

CBF-100 Conductive Body Filler

CBF-100

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## SAFETY DATA SHEET

### SECTION 1. IDENTIFICATION

Product identifier used on the label

: **CBF-100 Conductive Body Filler**

Product Code(s) : CBF-100

Recommended use of the chemical and restrictions on use

: Sheet metal body filler.  
No restrictions on use known.

Chemical family : Mixture of: Epoxy resin; Inorganic substances in powdered form; Ether

Name, address, and telephone number of the supplier:

**Midwest Thermal Spray**

23164 Commerce Drive  
Farmington Hills, Michigan, U.S.A.  
48335

Contact: David Sartor

Email: [ds@midwestthermal.com](mailto:ds@midwestthermal.com)

Supplier's Telephone # : (248) 442-6540

24 Hr. Emergency Tel # : (810) 602-0394

Name, address, and telephone number of the manufacturer:

Refer to supplier

### SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Black paste. Slight odor.

*Most important hazards:*

Irritating to eyes and skin. May cause an allergic skin reaction. Possible cancer hazard - contains material which may cause cancer. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.

Toxic to aquatic life with long lasting effects. Avoid release to the environment. See Section 12 for more environmental information.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:

Skin irritation - Category 2

Eye damage/irritation - Category 2A

Skin sensitization - Category 1

Carcinogenicity - Category 2

Label elements

Hazard pictogram(s)



Signal Word  
Warning!

Hazard statement(s)

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.



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### Precautionary statement(s)

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Avoid breathing dust, fume or vapors.  
Wash hands and face thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/clothing and eye/face protection.

IF exposed or concerned: Get medical attention/advice.  
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.  
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.

Store locked up.

Dispose of contents/container in accordance with local regulation.

### Other hazards

#### Other hazards which do not result in classification:

Toxic fumes may be released during a fire. Reacts with air to form peroxides. Rate of peroxide formation is not known. Excessive heating above 50°C / 122°F may degrade the resin component.

If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. If dusts are formed, inhalation may cause adverse lung effects. May cause gastrointestinal irritation.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
Bisphenol A / epichlorohydrin resin	Diglycidyl ether of bisphenol A Epoxy resin	25068-38-6	51.0%
Graphite	Mineral carbon	7782-42-5	30.7%
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	tert-Butylphenyl glycidyl ether	3101-60-8	11.0%
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	Bisphenol A, epichlorohydrin polymer, 2-methylimidazole condensate Epoxy-imidazole adduct	68002-42-6	5.0%
Epichlorohydrin Polyglycol Resin Polymer	Oxirane, 2,2'-[oxybis((methyl-2,1-ethanediyl)oxymethylene)]bis-	41638-13-5	2.0%
Carbon black	Lamp black Acetylene black Channel black	1333-86-4	0.3%

## SECTION 4. FIRST-AID MEASURES

### Description of first aid measures

- Ingestion* : If ingested, do not induce vomiting. Never give anything by mouth to an unconscious person. If irritation or symptoms develop, seek medical attention.
- Inhalation* : If breathed in, move person into fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. IF exposed or concerned: Get medical attention/advice.
- Skin contact* : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- Eye contact* : 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.



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

- : Causes skin irritation. Contact may cause redness, swelling and a painful sensation. Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis. May cause severe skin sensitization with allergic contact dermatitis symptoms such as swelling, rash and eczema. Suspected of causing cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing. If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. May cause coughing and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

### Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### *Suitable extinguishing media*

- : Foam; Dry chemical; Water spray; Carbon dioxide (CO<sub>2</sub>).

#### *Unsuitable extinguishing media*

- : Do not use a solid water stream as it may scatter and spread fire.

### Special hazards arising from the substance or mixture / Conditions of flammability

- : Not flammable under normal conditions of use. Excessive heating above 50°C / 122°F may degrade the resin component. Reacts with air to form peroxides. Rate of peroxide formation is not known. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

### Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable under normal conditions of handling.

### Hazardous combustion products

- : Carbon oxides; Nitrogen oxides (NO<sub>x</sub>); Aldehydes; Phenol; Sulfur oxides

### Special protective equipment and precautions for firefighters

#### *Protective equipment for fire-fighters*

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

#### *Special fire-fighting procedures*

- : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

- : Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. All persons dealing with the clean-up should wear the appropriate personal protective equipment. Refer to protective measures listed in sections 7 and 8.

### Environmental precautions

- : Avoid release to the environment. Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.



