

Material Safety Data Sheet

J-B Weld Co. LLC
1130 Como St., Sulphur Springs, TX 75482

For UK Branch:
J-B Weld UK, Automotive Brands Building, Bidavon Industrial Estate,
Bidford-Upon-Avon, Warwickshire, B50 4JN

Product Name: Clear Weld RESIN

Effective Date: 1/1/06

1. INGREDIENTS:

Reaction products of Epichlorohydrin and Bisphenol A (CAS# 25085-99-8) 100%
This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not Hazardous per this OSHA Standard may be listed.

2. PHYSICAL DATA:

BOILING POINT: not applicable
VAP PRESS: not applicable
VAP DENSITY: not applicable
SOL. IN WATER: none
SP. GRAVITY: 1.16
APPEARANCE: water-white to yellow liquid to semi-solid.
ODOR: faint epoxy odor

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 485°F, 252°C
METHOD USED: PMCC
FLAMMABLE LIMITS
LFL: not applicable
UFL: not applicable
EXTINGUISHING MEDIA: foam, CO₂, dry chemical
FIRE AND EXPLOSION HAZARDS: none.
FIRE-FIGHTING EQUIPMENT: Wear positive pressure SCBA.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Excess heating over long periods of time degrades the resin.
INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Base.
HAZARDOUS DECOMPOSITION PRODUCTS: The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances, and appropriate precautions should be taken.
HAZARDOUS POLYMERIZATION: Will not occur by itself but masses more than 1 pound of product plus aliphatic amine will cause irreversible polymerization with considerable heat buildup.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Soak up in absorbent material and collect in suitable containers. Residual may be removed using steam or hot soapy water.
DISPOSAL METHOD: Burn in adequate incinerator or bury in an approved landfill; in accordance with local, state and federal regulations.

6. HEALTH HAZARD DATA:

EYE: Minor transient irritation. No corneal injury likely.
SKIN CONTACT: May cause allergic skin reaction in susceptible individuals. Prolonged exposure not likely to cause significant skin irritation. Repeated exposure may cause skin irritation.
SKIN ABSORPTION: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The LD₅₀ for skin absorption in rabbits is 20,000

mg/kg.

INGESTION: Low acute oral toxicity; LD₅₀ (rat) greater than 4000 mg/kg. No hazards anticipated from ingestion incidental to industrial exposure.

INHALATION: Vapors are unlikely due to physical properties. Not a problem unless heated to high temperature.

SYSTEMIC AND OTHER EFFECTS: Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects. A poorly characterized sample of low molecular weight epoxy resin of this type has been reported to produce skin cancer in a highly sensitive strain of mice. However, high levels of impurities compromise the validity of the findings. Epoxy resin that is representative of current manufacturing processes is not believed to be a cancer hazard to humans. Results of mutagenicity tests in animals have been negative. Has been shown to be negative in some in vitro mutagenicity tests and positive in others.

7. FIRST AID:

EYES: Irrigation of the eye immediately with water for fifteen minutes is good safety practice.

SKIN: Contact will probably cause no more than irritation. Wash off in flowing water or shower. Wash clothing before reuse.

INGESTION: Low in toxicity. No adverse effects anticipated by this route of exposure incidental to proper industrial handling.

INHALATION: Remove to fresh air if effect occurs. Consult medical personnel.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

VENTILATION: Good room ventilation usually adequate for most operations.

RESPIRATORY PROTECTION: None normally needed.

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. Use impervious gloves when prolonged or frequently repeated contact could occur.

EYE PROTECTION: Use chemical goggles.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Practice good caution and personnel cleanliness to avoid skin and eye contact. Avoid breathing vapors of heated material.

10. NFPA HAZARD RATING:

4 = EXTREME	HEALTH	1
3 = HIGH	FIRE	1
2 = MODERATE	REACTIVITY	0
1 = SLIGHT		
0 = INSIGNIFICANT		

11. REGULATORY INFORMATION:

STATUS ON SUBSTANCE LISTS:

The concentrations shown in this document are maximum or ceiling levels (expressed in weight %, unless otherwise specified) to be used for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA:

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, and LIABILITY ACT of 1980 (CERCLA):

Requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQ's) in 40 CFR 302.4.

Components present in this product at level which could require reporting under the statute are:

Chemical Name CAS Number % By Weight RQ

NONE

SUPERFUND AMENDMENTS and REAUTHORIZATION ACT of 1986 (SARA) TITLE III: **Sections 301-304** require emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355. Components present in this product at a level which could require reporting under this statute are:

Chemical Name CAS Number % By Weight

NONE

Sections 311-312 require products be reviewed and applicable EPA Hazard Definitions be identified and made known.

EPA HAZARD CLASSIFICATIONS:

Acute Hazard	Chronic Hazard	Fire Hazard	Pressure Hazard	Reactive Hazard
no	no	no	no	no

Section 313 requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at level which could require reporting under the statute are:

Chemical Name CAS Number % By Weight

NONE

If you are unsure if you must report more information, call the EPA Emergency Planning and Right-To-Know Hot Line: 800-535-0202 or 202-479-2449.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The components of this product are contained on the chemical substance inventory list.

