

Material Safety Data Sheet

BP-2191 RESIN & HARDENER

Updated: 11/07

Section 1 - Chemical Product and Company Identification

Product Name: BP-2191 RESIN

General Use: Combine with BP-2191 Hardener and use as a laminating resin for plastic tooling.

Manufacturer: BLEHM PLASTICS: 2140 Earlywood Drive, Franklin IN 46131

FOR CHEMICAL EMERGENCY CALL CHEMTREC (24 HOURS)
1-800-424-9300 (U.S., Canada, Puerto Rico, Virgin Islands)
1-703-527-3887 (Outside above area, collect calls accepted)

For non-emergency information, call: 1-317-736-4090 (Monday-Friday 7:30am to 4:30pm EST)

Section 2 - Composition / Information on Ingredients

Ingredient Name	Exposure Limits	CAS Number	% wt
Diglycidyl Ether of Bisphenol-A	None established	25068-38-6	<75
Aluminum Powder	15 mg/m ³ dust (OSHA TWA)	68609-97-2	<22
1,4 Butanediol Diglycidyl Ether	None established	2425-79-8	<10

Section 3 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

HMIS	
H	2
F	1
R	0

†Sec. 8

Potential Health Effects

Primary Entry Routes:

Target Organs:

Acute Effects

Inhalation: Inhalation is not a likely route of exposure due to the low volatility.

Eye: Moderately irritating.

Skin: May cause irritation. May result in sensitization.

Ingestion: May cause nausea and vomiting.

Carcinogenicity: IARC, NTP, and OSHA do not list product as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: Skin disorders may be affected and compounded with irritation.

Pre-existing skin or lung allergies may develop increased symptoms.

Chronic Effects: No evidence of adverse effects from available information.

PLEASE NOTE:

Before using, please see the hardener MSDS concerning the hazards of the hardener.

Section 4 - First Aid Measures

Inhalation: Remove to fresh air.

Eye Contact: Flush with large amounts of water for at least 15 minutes. Get prompt medical attention.

Skin Contact: Remove contaminated clothing. Wash with soap and water.

Ingestion: Drink 2 glasses of water and induce vomiting.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: There is no specific antidote. Treatment should be directed to the control of symptoms.

Section 5 - Fire-Fighting Measures

Flash Point: 300 °F (148 °C)

Flash Point Method: PMCC

Auto Ignition Temperature: Not determined

LEL: Not determined

UEL: Not determined

Extinguishing Media: Water fog, carbon dioxide, or dry chemical.

Unusual Fire or Explosion Hazards: Water or foam may be dangerous if sprayed into a container of burning liquid.

Sensitivity to Mechanical Discharge: No

Sensitivity to Static Discharge: No

Hazardous Combustion Products: Carbon monoxide and carbon dioxide.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures:

Small Spills: Absorb on a suitable medium and dispose of as recommended.

Large Spills:

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Absorb on a suitable medium and dispose of as recommended.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid skin and eye contact. Wash after handling. Do not take internally.

Storage Requirements: Store in a cool, dry place. Keep away from open flames and high temperatures.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: †PPE = Personal Protective Equipment

Respiratory Protection: Not ordinarily required.

Protective Clothing/Equipment: Wear chemically protective gloves and aprons to prevent prolonged or repeated skin contact.

Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133).

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Gray liquid with hydrocarbon odor.

Odor Threshold: Unknown

Vapor Pressure: Not available

Vapor Density (Air=1): <1.0

Density: 1.217 g/ml

Specific Gravity (H₂O=1, at 4 °C): 1.217

pH: Not applicable

Water Solubility: Not available

Coefficient of Water/Oil Distribution: Not available

Boiling Point: 360 °F

Freezing/Melting Point: Not available

% Volatile: Not applicable

Evaporation Rate: Not applicable

Section 10 - Stability and Reactivity

Stability: Product is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Oxidizing agents.

Conditions to Avoid: Closed containers may rupture (due to pressure build up) when exposed to extreme heat.

Hazardous Decomposition Products: Thermal oxidative decomposition of product can produce carbon monoxide and carbon dioxide.

Section 11- Toxicological Information

Toxicity Data:

Eye Effects: Moderately irritating.

Skin Effects:

Irritancy: Mild.

Sensitization: May result.

Synergistic Products: None.

Acute Inhalation Effects:

LC₅₀: Not available.

Inhalation is not an expected route of exposure, due to low volatility of product.

Acute Oral Effects:

Rat, oral, LD₅₀: >2 g/kg

Chronic Effects: No evidence of adverse effects from available information.

Reproductive Effects: None Known

Mutagenicity: None

Teratogenicity: None

Section 12 - Ecological Information

Ecotoxicity: Keep out of surface waters, sewers and waterways.

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Not regulated.

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number: Not listed

RCRA Hazardous Waste Classification (40 CFR 261): Not classified.

CERCLA Hazardous Substance (40 CFR 302.4): Unlisted.

CERCLA Reportable Quantity (RQ): Not listed.

SARA 311/312 Codes: Immediate Health Hazard.

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed.

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed.

Other Regulations:

This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all of the information required by the CPR.

Section 16 - Other Information

Prepared By: Roger Brunette

Disclaimer: The information on this MSDS is based on the data available to us and is believed to be correct. However, Blehm Plastics, Inc. makes no warranty, express or implied regarding the accuracy of this data.