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### Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use inert, non-combustible absorbents to assist the pick up of material. Place in clean, dry and labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Clean contaminated floors and objects thoroughly while observing environmental regulations. Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

### Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).  
US CERCLA Reportable quantity (RQ): None.

In Canada: Contact appropriate local and provincial environmental authorities for assistance and/or reporting requirements.

## SECTION 7. HANDLING AND STORAGE

### Precautions for safe handling

- : Persons with recurrent skin eczema or sensitization problems should be excluded from working with this product. Once a person is sensitized, no further exposure to the material that caused the sensitization should be permitted.  
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.  
Use only in well-ventilated areas. Wear suitable protective equipment. Wear protective gloves/clothing and eye/face protection. Avoid breathing dust, fume or vapors. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Keep away from incompatibles. Keep containers closed when not in use. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Empty containers retain residue and can be dangerous.

### Conditions for safe storage

- : Store in cool/well-ventilated place. Store locked up. Keep away from extreme heat and flame. Protect against physical damage. Store away from incompatible materials. Inspect periodically for damage or leaks. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.

### Incompatible materials

- : Strong oxidizing agents; Acids; Bases; Amines.



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### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Exposure Limits:</u>					
	<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
		<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Bisphenol A / epichlorohydrin resin	N/Av	N/Av	N/Av	N/Av	
Graphite	2 mg/m <sup>3</sup> (all forms except graphite fibers, respirable fraction)	N/Av	15 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable) (PNOR)	N/Av	
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	N/Av	N/Av	N/Av	N/Av	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	N/Av	N/Av	N/Av	N/Av	
Epichlorohydrin Polyglycol Resin Polymer	N/Av	N/Av	N/Av	N/Av	
Carbon black	3 mg/m <sup>3</sup> (inhalable)	N/Av	3.5 mg/m <sup>3</sup>	N/Av	

#### Exposure controls

##### Ventilation and engineering measures

- : Use only in well-ventilated areas. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

##### Respiratory protection

- : If airborne concentrations are above the permissible exposure limits or are not known, respiratory protection may be required. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

##### Skin protection

- : Wear protective gloves/clothing. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear sufficient clothing to prevent skin contact. Advice should be sought from glove suppliers.

##### Eye / face protection

- : Wear eye/face protection. Wear as appropriate: Tightly fitting safety goggles A full face shield may also be necessary.

##### Other protective equipment

- : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

##### General hygiene considerations

- : Avoid breathing dust, fume or vapors. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice. Contaminated work clothing must not be allowed out of the workplace.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Black paste.
Odor	: slight
Odor threshold	: N/Av
pH	: N/Av
Melting/Freezing point	: N/Av



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### Initial boiling point and boiling range

: N/Av

**Flash point** : 121.11°C (250°F)

**Flashpoint (Method)** : Setaflash Closed Tester

**Evaporation rate (BuAe = 1)** : N/Av

**Flammability (solid, gas)** : Not considered flammable.

**Lower flammable limit (% by vol.)**

: N/Av

**Upper flammable limit (% by vol.)**

: N/Av

**Oxidizing properties** : None.

**Explosive properties** : Not explosive

**Vapor pressure** : < 1 mmHg @ 25°C (77°F)

**Vapor density** : N/Av

**Relative density / Specific gravity**

: 1.27

**Solubility in water** : insoluble

**Other solubility(ies)** : N/Av

**Partition coefficient: n-octanol/water or Coefficient of water/oil distribution**

: N/Av

**Auto-ignition temperature** : N/Av

**Decomposition temperature** : N/Av

**Viscosity** : N/Av

**Volatiles (% by weight)** : < 10%

**Volatile organic Compounds (VOC's)**

: 15.6 g/L

**Absolute pressure of container**

: N/Av

**Flame projection length** : N/Av

**Other physical/chemical comments**

: No additional information.

### SECTION 10. STABILITY AND REACTIVITY

**Reactivity** : Not normally reactive. Reacts with air to form peroxides. Rate of peroxide formation is not known.

**Chemical stability** : Stable under normal conditions. Excessive heating above 50°C / 122°F may degrade the resin component.

**Possibility of hazardous reactions**

: Hazardous polymerization does not occur.

**Conditions to avoid** : Incompatible products. Do not use in areas without adequate ventilation. Keep away from extreme heat and flame.

