

MATERIAL SAFETY DATA SHEET

VersaChem Corporation
 6643 42nd Terrace North
 West Palm Beach, FL 33407
 (407) 845-2425

SECTION I IDENTIFICATION OF PRODUCT

| | |
|---|---|
| TRADE NAME Steel Weld Epoxy Resin | PRODUCT CODE 45-2C <i># 45209 BRAVO RESIN</i> |
| SYNONYM OR CROSS REFERENCE Epoxy Resin | PROPER SHIPPING NAME Resin Solution |

SECTION II HAZARDOUS INGREDIENTS

| | |
|--|--|
| MATERIAL Bisphenol A - Epichlorohydrin Resin 43% | NATURE OF HAZARD Eye and skin irritant. |
| See Page 3 attached. | |

SECTION III PHYSICAL DATA

| | |
|----------------------------------|---|
| BOILING POINT N/A | MELTING POINT N/A |
| VAPOR PRESSURE N/A | SPECIFIC GRAVITY (water=1) 1.17 |
| VAPOR DENSITY (AIR = 1) > 1 | PERCENT VOLATILE BY VOLUME (%) < 50% |
| WATER SOLUBILITY Not soluble | EVAPORATION RATE (Ethyl Ether = 1) < 1 |
| APPEARANCE Dark, smooth paste | |

SECTION IV FIRE AND EXPLOSION HAZARD DATA

| | | | |
|--|-------------------------|-------|-------|
| FLASH POINT (method used) COC > 200° F. | FLAMMABLE LIMITS N/A | Lower | Upper |
| FIRE EXTINGUISHING MEDIA Water, CO ₂ , Dry Chemical | | | |
| SPECIAL FIRE-FIGHTING PROCEDURES Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter, especially if sprayed into containers of hot, burning liquid. Self-contained breathing apparatus with a full UNUSUAL FIRE AND EXPLOSION HAZARD/facepiece operated in pressure demand or other positive pressure mode. | | | |
| N/A | | | |

SECTION V HEALTH HAZARD

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|--|
| THRESHOLD LIMIT VALUE See Page 3 attached. |
| HEALTH HAZARDS Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use with adequate ventilation. |
| FIRST AID PROCEDURES <u>EYES</u> : Can cause irritation. Flush with excess water. Call a physician. <u>SKIN</u> : Prolonged or repeated contact can cause moderate irritation, defatting and dermatitis. Wash with soap and water. <u>INHALATION</u> : Excessive inhalation of vapors can cause nasal and respiratory irritation. Remove to fresh air. <u>SWALLOWED</u> : Can cause gastrointestinal irritation, nausea, vomiting, diarrhea. Call a physician. |

SECTION VI REACTIVITY DATA

| | | | |
|-----------|----------|---|--|
| STABILITY | UNSTABLE | | CONDITIONS TO AVOID Open flame, sparks, excessive heat (above 100° F.) and/or contact with strong oxidizing agents. |
| | STABLE | X | |

INCOMPATIBILITY (materials to avoid)

Strong acids and/or strong oxidizing agents (like peroxides).

HAZARDOUS DECOMPOSITION PRODUCTS Thermal decomposition will yield oxides of carbon (carbon monoxide and carbon dioxide) and acrid fumes.

| | | | |
|-----------------------------|----------------|---|--|
| HAZARDOUS POLYMERIZATION | MAY OCCUR | X | CONDITIONS TO AVOID Strong acids, strong oxidants and epoxy resins (amines/amids) where direct contact is under uncontrolled conditions. |
| | WILL NOT OCCUR | | |

SECTION VII SPILL AND DISPOSAL PROCEDURES

SPILLS

Pick up large spills with inert absorbents like vermiculite or sand, and place in a proper container for disposal. Wash and clean up small spills with water and detergents.

DISPOSAL

Disposal method must comply with Local, State and Federal Regulations

SECTION VIII PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)

Ventilate with air flow to keep vapor concentration below TLV

| | | |
|---|------------------------------------|---------------------------|
| VENTILATION Use in well ventilated area | LOCAL Exhaust | SPECIAL See Section IX |
| | MECHANICAL (general) Acceptable | OTHER |

PROTECTIVE GLOVES

Neoprene or equivalent recommended

EYE PROTECTION

Goggles recommended to protect against accidental splashes

OTHER PROTECTIVE EQUIPMENT

Safety showers and eye wash fountains should be available.

SECTION IX HANDLING AND STORAGE PRECAUTIONS

STORAGE & HANDLING

Keep away from extreme heat, open flame, or other sources of ignition. Do not store above 100° F. USE WITH ADEQUATE VENTILATION. DANGER: HARMFUL OR FATAL IF SWALLOWED! AVOID CONTACT WITH EYES! AVOID BREATHING OF VAPORS!

MISCELLANEOUS

Do not flame cut, braze, weld, or melt empty containers.

Date issued 7-18-86

Revision

The information in this Material Safety Data Sheet has been compiled from our experience and data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary. We reserve the right to revise Material Safety Data Sheets from time to time as new technical information becomes available. The user has the responsibility to contact the company to make sure that the sheet is the latest one issued.

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PRODUCT RATING

HMIS LABEL CODE:

0 = least hazard to
 4 = greatest hazard

HEALTH

FLAMMABILITY

REACTIVITY

| |
|---|
| 3 |
| 1 |
| 1 |

PRODUCT: Steel Weld Epoxy Resin

SECTION II - LIST OF INGREDIENTS

| 45-2C | Weight % Range: | CAS # | TLV/PEL |
|---|-----------------|------------|---|
| Epoxy Resins | Less than 43% | 25068-38-6 | N/E * |
| Pigments & extenders: | | | ** |
| Aluminum Powder | Less than 59% | 7429-90-5 | TLV 10 mg/m ³ |
| Iron Powder | | 65997-19-5 | TLV 15 mg/m ³ |
| Calcium Carbonate | | 1317-65-3 | TLV 10 mg/m ³ ACGIH 1977 |
| Silica (SiO ₂) | | 7631-86-9 | 20 mppcf 8-hr. time weighted average |
| <p>* Not Established</p> <p>** Available data shows hazard as dust. In this product as sold and distributed, this material is wetted down limiting the extent and severity of the potential hazard.</p> | | | |
| CARCINOGENICITY | NTP | IARC | OSHA |
| None | | | |

7-18-86