OTHER REGULATORY INFORMATION:

D.O.T. Shipping Name:

Not Regulated By D.O.T.

The information herein is given in good faith, but no warranty expressed or implied is made.

J-B Weld Co. urges suppliers and users of this product to evaluate its suitability and compliance with local regulations as J-B Weld cannot foresee the nature of the application nor final location of usage.

Material Safety Data Sheet

J-B Weld Company, LLC

J-B Weld Co., LLC. 1130 Como St., Sulphur Springs, TX 75482

Effective Date: February 17th 2011

1. PRODUCT IDENTIFICATION PRODUCT NAME: Clear Weld Hardener CHEMICAL NAME: Epoxy Curative

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not Hazardous per this OSHA Standard may be listed. Where proprietary ingredient is shown, the identity may be made available as provided in this standard.

2. HAZARDS IDENTIFICATION

Emergency Overview Corrosive, Harmful if swallowed; Harmful in contact with Skin; CNS effects

Straw colored liquid with a distinct amine odor. In a fire or during combustion, noxious irritating fumes may be given off. Use a cold water spray to remove heat from containers etc. This material may cause severe skin, eye and respiratory tract burns. May also cause CNS effects such as headaches, dizziness and confusion. Product may cause an allergic skin reaction, and even dermatitis long term. If ingested, severe burns of the mouth, throat and esophagus and stomach may occur.

Routes of Entry to the body Skin, eyes, CNS. Anyone suffering a medical condition involving these routes can have these conditions aggravated.

Chronic Not carcinogenic see ALSO section 11 Toxicology

3. COMPOSITION AND INGREDIENT INFORMATION

4. FIRST AID:

EYES: Immediate and continuous irrigation with flowing water for at least 30 minutes is required. Promptly seek medical

Component	CAS#	Proportion
Tris-2,4,6-(dimethylaminomethyl)phenol	90-72-2	< 15 %
Bis(dimethylaminomethyl)phenol	71074-89-0	<2%
1-(2-Aminoethyl) piperazine	140-31-8	<20%
Poly alkoxyated hydroxyalkyl thiol	101359-87-9	<75%
Benzyl Alcohol	100-51-6	<5%

attention if irritation develops SKIN: Immediately wash skin with plenty of soap and water while removing contaminated clothing, and shoes preferably under a safety shower. Seek medical attention immediately if irritation develops and persists. Avoid prolonged or repeated contact to skin. Thoroughly clean shoes before reuse. INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility. INHALATION: Remove to fresh air if effects occur. Consult a physician. NOTE TO PHYSICIAN: Corticosteroid cream has been very effective and treating skin irritation .

5. FIRE FIGHTING MEASURES

Boiling Point:> 212°F, (>100 °C)

Flash Point: > 285 °F, (> 140 °C)

Lower Explosion Limit: not determined

Upper Explosion Limit: not determined

Fire Fighting Equipment Alcohol resistant foam (PREFERRED) Use water, water spray, CO₂ dry chemical powder, dry sand, limestone powder

Fire Fighting Procedures Fire Fighters should wear SCBA to protect against the potential ly acrid fumes that could be generated during a fire. Cold water should be used to cool fire exposed drums, tanks and other containers.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: VENTILATE AREA. EVACUATE unnecessary people from the area. Large spill •• dike up and pump into appropriate containers. Small spill -use noncombustible absorbent material/sand and shovel into suitable containers. Do not allow to enter water courses, sewers, drains etc. DISPOSAL METHOD: Large quantities should be recovered . Collect small quantities in waste metal drums and seal for removal to an approved landfill, or incinerate in accordance with local, state, and federal regulations. See also section 13

7. HANDLING AND STORAGE

Store between 0 and 50°C (32 -125 OF) and avoid contact with skin and eyes. Do not store near acids. Ground all transfer equipment. Hold bulk storage under a nitrogen blanket. This product should not come in contact with copper or copper-bearing alloys. Good housekeeping procedures should be followed . Avoid contact with eyes. Vapors may irritate eyes. Use only with good ventilation and PPE. Keep container closed when not in use. Nitrogen purging of containers is ideal and good practice.

8. EXPOSURE GUIDELINE(S) AND CONTROLS:

VENTILATION: Control airborne concentration below the exposure guideline. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations (e.g . spraying), use an approved positive pressure air supplied respirator. In confined spaces or areas with poor ventilation this is mandatory. SKIN PROTECTION: Use protective clothing impervious to this material. Butyl/Nitrile/neoprene gloves should be worn. Safety shower should be located in work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse. Contaminated leather such as shoes, belts and watchbands, should be removed and thoroughly washed before reuse .. EYE PROTECTION: Use chemical goggles or safety glasses with side shields. If vapor exposure causes eye irritation, use a full face air fed respirator. Eye wash fountain and emergency showers should be located in immediate work area.