**Incompatible materials** : Strong oxidizing agents; Acids; Bases; Amines

**Hazardous decomposition products**

: None known, refer to hazardous combustion products in Section 5.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure:

**Routes of entry inhalation** : YES

**Routes of entry skin & eye** : YES



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Routes of entry Ingestion : YES

Routes of exposure skin absorption  
: NO

### Potential Health Effects:

#### Signs and symptoms of short-term (acute) exposure

##### *Sign and symptoms Inhalation*

- : If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. Symptoms may include coughing, mucous production and difficulty breathing.

##### *Sign and symptoms ingestion*

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

##### *Sign and symptoms skin*

- : May cause moderate skin irritation. Contact may cause redness, swelling and a painful sensation.

##### *Sign and symptoms eyes*

- : Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.

#### Potential Chronic Health Effects

- : None known or reported by the manufacturer.

#### Mutagenicity

- : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

#### Carcinogenicity

- : This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:  
Carcinogenicity - Category 2. Suspected of causing cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing. This product contains Carbon black, an IARC Group 2B carcinogen. No other components are classified as carcinogenic by IARC, ACGIH, OSHA or NTP.

#### Reproductive effects & Teratogenicity

- : This product is not expected to cause reproductive or developmental effects.

#### Sensitization to material

- : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:  
Skin sensitization - Category 1. May cause allergic skin reaction. May cause severe skin sensitization with allergic contact dermatitis symptoms such as swelling, rash and eczema.  
  
May cause an allergic respiratory reaction (e.g. asthma) in some hypersensitive individuals. However, no firm conclusions can be drawn from these studies and how they relate to occupational exposure.

#### Specific target organ effects

- : According to the classification criteria of U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause target organ toxicity through single or repeated exposures.

#### Medical conditions aggravated by overexposure

- : Pre-existing skin, eye and respiratory disorders.

#### Synergistic materials

- : No information available.

#### Toxicological data

- : Not classified for acute toxicity based on available data. The calculated ATE values for this mixture are:  
ATE oral = 125 000 mg/kg  
ATE dermal = 125 000 mg/kg

See below for individual ingredient acute toxicity data.



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<u>Chemical name</u>	<u>LC<sub>50</sub> (4hr)</u> <u>inh, rat</u>	<u>LD<sub>50</sub></u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Bisphenol A / epichlorohydrin resin	N/Av	11 400 mg/kg	> 23 500 mg/kg
Graphite	> 64.4 mg/L	> 10 000 mg/kg	N/Av
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	N/Av	> 2000 mg/kg	> 2000 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	N/Av	> 2000 mg/kg	> 2000 mg/kg
Epichlorohydrin Polyglycol Resin Polymer	N/Av	> 2000 mg/kg	> 2000 mg/kg
Carbon black	6750 mg/m <sup>3</sup>	> 15 400 mg/kg	> 3000 mg/kg

### Other important toxicological hazards

: None known or reported by the manufacturer.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

: Toxic to aquatic life with long lasting effects. No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

The product contains the following substances which are hazardous for the environment:

Bisphenol A / epichlorohydrin resin; p-tert-butylphenyl 1-(2,3-epoxy)propyl ether; Epichlorohydrin Polyglycol Resin Polymer.

See the following tables for individual ingredient ecotoxicity data.

### Ecotoxicity data:

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC50 / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Bisphenol A / epichlorohydrin resin	25068-38-6	2.3 mg/L (Rainbow trout) (ECHA)	N/Av	None.
Graphite	7782-42-5	> 100 mg/L (Zebra fish) (ECHA)	N/Av	None.
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	7.5 mg/L (Rainbow trout) (ECHA)	N/Av	None.
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	68002-42-6	> 160 mg/L (Rainbow trout) (ECHA)	N/Av	None.
Epichlorohydrin Polyglycol Resin Polymer	41638-13-5	67 mg/L (Golden orfe) (literature)	N/Av	None.
Carbon black	1333-86-4	> 1000 mg/L (Zebra fish) (OECD)	N/Av	None.