Section 1 - Chemical Product and Company Identification

Product Name: BP-2191 HARDENER

General Use: Combine with BP-2191 Resin and use as a laminating resin for plastic tooling.

Manufacturer: BLEHM PLASTICS: 2140 Earlywood Drive, Franklin IN 46131

FOR CHEMICAL EMERGENCY CALL CHEMTREC (24 HOURS)

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For non-emergency information, call: 1-317-736-4090 (Monday-Friday 7:30am to 4:30pm EST)

Section 2 - Composition / Information on Ingredients

Ingredient Name	Exposure Limits	CAS Number	% wt
Triethylenetetramine	None established	112-24-3	<35
Methylimidazole, 1-	None established	616-47-7	<20
1,8-Diamino-p-menthane	None established	80-52-4	<5
Isophorone Diamine	None established	2855-13-2	<45

Section 3 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

HMIS	
H	3
F	1
R	0
† Sec. 8	

Potential Health Effects

Primary Entry Routes:

Target Organs:

Acute Effects

Inhalation: Vapor is irritating.

Eye: Can cause burns.

Skin: May cause burns.

Ingestion: May cause burns of mouth, throat, abdominal pain, nausea and vomiting.

Carcinogenicity: IARC, NTP, and OSHA do not list product as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: May produce asthmatic response. May aggravate existing dermatitis.

Chronic Effects: May cause sensitization of the respiratory tract and skin.

Section 4 - First Aid Measures

Inhalation: Remove to fresh air. Use oxygen if necessary. Get medical attention.

Eye Contact: Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention.

Skin Contact: Remove contaminated clothing. Wash with soap and water. Get medical attention.

Ingestion: **DO NOT** induce vomiting. Give large quantities of water. Get medical attention.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: There is no specific antidote. Treatment should be directed to the control of symptoms.

Section 5 - Fire-Fighting Measures

Flash Point: 230 °F (110 °C)

Flash Point Method: PMCC

Auto Ignition Temperature: Not available

LEL: Not determined

UEL: Not determined

Extinguishing Media: Water fog, carbon dioxide, or dry chemical

Unusual Fire or Explosion Hazards: Water or foam may be dangerous if sprayed into a container of burning liquid.

Sensitivity to Mechanical Discharge: No

Sensitivity to Static Discharge: No

Hazardous Combustion Products: Nitrogen oxide gas and carbon monoxide.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures:

Small Spills: Absorb on a suitable medium and dispose of as recommended.

Large Spills:

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Absorb on a suitable medium and dispose of as recommended.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Do not get in eyes, on skin, or on clothing. Do not breathe vapor. Harmful and corrosive if swallowed. Harmful if inhaled or absorbed through skin. Use with ventilation. Wash thoroughly after handling.

Storage Requirements: Store at room temperature.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: †PPE = Personal Protective Equipment

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions.

Protective Clothing/Equipment: Wear chemically protective gloves, boots aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133).

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Syrup with ammonia like odor.

Odor Threshold: Unknown

Vapor Pressure: <0.1 mm Hg

Vapor Density (Air=1): 4.5

Density: 1.008 g/ml

Specific Gravity (H₂O=1, at 4 °C): 1.008

pH: Not applicable

Water Solubility: <25%

Coefficient of Water/Oil Distribution: Not available

Boiling Point: 400 °F (204 °C)

Freezing/Melting Point: Not available

% Volatile: Not applicable

Evaporation Rate: Not available

Section 10 - Stability and Reactivity

Stability: Product is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Mineral or organic acids, oxidizing agents, aldehydes, ketones, and organic halides.

Conditions to Avoid: Closed containers may rupture (due to pressure build up) when exposed to extreme heat.

Hazardous Decomposition Products: Thermal oxidative decomposition of product can produce carbon monoxide and oxides of nitrogen.

Section 11- Toxicological Information**Toxicity Data:****Eye Effects:** Corrosive. Causes corneal injury.**Acute Inhalation Effects:**LC₅₀: Not available.**Skin Effects:** Corrosive and causes chemical burns.**Acute Oral Effects:**Rat, oral, LD₅₀: Not available

Irritancy: Moderate.

Chronic Effects: May cause skin and respiratory sensitization.

Sensitization: Yes.

Reproductive Effects: None Known**Synergistic Products:** None.**Mutagenicity:** None**Teratogenicity:** None**Section 12 - Ecological Information****Ecotoxicity:** Keep out of surface waters, sewers and waterways.**Section 13 - Disposal Considerations****Disposal:** Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.**Section 14 - Transport Information****DOT Transportation Data (49 CFR 172.101):****Shipping Name:** Corrosive Liquid N.O.S. (Contains triethylenetetramine, methylimidazole, 1-)**Hazard Class:** 8**UN Number:** 1760**Packing Group:** II**Label:** Corrosive**Section 15 - Regulatory Information****EPA Regulations:**

RCRA Hazardous Waste Number: Not listed.

RCRA Hazardous Waste Classification (40 CFR 261): Not classified.

CERCLA Hazardous Substance (40 CFR 302.4): Unlisted.

CERCLA Reportable Quantity (RQ): Not listed.

SARA 311/312 Codes: Immediate Health Hazard and Delayed Health Hazard.

SARA Toxic Chemical: (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed.

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed.

Other Regulations:

This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all of the information required by the CPR.

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