9. MATERIAL PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale yellow liquid with an ammoniacal odor
 pH: 11 .3
 Viscosity: circa 400 cps (mPa.s) @ 25 °C
 Density: 8.3 pounds per gallon @ 25 °C
 Vapor Pressure: <0.05 mmHg @ 25°C
 Vapor Density: n/d
 Boiling Point: > 212 of (>100 °C)
 Flash Point: > 285 of (> 140°C)

10. REACTIVITY AND STABILITY

Hazardous polymerization is very unlikely to occur. Materials such as oxidizing agents and isocyanates and polyurethanes should be avoided as these will cause exothermic polymerization. Avoid extreme heat. Fire , pyrolysis and thermal decomposition will produce noxious gases such as CO, CO" NOx, amines, ammonia and others. The material is designed as an accelerator curing agent for epoxy resins and will react with them to give a hard glassy polymer with the evolution of heat.

11. TOXICOLOGY

This toxicity data is based on a very similar product chemically.

Acute Oral	LD50	1670mg/kg	rat
Acute Inhalation	LC50	no data on product itself	
Acute Dermal	LD50	1240 mg/kg	rabbit
Dermal Irritation	severely irritating	corrosive	rabbit
Eye Irritation	severely irritating	corrosive	rabbit
Sensitization	some sensitizing potential		Guinea Pig
Carcinogens	This product does not contain any substances that are considered by OSHA NTP, IARC or ACGIH to be probable or suspect human carcinogens		
Mutagens	Results in vitro have been negative		

12. ECOLOGY

Aquatic toxicity

EC ₅₀	72 hr 84 mg/l	Scenedesmus subspicatus
EC ₅₀	96 hr 718 mg/l	Palaemonetes (Grass Shrimp)
LC ₅₀	24 hr 222 mg/l	Oncorhynchus mykiss (Rainbow Trout)
LC ₅₀	24 hr 249 mg/l	Cyprinus carpio (Carp)
LC ₅₀	96 hr 175 mg/l	Cyprinus carpio (Carp)

Biodegradability Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

If this material were to become waste , it would be considered hazardous by RCRA due to its corrosivity. RCRA code 0002. Recover and reuse if possible. If this were to become waste, dispose of in accordance with local state and federal laws. Do not heat or cut empty containers with a torch as they may contain residue. If the containers are properly cleaned, they may be recovered, reconditioned and reused.

14. TRANSPORT INFORMATION

DOT/TDG (Land)
Proper Shipping Name UN 2735 Amines, Liquid, Corrosive, n.o.s.
(1-(2-Aminoethyl) piperazine ,Tris-2,4,6-(dimethylaminomethyl)phenol)
Class 8 Packing group iii

IATA (Air)
Proper Shipping Name UN 2735 Amines, Liquid, Corrosive, n.o.s.
(1-(2-Aminoethyl) piperazine ,Tris-2,4,6-(dimethylaminomethyl)phenol)
Class 8 Packing group : iiii

IMDG (Sea)
Proper Shipping Name UN 2735 Amines, Liquid, Corrosive, n.o.s.
(1-(2-Aminoethyl) piperazine ,Tris-2,4,6-(dimethylaminomethyl)phenol)
Class 8 Packing group : iii

Marine Pollutant NO

15. REGULATORY INFORMATION

OSHA	Hazardous	Corrosive
RCRA	0002 -corrosive	

STATUS ON SUBSTANCE LISTS: The concentrations shown in this document are maximum levels (weight %,) to be used for regulations. Trade Secrets are indicated by"TS". TOXIC SUBSTANCES CONTROL ACT (TSCA): The components of this product are contained on the chemical substance inventory list.

FEDERAL EPA:
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yes	no	no	no	no

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Chemical Name CAS Number % By Weight
none

California Proposition 65. Does not contain any listed chemical to the best of our knowledge.

Canada DSI On the inventory

WHMIS Codes E

CEPA Challenge Substance none

EUROPE EINECS, Included on Inventory

Pre-registered for REACH -see European MSDS for R codes and S codes etc.

USA	TSCA	Included on Inventory.
AUSTRALIA	AICS	Included on Inventory
JAPAN	MITI/ENCS	Included on Inventory
SOUTH KOREA	ECI	Included on Inventory
CHINA	SEPA	Included on Inventory
PHILIPPINES	PICCS	Included on Inventory

16. OTHER INFORMATION

If you are unsure or if you must report more information, call the EPA Emergency Planning and Right-To-Know Hot Line: 800-535-0202 or 202-479-2449.

HAZARD RATING:		NFPA	HMIS
4 = EXTREME	HEALTH	3	3
3 =HIGH	FIRE	1	1
2 = MODERATE	REACTIVITY	0	0
I=SLIGHT SPECIFIC			
0= INSIGNIFICANT			

Harmonized Tariff Schedule 2907.19.80

The information and recommendations in this document are accurate to the best of our knowledge. User must conduct their own tests to determine the suitability of these products for their particular purposes. Because of numerous factors affecting results, J-B WELD CO.,LLC MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PURPOSE, other than the material conforms to our applicable current specifications. J-B WELD CO.,LLC assumes no legal responsibility for use or reliance on the information contained in this Material Safety Data Sheet.