

Preformed Epoxy Resin Compounds

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012
Date of issue: 10/16/15 Revision date: 10/16/15 Version: 1.0



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : DC-001 Red DC-003 Green
DC-002 Black DC-007 Red
DC-003 Blue
Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Electrical/Electronic Encapsulant, Sealant

1.3. Details of the supplier of the safety data sheet

Multi-Seals, Inc.
540 North Main St.
Manchester, CT 06042 - USA
T 860-643-7188

1.4. Emergency telephone number

Emergency number : 860-643-7188 (8:30am - 5:00pm EST)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Eye Irritation 2A
Skin Sensitization 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : Causes serious eye irritation. May cause an allergic skin reaction.
Precautionary statements (GHS-US) : Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Wear protective gloves/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

DC-001 Red: 65 percent of the mixture consists of ingredient(s) of unknown acute toxicity.
DC-002 Black, DC-003 Blue, DC-003 Green: 60 percent of the mixture consists of ingredient(s) of unknown acute toxicity.
DC-007 Red: 70 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Bisphenol A diglycidyl ether - bisphenol A copolymer	(CAS No) 25036-25-3	60 - 100
1,3-Isobenzofurandione, 5,5'-carbonylbis-	(CAS No) 2421-28-5 ¹	10 - 20

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Phenol, polymer with formaldehyde, glycidyl ether	(CAS No) 28064-14-4 ²	5 - 10
Carbon black	(CAS No) 1333-86-4 ³	1 - 5
¹ Only present in DC-007 Red ² Only present in DC-001 Red ³ Only present in DC-002 Black		

* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Not a normal route of exposure. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists. In case of contact with hot or molten product, get immediate medical advice/attention.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention. In case of contact with hot or molten product, get immediate medical advice/attention.
- First-aid measures after ingestion : Not a normal route of exposure. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : Not a normal route of exposure. May cause respiratory tract irritation.
- Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
- Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/injuries after ingestion : Not a normal route of exposure. May result in obstruction and temporary irritation of the digestive tract.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Powder, water fog, foam, carbon dioxide.
- Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon, aldehydes, hydrogen chloride, silicon dioxide.

5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release.

6.2. Methods and material for containment and cleaning up

- For containment : With molten spills, allow the material to solidify and cool. Pick up large pieces, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Vacuum or sweep material and place in a disposal container.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.

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Hygiene measures : Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Store in a dry, cool area. Keep container tightly closed.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Bisphenol A diglycidyl ether - bisphenol A copolymer (25036-25-3)		
ACGIH	Not applicable	
OSHA	Not applicable	
1,3-Isobenzofurandione, 5,5'-carbonylbis- (2421-28-5)		
ACGIH	Not applicable	
OSHA	Not applicable	
Phenol, polymer with formaldehyde, glycidyl ether (28064-14-4)		
ACGIH	Not applicable	
OSHA	Not applicable	
Carbon black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m ³)	3.5 mg/m ³

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear eye protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : None necessary under normal conditions of use.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Geometric form

Color : Various

Odor : Slight phenolic

Odor threshold : No data available

pH : No data available

Melting point : 85 - 100 °C (185 °F - 212 °F)

Freezing point : No data available

Boiling point : No data available

Flash point : > 93 °C (> 200 °F)

Relative evaporation rate (butylacetate=1) : No data available

Flammability (solid, gas) : Not flammable

Explosive limits : No data available

Explosive properties : No data available

Oxidising properties : No data available

Vapour pressure : Nil

Relative density : 1.1 - 1.7 g/cc at 20 °C (68 °F)

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Relative vapour density at 20 °C	: No data available
Solubility	: Nil
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

% Volatile	: 0.6 - 0.8% by weight
VOC %	: 0 - 0.8% by weight

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, aldehydes, hydrogen chloride, silicon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

Preformed Epoxy Resin Compounds	
LD50 oral rat	DC-002 Black, DC-003 Blue, DC-003 Green, DC-007 Red: > 2000 mg/kg DC-001 Red: No data available
LD50 dermal rabbit	DC-002 Black, DC-003 Blue, DC-003 Green, DC-007 Red: > 2000 mg/kg DC-001 Red: No data available
LC50 inhalation rat	No data available

1,3-Isobenzofurandione, 5,5'-carbonylbis- (2421-28-5)	
LD50 oral rat	12800 mg/kg

Carbon black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg
LD50 dermal rabbit	> 3 g/kg

Skin corrosion/irritation	: Based on available data, the classification criteria are not met.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.

Carbon black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans (airborne particles of respirable size)

Reproductive toxicity	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: Based on available data, the classification criteria are not met.

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Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: Not a normal route of exposure. May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.
Symptoms/injuries after eye contact	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion	: Not a normal route of exposure. May result in obstruction and temporary irritation of the digestive tract.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except:

Silica, amorphous, precipitated and gel	CAS No 112926-00-8 ⁴
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⁴Only present in DC-007 Red

Bisphenol A diglycidyl ether - bisphenol A copolymer (25036-25-3)

EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.
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15.2. US State regulations

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State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
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15.3. EU RoHS

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Directive 2011/65/EU

This product does not have levels of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PPB), or polybrominated diphenyl ether (PBDE) detectable above the limits proposed by EU Directive 2011/65/EU RoHS; therefore, these products are fully compliant with EU Directive 2011/65/EU RoHS

SECTION 16: Other information

Date of issue : 10/16/2015

Revision date : 10/16/2015

Other information : None

Prepared by: Burton S. Anderson 10-16-15

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Disclosure: Any ingredient claimed as a trade secret will be disclosed in accordance with CFR 29 1910.1200 (j). Known to be present only as a trace impurity in the finished product: NONE See Section 8 of this SDS for any noted exposure limits for these compounds. This Safety Data Sheet (SDS) has been prepared in compliance with the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200 The listed components are considered to be hazardous under that standard.