Toxicity:

LD50 : > 2,800 mg/kg Species : Rabbit.

# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

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Revision date: 2015/08/20

Skin corrosion/irritation: Severe skin irritation. Corrosive to the skin of a rabbit.

Serious Eye Damage/Eye Irritation: Severe eye irritation

Sensitization: May cause sensitization by skin contact

### Chronic Toxicity or Effects from Long Term Exposures

Carcinogenicity: No data available

Reproductive Toxicity: No data is available on the product itself

Germ Cell Mutagenicity: No data is available on the product itself

Specific Target Organ Systemic Toxicity (single exposure): No data is available

Specific Target Organ Systemic Toxicity (repeated exposure): No data is available

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. Repeated or prolonged contact causes sensitization, asthma and eczemas. Neurological disorders, Asthma, Skin disorders and Allergies, Eyedisease.

Rats exposed orally to 800 mg/kg benzyl alcohol for thirteen weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No Observed Adverse Effect Level (NOAEL) was 400 mg/kg. No evidence of carcinogenicity was seen in a two-year study with rats and mice.

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## 12. Ecological Information

### EcoToxicity Effects

Aquatic toxicity: No data available on the product itself

#### Toxicity to fish:

Benzyl alcohol LC50 (96 h) : 10 mg/l Species : Bluegill sunfish (*Lepomis macrochirus*).

Benzyl alcohol LC50 (96 h) : 460 mg/l Species : Fathead minnow (*Pimephales promelas*).

#### Toxicity to algae:

Benzyl alcohol IC50 (72 h) : 700 mg/l Species : Algae.

Toxicity to other organisms: No data available.

#### Persistence and degradability

Biodegradability: No data is available on the product itself.

Mobility: No data available.

Bioaccumulation: No data is available on the product itself.

#### Bioaccumulation:

Benzyl alcohol: Low bioaccumulation potential.

# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

Revision date: 2015/08/20

### 13. Disposal Considerations

Dispose of in a licensed facility. Do not discharge into waterways or sewer systems without proper authorization. Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

#### Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

### 14. Transport Information

#### Land transport

USDOT

Hazard class: 8  
Packing group: III  
ID number: UN 2735  
Hazard label: 8  
Proper shipping name: Amines, liquid, corrosive, n.o.s. (Isophorone diamine, M-xylylene diamine)

#### Sea transport

IMDG

Hazard class: 8  
Packing group: III  
ID number: UN 2735  
Hazard label: 8  
Proper shipping name: Amines, liquid, corrosive, n.o.s. (Isophorone diamine, M-xylylene diamine)  
Marine Pollutant: YES

#### Air transport

IATA/ICAO

Hazard class: 8  
Packing group: III  
ID number: UN 2735  
Hazard label: 8  
Proper shipping name: Amines, liquid, corrosive, n.o.s. (Isophorone diamine, M-xylylene diamine)  
Marine pollutant: YES

### 15. Regulatory Information

Toxic Substance Control Act (TSCA) 12(b)

Component(s):None.

COUNTRY	REGULATORY LIST	NOTIFICATION
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.

# Safety Data Sheet

## BDC VAPOR SEAL - HARDENER

Revision date: 2015/08/20

Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification:  
Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level:  
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)  
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

### 16. Other Information

#### HMIS Rating

Health	:	3
Flammability	:	2
Physical hazard	:	0

**SDS Prepared by:**  
B.D. Classic Enterprises

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