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<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Bisphenol A / epichlorohydrin resin	25068-38-6	1.1 mg/L (Daphnia magna) (ECHA)	0.3 mg/L (Read-across)	None.
Graphite	7782-42-5	> 100 mg/L (Daphnia magna) (ECHA)	N/Av	None.
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	67.9 mg/L (Daphnia magna) (ECHA)	N/Av	None.
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	68002-42-6	> 100 mg/L (Daphnia magna) (ECHA)	N/Av	None.
Epichlorohydrin Polyglycol Resin Polymer	41638-13-5	90 mg/L (Daphnia magna) (literature)	N/Av	None.
Carbon black	1333-86-4	> 5600 mg/L (Daphnia magna) (OECD)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Bisphenol A / epichlorohydrin resin	25068-38-6	13.81 mg/L/72hr (Green algae) (ECHA)	N/Av	None.
Graphite	7782-42-5	> 100 mg/L/72hr (Green algae) (ECHA)	N/Av	None.
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	9 mg/L/72hr (Green algae) (ECHA)	N/Av	None.
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	68002-42-6	> 100 mg/L/72hr (Green algae) (ECHA)	N/Av	None.
Epichlorohydrin Polyglycol Resin Polymer	41638-13-5	N/Av	N/Av	None.
Carbon black	1333-86-4	> 10 000 mg/L/72hr (Green algae) (OECD)	N/Av	None.

### Persistence and degradability

- : The product itself has not been tested.  
Contains the following chemicals which are not readily biodegradable: Bisphenol A / epichlorohydrin resin; p-tert-butylphenyl 1-(2,3-epoxy)propyl ether; Epichlorohydrin Polyglycol Resin Polymer; Graphite; Epoxy-imidazole adduct; Carbon black.



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**Bioaccumulation potential** : The product itself has not been tested. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Bisphenol A / epichlorohydrin resin (CAS 25068-38-6)	> 2.915	31 (QSAR)
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether (CAS 3101-60-8)	3.59	N/Av
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole (CAS 68002-42-6)	2.37	N/Av
Epichlorohydrin Polyglycol Resin Polymer (CAS 41638-13-5)	- 0.57 (calculated)	N/Av

**Mobility in soil** : The product itself has not been tested.

**Other Adverse Environmental effects**

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### SECTION 13. DISPOSAL CONSIDERATIONS

**Handling for Disposal** : Handle in accordance with good industrial hygiene and safety practice. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Refer to protective measures listed in sections 7 and 8.

**Methods of Disposal** : Dispose in accordance with all applicable federal, state, territory and local regulations.

**RCRA** : If the product becomes a waste, it may meet the criteria of a hazardous waste according to the US RCRA Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.



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### SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated.	Not regulated	None	
<b>49CFR/DOT Additional information</b>	This product may be regulated as environmentally hazardous according to international air (ICAO/IATA) or vessel (IMDG) transport regulations. Refer to IATA or IMDG, as appropriate, for international air or sea shipments.				
TDG	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin; p-tert-butylphenyl 1-(2,3-epoxy)propyl ether)	9	III	
<b>TDG Additional information</b>	This material may be shipped as an exempted marine pollutant in accordance with TDG Section 1.45.1 and Special Provision 99.				
ICAO/IATA	UN3077	Environmentally hazardous substance, solid, n.o.s. [Epoxy resin; p-tert-butylphenyl 1-(2,3-epoxy)propyl ether]	9	III	
<b>ICAO/IATA Additional information</b>	Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material. When transported in packagings with a net capacity of less than 5 kg of the material, this material is not subject to these regulations, provided certain general packaging provisions are met. Refer to Special Provision A197 for further requirements.				
IMDG	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. [Epoxy resin; p-tert-butylphenyl 1-(2,3-epoxy)propyl ether]	9	III	
<b>IMDG Additional information</b>	May be shipped as Limited Quantity when transported in containers no larger than 5.0 kg; in packages not exceeding 30 kg gross mass.				

**Special precautions for user** : Appropriate advice on safety must accompany the package. Avoid release to the environment.

**Environmental hazards** : This product meets the criteria for an environmentally hazardous material according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
 : This information is not available.



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### SECTION 15 - REGULATORY INFORMATION

**US Federal Information:**

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Bisphenol A / epichlorohydrin resin	25068-38-6	Yes	None.	None.	No	N/Ap
Graphite	7782-42-5	Yes	None.	None.	No	N/Ap
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	Yes	None.	None.	No	N/Ap
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	68002-42-6	Yes	None.	None.	No	N/Ap
Epichlorohydrin Polyglycol Resin Polymer	41638-13-5	Yes	None.	None.	No	N/Ap
Carbon black	1333-86-4	Yes	None.	None.	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:

Health hazards (Skin irritation; Eye irritation; Skin sensitization; Carcinogenicity)

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

**US State Right to Know Laws:**

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Bisphenol A / epichlorohydrin resin	25068-38-6	No	N/Ap	No	No	No	No	No	No
Graphite	7782-42-5	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	No	N/Ap	No	No	No	No	No	No
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	68002-42-6	No	N/Ap	No	No	No	No	No	No
Epichlorohydrin Polyglycol Resin Polymer	41638-13-5	No	N/Ap	No	No	No	No	No	No
Carbon black	1333-86-4	Yes	Cancer (airborne, unbound particles of respirable size)	Yes	Yes	Yes	Yes	Yes	Yes



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### Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product does not contain any substances listed on the NPRI.

