

JALASANJ Co Ltd

MATERIAL SAFETY DATA SHEET

MSDS

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: JALAPOX (2 Components EPOXY ADHESIVE)
PRODUCT CODE: 706 - 797
CHEMICAL FAMILY:EPOXY
CHEMICAL NAME: Epoxy Based Adhesive
FORMULA:Epoxy Resin + Hardener

MANUFACTORER:

JALASANJ Company Ltd
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TEHRAN, IRAN
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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING May cause skin irritation. May cause eye irritation. May cause allergic reaction.

PRIMARY ROUTE(S) OF ENTRY: Skin Contact

POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION: if product is heated, vapors generated can cause headache, nausea, dizziness and possible respiratory irritation if inhaled in high concentrations.

CHRONIC INHALATION: Repeated exposure to high vapor concentrations may cause irritation of pre-existing lung allergies and increase the chance of developing allergy symptoms to this product.

ACUTE SKIN CONTACT: May cause allergic skin response in certain individuals. May cause moderate irritation to the skin such as redness and itching.

CHRONIC SKIN CONTACT: May cause sensitization in susceptible individuals. May cause moderate irritation to the skin.

EYE CONTACT: May cause irritation.

INGESTION: Low acute oral toxicity.

SYMPTOMS OF OVEREXPOSURE: Possible sensitization and subsequent allergic reactions usually seen as redness and rashes.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:..... Pre-existing skin and respiratory disorders may be aggravated by exposure to this product. pre-existing lung and skin allergies may increase the chance of developing allergic symptoms to this product.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS #</u>	<u>CONCENTRARION (%)</u>
<u>PART1 (Resin)</u>		
Bisphenol-A/Epichlorohydrin Based Epoxy Resin	25068-38-6	30-70
Mineral Fillers	471-34-1	0-70
<u>PART2 (Hardener)</u>		
Polyoxypropyleneediamine	9046-10-0	40-50
Aliphatic Amines	140-31-8	5-15
Alkyl Phenol	84852-15-3	40-50
Mineral Fillers	471-34-1	0-70

4. FIRST AID MEASURES

FIRST AID FOR EYES: Flush immediately with water for at least 15minutes.
Consult a physician.

FIRST AID FOR SKIN: Remove contaminated clothing. Wipe excess from skin.
Apply waterless skin cleaner and then wash with soap and water. Consult a physician if effects occur.

FIRST AID FOR INHALATION: Remove to fresh air if effects occur.

FIRST AID FOR INGESTION: No acute adverse health effects expected from amounts
ingested under normal conditionals of use. Seek medical attention if a significant amount is ingested.

5. FIRE FIGHTING MEASURES

FLASH POINT: >200°F

EXTINGUISHING MEDIA: Foam, Carbon Dioxide (CO₂), dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Wear a self-contained breathing apparatus and complete
full-body personal protective equipment. Closed containers may rupture (due to buildup of pressure) when exposed to extreme
heat.

FIRE AND EXPLOSION HAZARD: During a fire, smoke may contain the original materials in
addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include,
but are not limited to: phenolics, carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Stop leak without additional risk. Dike and absorb with inert
material (e.g., sand) and collect in a suitable, closed container. Warm, soapy water or non-flammable, safe solvent may be used to
clean residual.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (min./max.):..... 40°F (4°C) / 120°F (49°C)

STORAGE: Store in cool, dry place, store in tightly sealed containers to
prevent moisture absorption and loss of volatiles. Excessive heat over long periods of time will degrade the Product

HANDLING PRECAUTIONS: Avoid prolonged or repeated skin contact. Wash thoroughly
after handling. Launder contaminated clothing before reuse. Avoid inhalation of vapors from heated product. Precautionary steps
should be taken when curing product in large quantities. When mixed with epoxy curing agents this product causes an exothermic,
which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary
widely in composition and toxicity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION GUIDELINES: Safety glasses with side shields or chemical splash
goggles.

SKIN PROTECTION GUIDELINES: Wear liquid-proof, chemical resistant gloves (nitrile-butyl
rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

RESPIRATORY/VENTILATION GUIDELINES: Good room ventilation is usually adequate for most
operations. Wear a NIOSH/MSHA approved respirator with an organic vapor cartridge whenever exposure to vapor in
concentrations above applicable limits is likely.

Note: West System, Inc. has conducted an air sampling study using this product or similarly formulated products. The results
indicate that the components sampled for (epichlorohydrin, benzyl alcohol) were either so low that they were not detected at all or
they were significantly below OSHA's permissible exposure levels.

ADDITIONAL PROTECTIVE MEASURES: Practice good caution and personal cleanliness to avoid
skin and eye contact. Avoid skin contact when removing gloves and other protective equipment. Wash thoroughly after handling.
Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful
exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: Not established for product as whole. Refer to OSHA's
Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Liquid Paste

COLOR: Gray or (Clear Yellow for C type)

ODOR: Mild

BOILING POINT: >500°F

pH:..... No data

SOLUBILITY IN WATER: Slight

BULK DENSITY: 1.5 (gr/cm³)

VAPOR PRESSURE: < 1 mmHg @ 20°C

VAPOR DENSITY: Heavier than air

10. STABILITY AND REACTIVITY

STABILITY: Stable.

HAZARDOUS POLYMERIZATION: Will not occur by itself, but a mass of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with significant heat buildup.

INCOMPATIBILITIES: Strong acids, bases, amines and mercaptans cause polymerization.

DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and phenolics may be produced during uncontrolled exothermic reactions or when otherwise heated to decomposition.

11. TOXICOLOGICAL INFORMATION

No specific oral, inhalation or dermal toxicology data is known for this product. Specific toxicology information for a bisphenol-A based epoxy resin present in this product is indicated below:

Oral: LD₅₀ = 11.4 g/kg (rats)

Dermal: LD₅₀ > 20 ml/kg (skin absorption in rabbits)

TERATOLOGY: Diglycidyl ether bisphenol-A did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

REPRODUCTIVE EFFECTS: In animal studies, has been shown not to interfere with reproduction.

12. ECOLOGICAL INFORMATION

In the non-cured liquid form this product may cause long-term harm if released to the environment. Prevent entry into sewers and natural waters.

Movement and Partitioning:

Bio concentration potential is moderate

Degradation and Transformation:

Theoretical oxygen demand is calculated to be 2.35 p/p.

Ecotoxicology:

Material is moderately toxic to aquatic organisms on an acute basis.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, wither by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

US Department of Transportation Classification.....This material is not subject to DOT regulations under 49 CFR Parts 171-180.

15. REGULATOR INFORMATION

OSHA STATUS: Irritant

TSCA STATUS: All components are listed on TSCA inventory or otherwise comply with

Canada WHMIS Classification: All components are listed on TSCA inventory or otherwise comply with TSCA requirements.

CEPA Chemical Inventory Status: All components are listed or are otherwise compliant with CEPA requirements.

16. OTHER INFORMATION

PREPARED BY: JALASANJ

APPROVAL DATE: April 29, 2013

SUPERSEDES DATE: September 10, 2012

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