MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	**ClearWeld**
CAS #	Mixture
Product Use	Bonds and repairs
Manufacturer	J-B Weld Company P.O. Box 483 Sulphur Springs, TX 75482 US Phone: 903-885-7696

2. Hazards Identification

Emergency Overview	DANGER CAUSES EYE BURNS. CAUSES SKIN BURNS. MAY CAUSE ALLERGIC SKIN REACTION.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
Eyes	May cause chemical burns. May cause blindness.
Skin	May cause chemical burns. May cause skin sensitization, an allergic reaction, which becomes evident on re-exposure to this material.
Inhalation	May cause respiratory tract irritation.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Target organs	Eyes. Skin.
Chronic effects	Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.
Signs and symptoms	The product causes burns of eyes, skin and mucous membranes.
Potential environmental effects	See section 12.

3. Composition/Information on Ingredients

Ingredient(s)	CAS #	Percent
Bis[(dimethylamino)methyl]phenol	71074-89-0	1 - 5
Phenol, 2,4,6-tris[(dimethylamino)methyl]-	90-72-2	10 - 30
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis, homopolymer	25085-99-8	10 - 30
N-(2-Aminoethyl)piperazine	140-31-8	10 - 30
Benzyl alcohol	100-51-6	3 - 7
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-hydroxy-3-mercaptopropoxy)-, .alpha.,.alpha.',.alpha.''-ether with 2-(hydroxymethyl)-2-methyl-1,3-propanediol (3:1)	101359-87-9	30 - 60

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
Skin contact	Immediately flush with cool water for 15 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.
Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Notes to physician	Symptoms may be delayed.

General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire-fighting Measures

Flammable properties	Not flammable by WHMIS criteria.
Extinguishing media	
Suitable extinguishing media	Dry chemical. Water spray. Foam. Carbon dioxide.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighers	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. Use water spray to reduce vapours or divert vapour cloud drift.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use. Large Spills: Wet down with water and dike for later disposal. After removal flush contaminated area thoroughly with water.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. DO NOT get in eyes. Do NOT get on skin. Avoid prolonged or repeated skin contact with this material. Avoid breathing vapours or mists of this product. Wash thoroughly after handling.
Storage	Keep out of the reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limit values

Ingredient(s)	Exposure limit values
Benzyl alcohol	**ACGIH-TLV** Not established
Bis[(dimethylamino)methyl]phenol	**ACGIH-TLV** Not established
N-(2-Aminoethyl)piperazine	**ACGIH-TLV** Not established
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]b homopolymer	**ACGIH-TLV** Not established
Phenol, 2,4,6-tris[(dimethylamino)methyl]-	**ACGIH-TLV** Not established
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-hydroxy-3-mercaptopropoxy)-, .alpha.,.alpha.',.alpha.''-ether with 2-(hydroxymethyl)-2-methyl-1,3-propanediol (3:1)	**ACGIH-TLV** Not established

Engineering controls Use only under good ventilation conditions or with respiratory protection.

Personal protective equipment

Eye/Face protection Safety glasses or goggles.

Hand protection Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection As required by employer code.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

General hygiene considerations Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Viscous
Colour	White / Yellow
Form	Liquid
Odour	Ammoniacal.
Odour threshold	Not available
Physical state	Liquid
pH	11.3
Freezing point	Not available
Boiling point	Not available
Pour point	Not available
Evaporation Rate	Not available
Flash point	> 140 °C (> 284.00 °F)
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability Limits in Air, Upper, % by Volume	Not available
Vapour pressure	Not available
Vapour density	Not available
Specific gravity	Not available
Octanol/water coefficient	Not available

