

Flexible Adhesive Systems

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom
2018 Revision date: 5/29/2018 Version: C



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

1.1. Product identifier

Product name : F04/05 Black
F08 Black
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, Adhesive

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/vapours/spray. Wash hands thoroughly after handling. Wear protective gloves/eye protection/face protection. 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)

F04/05 Black: 40 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

F08 Black: 36 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	20 - 50
Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	(CAS No) 29690-82-2 ¹	10 - 20
Benzenamine, 4,4'-sulfonylbis-	(CAS No) 80-08-0 ¹	5 - 7

¹ Only present in F04/05 Black

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

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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 spray, 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, oxides of nitrogen.

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/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.
- Hygiene measures : Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : F04/F08 Black: Keep out of the reach of children. Store below 39°F (4°C) in a dry area. Keep container tightly closed.
F05 Black: Keep out of the reach of children. Store below 80°F (27°C) in a dry area. Keep container tightly closed.

7.3. Specific end use(s)

Not available.

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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

Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol (29690-82-2)	
ACGIH	Not applicable
OSHA	Not applicable

Benzenamine, 4,4'-sulfonylbis- (80-08-0)	
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.
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	: Film
Colour	: Black
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
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	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Solubility	: No data available
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

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9.2. Other information

No additional information available

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. Moisture.

10.5. Incompatible materials

Acids. Bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

Flexible Adhesive Systems	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	No data available

Benzenamine, 4,4'-sulfonylbis- (80-08-0)	
LD50 oral rat	1 g/kg
LD50 dermal rabbit	> 4 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.

Benzenamine, 4,4'-sulfonylbis- (80-08-0)	
IARC group	3 - Not classifiable
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 : 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.

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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.

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	F08 Black: This product contains a chemical known to the State of California to cause cancer. F04/05 Black: 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

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

Date of issue : 04/05/2010

Revision date : 09/30/2015

Other information : Rev. B: 09/30/2015 Update format to Hazard Communication Standard (CFR29 1910.1200) HazCom 2012. Include RoHS statement for EU Directive 2002/95/EC to EU Directive 2011/65/ EU.

Prepared by: Burton S. Anderson 09-30-15

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.

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