

# Preformed Epoxy Resin Compounds

## Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012  
Date of issue: 07/31/2015 Revision date: 07/31/2015 Version: 1.0



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

#### 1.1. Product identifier

Product name : DC-202 Black  
DC-202LT Black  
DC-202LT Red  
DC-203 Blue  
DC-203 Green  
DC-203 Red  
DC-204 Black

#### 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

Skin Irritation2  
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 skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.  
Precautionary statements (GHS-US) : Wash hands thoroughly after handling. Wear protective gloves/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. Contaminated work clothing must not be allowed out of the workplace. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. 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. 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-202 Black; DC-202LT Black; DC-202LT Red; DC-203 Blue; DC-203 Green; DC-203 Red; DC-204 Black: 60 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable.

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### 3.2. Mixture

Name	Product identifier	%
Bisphenol A diglycidyl ether - bisphenol A copolymer	(CAS No) 25036-25-3	60 - 100
Carbon black	(CAS No) 1333-86-4 <sup>1</sup>	< 1
Titanium dioxide	(CAS No) 13463-67-7 <sup>2</sup>	< 1
2-Methylimidazole	(CAS No) 693-98-1	< 0.1

<sup>1</sup> Only present in DC-202 Black, DC-202LT Black, and DC-204 Black  
<sup>2</sup> Only present in DC-203 Blue, DC-203 Green, and DC-203 Red

\* 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 : 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.
- 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.
- First-aid measures after ingestion : 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 : May cause respiratory tract irritation.
- Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause sensitization by skin contact.
- 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 : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

### 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 : Water fog, carbon dioxide, dry chemical, foam.
- 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, oxides of sulfur, oxides of nitrogen, hydrogen chloride, aldehydes, 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. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

### 6.2. Methods and material for containment and cleaning up

- For containment : Contain spill, then place in a suitable container. Minimize dust generation. 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/vapours/spray. Minimize generation of dust. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.

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Hygiene measures : Launder contaminated clothing before reuse. 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. Keep container tightly closed. Store in a dry, cool area. Protect from sunlight.

### 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	
Carbon black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>
Titanium dioxide (13463-67-7)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (total dust)
2-Methylimidazole (693-98-1)		
ACGIH	Not applicable	
OSHA	Not applicable	

### 8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear eye protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. 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.

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

Colour : Various

Odour : Slight phenolic

Odour threshold : No data available

pH : No data available

Melting point : 85 °C-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

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Vapour pressure	: Nil
Relative density	: 1.1 - 1.7 g/cc at 20 °C (68 °F)
Relative vapour density at 20 °C	: No data available
Solubility	: Nil
Partition coefficient: n-octanol/water	: No data available
Log Kow	: 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.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified.

Preformed Epoxy Resin Compounds	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	No data available

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

Titanium dioxide (13463-67-7)	
LD50 oral rat	> 10000 mg/kg

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: 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, unbound particles of respirable size)

Titanium dioxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans (airborne, unbound particles of respirable size)

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### 2-Methylimidazole (693-98-1)

IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity

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.
Aspiration hazard	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause sensitization by skin contact.
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	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

## SECTION 12: Ecological information

### 12.1. Toxicity

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

### 12.2. Persistence and degradability

#### Preformed Epoxy Resin Compounds

Persistence and degradability	Not established.
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### 12.3. Bioaccumulative potential

#### Preformed Epoxy Resin Compounds

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 : This material must be disposed of in accordance with all local, state, provincial, and federal 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.

#### 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

#### Preformed Epoxy Resin Compounds

State or local regulations	This product contains a chemical known to the State of California to cause cancer.
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### 15.3. EU RoHS

#### Preformed Epoxy Resin Compounds

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
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## SECTION 16: Other information

Revision Section/Reason

All sections:

Rev. A, Ver. 0: 03/01/96 Change to ANSI Z400.1, 16 Section Format. Incorporate M5-13, M5-82, M5-92, DC-2XX Series Epoxies.

Consolidate all epoxies to menu type format.

Rev. A, Ver. 1: 04/04/96 Minor corrections/clarifications to text of various sections following professional review.

Rev. A, Ver. 2: 04/15/96 Added M17-19 Black and M17-19 Red to MSDS.

Rev. A, Ver. 3: 06/12/96 Deleted the word "for" in section 4, Eye Contact...

Rev. A, Ver. 4: 03/04/97 Changed font from 12 to 10 cpi. Adjusted text on pages as required.

Rev. A, Ver. 5: 02/09/99 Deleted disclaimers from pages 2-7. Consolidated text, formatted to 7 pages.

Rev. A, Ver. 6: 03/07/00 Deleted DC-001 Black and DC-007 Black from MSDS. Added DC-202 Black to the MSDS. Added TSCA statement.

Rev. B: 12/06/02 Transfer all information referring to DC-007, DC-207, M5-92, AND M17-19 to separate MSDS.

Rev. C: 04/19/06 Add RoHS statement to section 15.

Rev. D: 07/28/15 Update format to Hazard Communication Standard (CFR29 1910.1200) HazCom 2012. Remove epoxies DC-001 Red, DC-002 BK, DC-003 Red, DC-003 Green, DC-003 Blue,

DC-004 Black, M5-13 Red & M5-82 Red. Update RoHS from EU Directive 2002/95/EC to EU Directive 2011/65/ EU

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*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 (i). 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.*