10. Stability and Reactivity

Reactivity	This product reacts with acids.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Benzyl alcohol	8.8 mg/l/4h rat
Bis[(dimethylamino)methyl]phenol	Not available
N-(2-Aminoethyl)piperazine	Not available
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis- homopolymer	Not available
Phenol, 2,4,6-tris[(dimethylamino)methyl]-	Not available
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-hydroxy-3-mercaptopropoxy)-, .alpha.,.alpha.',.alpha.''-ether with 2-(hydroxymethyl)-2-methyl-1,3-propanediol (3:1)	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Benzyl alcohol	1230 mg/kg rat
Bis[(dimethylamino)methyl]phenol	Not available
N-(2-Aminoethyl)piperazine	1470 mg/kg rat
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis- homopolymer	30000 mg/kg rat
Phenol, 2,4,6-tris[(dimethylamino)methyl]-	1200 mg/kg rat
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-hydroxy-3-mercaptopropoxy)-, .alpha.,.alpha.',.alpha.''-ether with 2-(hydroxymethyl)-2-methyl-1,3-propanediol (3:1)	Not available

Effects of acute exposure

Eye	May cause chemical burns. May cause blindness.
Skin	May cause chemical burns. May cause skin sensitization, an allergic reaction, which becomes evident on re-exposure to this material.
Inhalation	May cause respiratory tract irritation.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Sensitisation	May cause sensitisation by skin contact.
Chronic effects	Non-hazardous by WHMIS criteria.
Carcinogenicity	Non-hazardous by WHMIS criteria.
Mutagenicity	Non-hazardous by WHMIS criteria. Benzyl alcohol has caused an increase in chromosomal aberrations in Chinese hamster ovary cells.
Reproductive effects	Non-hazardous by WHMIS criteria.
Teratogenicity	Non-hazardous by WHMIS criteria.
Name of Toxicologically Synergistic Products	Not available

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Algae - Acute Toxicity Data

Benzyl alcohol	100-51-6	3 Hr EC50 Anabaena variabilis: 35 mg/L
N-(2-Aminoethyl)piperazine	140-31-8	72 Hr EC50 Pseudokirchneriella subcapitata: 495 mg/L

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

Benzyl alcohol	100-51-6	96 Hr LC50 Pimephales promelas: 460 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 10 mg/L [static]
N-(2-Aminoethyl)piperazine	140-31-8	96 Hr LC50 Pimephales promelas: 1950-2460 mg/L [flow-through]; 96 Hr LC50 Poecilia reticulata: >1000 mg/L [semi-static]; 96 Hr LC50 Oncorhynchus mykiss: >=100 mg/L [semi-static]

Ecotoxicity - Water Flea - Acute Toxicity Data

Benzyl alcohol	100-51-6	48 Hr EC50 water flea: 23 mg/L
N-(2-Aminoethyl)piperazine	140-31-8	48 Hr EC50 Daphnia magna: 32 mg/L

Persistence and degradability Not available

Bioaccumulation/accumulation Not available

Mobility in environmental media Not available

Environmental effects Not available

Aquatic toxicity Not available

Partition coefficient Not available

Chemical fate information Not available

Other adverse effects Not available

13. Disposal Considerations

Disposal instructions Review federal, provincial, and local government requirements prior to disposal.

Waste from residues / unused products Not available

Contaminated packaging Not available

14. Transport Information

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (1-PIPERAZINEETHANAMINE)

Hazard class 8

UN number UN2735

Packing group III

Additional information:

Special provisions 16

Packaging exceptions Limited quantity <5L

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Benzyl alcohol	100-51-6	1 %
N-(2-Aminoethyl)piperazine	140-31-8	1 %

WHMIS classification Class D - Division 2B, Class E - Corrosive Material

WHMIS status Controlled

WHMIS labeling

Inventory Status

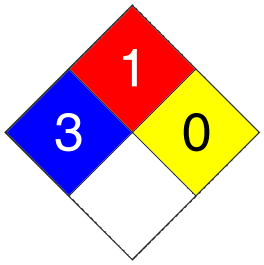
Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	*	3
Flammability		1
Physical Hazard		0
Personal Protection		X



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 24-Dec-2012

Effective Date 15-Dec-2012

Expiry Date 15-Dec-2015

Prepared by Dell Tech Laboratories Ltd. (519) 858-5021

Other Information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.