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

### International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Bisphenol A / epichlorohydrin resin	25068-38-6	500-033-5	Present	Present	(7)-1283	KE-24000	Present	HSR003180
Graphite	7782-42-5	231-955-3	Present	Present	Not listed	KE-18101	Present	May be used as a single component chemical under an appropriate group standard.
p-tert-butylphenyl 1-(2,3-epoxy)propyl ether	3101-60-8	221-453-2	Present	Present	(3)-594; (3)-575	KE-11404	Present	May be used as a single component chemical under an appropriate group standard.
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 2-methylimidazole	68002-42-6	500-181-0	Present	Present	(7)-1482	KE-24054	Present	HSR005753
Epichlorohydrin Polyglycol Resin Polymer	41638-13-5	Polymer	Present	Present	(7)-343	KE-27711	Present	HSR003627
Carbon black	1333-86-4	215-609-9	Present	Present	(5)-3328; (5)-5222	KE-04682	Present	HSR002801

### SECTION 16. OTHER INFORMATION

#### Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- AICS: Australian Inventory of Chemical Substances
- ATE: Acute Toxicity Estimate
- CA: California
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CSA: Canadian Standards Association
- DOT: Department of Transportation
- EC50: Effective Concentration 50%
- ECHA: European Chemicals Agency
- EINECS: European Inventory of Existing Commercial chemical Substances
- ENCS: Existing and New Chemical Substances
- EPA: Environmental Protection Agency
- HSDB: Hazardous Substances Data Bank



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IARC: International Agency for Research on Cancer  
IATA: International Air Transport Association  
IBC: Intermediate Bulk Container  
ICAO: International Civil Aviation Organisation  
IECSC: Inventory of Existing Chemical Substances  
IMDG: International Maritime Dangerous Goods  
Inh: Inhalation  
IOC: Inventory of Chemicals  
KECI: Korean Existing Chemicals Inventory  
KECL: Korean Existing Chemicals List  
LC: Lethal Concentration  
LD: Lethal Dose  
MA: Massachusetts  
MN: Minnesota  
N/Ap: Not Applicable  
N/Av: Not Available  
NIOSH: National Institute of Occupational Safety and Health  
NJ: New Jersey  
NOEC: No observable effect concentration  
NTP: National Toxicology Program  
OECD: Organisation for Economic Co-operation and Development  
OSHA: Occupational Safety and Health Administration  
PA: Pennsylvania  
PEL: Permissible exposure limit  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
PNOR: Particulates Not Otherwise Regulated  
RCRA: Resource Conservation and Recovery Act  
RI: Rhode Island  
RQ: Reportable Quantity  
RTECS: Registry of Toxic Effects of Chemical Substances  
SARA: Superfund Amendments and Reauthorization Act  
SDS: Safety Data Sheet  
STEL: Short Term Exposure Limit  
TDG: Canadian Transportation of Dangerous Goods Act & Regulations  
TLV: Threshold Limit Values  
TWA: Time Weighted Average  
WHMIS: Workplace Hazardous Materials Identification System

### References

1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2018.
2. International Agency for Research on Cancer Monographs, searched 2018.
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2018 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - March 2015 version.
6. California Proposition 65 List - May 25, 2018 version.
7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2018.

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**Revision Information** : (M)SDS sections updated:  
 2. HAZARDS IDENTIFICATION;  
 4. FIRST AID MEASURES;  
 5. FIRE-FIGHTING MEASURES;  
 6. ACCIDENTAL RELEASE MEASURES;  
 11. TOXICOLOGICAL INFORMATION;  
 12. ECOLOGICAL INFORMATION;  
 14. TRANSPORT INFORMATION;  
 15. REGULATORY INFORMATION

**Other special considerations for handling**

: Provide adequate information, instruction and training for operators.

<p><b><u>Prepared for:</u></b>          Midwest Thermal Spray          23164 Commerce Drive, MI, U.S.A.          48335          Telephone: (248) 442-6540          Website: <a href="http://www.midwestthermal.com">www.midwestthermal.com</a>          Please direct all enquiries to Midwest Thermal Spray.</p>	
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