

# Material Safety Data Sheet

## 1. Chemical Product and Company Identification

Trade Name	JP-105(Resin)
General Use	Epoxy Mortar
Manufacturer	Jeil Chemical Co., Ltd. 38-16. Hoehak 3-gil, Onsan-Eup, Ulju-Gun, Ulsan, South Korea 052-227-5003

## 2. Hazards Identification

Hazards Classification and Statements	Acute. Tox. : Category 4 Skin Irrit. : Category 2 Eye Irrit. : Category 2 Skin Sens. : Category 1 Carcinogenicity : Category1A STOT Rep. : Category 1 Aquatic Chronic : Category 2 Carcinogenicity : Category1B
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### b. Hazards Description:

Pictogram



Signal word

DANGER

Hazards Classification and Statements

H302 Harmful if swallowed  
H312 Harmful in contact with skin  
H315 Causes skin irritation  
H317 May cause an allergic skin reaction  
H319 Causes serious eye irritation  
H330 Fatal if inhaled  
H400 Very toxic to aquatic life  
H410 Very toxic to aquatic life with long lasting effects

Prevention precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray  
P264 Wash ... thoroughly after handling  
P270 Do not eat, drink or smoke when using this product  
P271 Use only outdoors or in a well-ventilated area  
P272 Contaminated work clothing should not be allowed out of the workplace  
  
P273 Avoid release to the environment  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
  
P284 Wear respiratory protection

Response precautionary statements

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P302+P352 IF ON SKIN: Wash with soap and water  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/physician  
P312 Call a POISON CENTER or doctor/physician if you feel unwell  
P320 Specific treatment is urgent (see ... on this label)  
P321 Specific treatment (see ... on this label)  
P322 Specific measures (see ... on this label)  
P330 Rinse mouth  
P332+P313 If skin irritation occurs: Get medical advice/attention  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.  
P363 Wash contaminated clothing before reuse.  
P391 Collect spillage.  
P403+P233 Store in a well ventilated place Keep container tightly closed  
P403+P235 Store in a well ventilated place Keep cool  
P405 Store locked up  
P501 Dispose of contents/container in accordance with local/regional/national/international regulation (to be specified).

Storage precautionary statements

Disposal precautionary statements:

C. Other harmful or danger characteristic (NFPA)

Benzyl Alcohol

Health hazard	2
Fire	1
Reactivity Hazard	0

BISPHENOL A-EPICHLOROHYDRIN RESIN

Health hazard	2
Fire	1
Reactivity Hazard	0

C12-C14 ALKYL GLYCIDYL ETHER

Health hazard	1
Fire	1
Reactivity Hazard	0

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

	Component	CAS NO.	Amount(%)
Benzyl Alcohol	BENZENEMETHANOL	100-51-6	4 ~ 6
BISPHENOL A-EPICHLOROHYDRIN RESIN	BISPHENOL A-EPICHLOROHYDRIN RESIN	25068-38-6	85 ~ 90
C12-C14 ALKYL GLYCIDYL ETHER	C12-C14 GLYCIDYL ETHER	68609-97-2	4 ~ 6

### 4. First aid measures

- |                 |  |
|-----------------|--|
| a. Eye contact  | Flush eyes with plenty of water for at least 15 minutes while holding eyelids open.<br><br>Consult a physician if signs of irritation appear.  |
| b. Skin contact | Immediately remove contaminated clothing or shoes, wash skin with plenty of water for at least 15 minutes. Use soap if readily available, or follow by thoroughly washing soap and water. Do not reuse clothing until thoroughly decontaminated. |
| c. Inhalation   | Move person to fresh air area and provide oxygen if breathing is difficult. Consult a physician if effects occur.  |

d. Ingestion Do not induce vomiting because of risk of aspiration. Rinse mouth with water. Consult a physician if effects occur.

#### 5. Fire fighting measures

Hazardous products of Combustion	In case of fire, toxic fumes might be formed
Extinguishing media	Water spray, foam, dry chemical, or carbon dioxide
Unusual fire or explosion Hazards	May produce hazardous fumes of hazardous decomposition products When fire fighting, wear full protective equipment including self-contained breathing apparatus

#### 6. Accidental release measures

Personal precautions	Put on adequate protective equipment. See section 8, Exposure control/ Personal Protection
Environmental precautions	Keep away from drains, surface-water, ground water and soil.
Clean-up Method	Sweep spilled material into non-leaking containers. All disposal methods must be in compliance with applicable local regulations.

#### 7. Handling and storage

a. Storage Keep away from: acids, alkalis, oxidizers. Keep in cool, dry, ventilate storage and in closed containers. Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Avoid freezing temperatures during storage. Do not store in reactive metal containers. Product may partially freeze with extended exposure to cold temperatures.

b. Handling When handling, do not eat, drink, or smoke. Avoid contact with eyes. Avoid contact with skin. Spraying increases the risk of hazardous exposure. In atmospheres where the material is sprayed, workers should avoid contact with aerosols containing S through proper engineering controls, such as exhaust ventilation. Wear goggles and face shield. Do not get into the eyes. Other individuals working in the vicinity of the product where exposure can occur should also be fitted with chemical splash goggles. Contaminated clothing should be properly disposed of in a manner that will not cause additional exposure. Workers should be strongly encouraged to follow good personal hygiene practices, such as thorough washing of hands, arms, neck and face following working with JP-105.

#### 8. Exposure controls/personal protection

a. Exposure Limits

National regulations	No Data
ACGIH regulations	No Data
Biological exposure limits	No Data

b. Suitable Engineering Management Use process isolation, local ventilation or other engineering management to maintain air quality under exposure limits.  
Set wash up facilities and safe shower system, where storage or use of this material.

c. Personal protector

Eye protection	Safety glasses with side shields.
Hands protection	Chemical resistant gloves.
Skin and body protection	Chemical resistant protective suit. Chemicals resistant boots.
Respiratory protection	Never exceed the national Occupational Exposure Limit. Use local. Exhaust ventilation or handle in a ventilated enclosure. For greater protection a face piece chemical cartridge respirator is recommended.

## 9. Physical and chemical properties

1. Appearance	
Type	Liquid
Color	transparent
2. Odor	No Data
3. Odour threshold	No Data
4. pH	No Data
5. Melting Point/Freezing Point	No Data
6. Boiling Point	No Data
7. Flash Point	93 °C
8. Evaporation Rate	No Data
9. Flammability	No Data
10. Flammable Limits	No Data
11. Vapor Pressure	No Data
12. Solubility in WATER	No Data
13. Vapor density(water=1)	No Data
14. Density	1.10~1.20
15. n-Octanol/Water Partition coefficient	No Data
16. Autoignition Temperature	No Data
17. Decomposition Temperature	No Data
18. Viscosity(at 25°C)	800~1,400CPS(25°C)
19. Molecular Weight	No Data

## 10. Stability and reactivity

Conditions to avoid	Can react strongly with epoxy resins at elevated temperature
Materials to avoid	Acids, amines, bases, oxidizing agents
Hazardous reaction	Hazardous polymerization does not occur by itself
Decomposition temperature	Not available
Hazardous decomposition component	Hazardous decomposition products are not expected to form during normal storage

## 11. Toxicological information

a. Information on the likely routes of exposure	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.
b. Acute Toxicity Data	
Acute toxic	
Oral	
Benzyl Alcohol	LD50 1230 mg/kg Rat
BISPHENOL A-EPICHLOROHYDRIN RESIN	LD50 > 1000 mg/kg Rat
C12-C14 ALKYL GLYCIDYL ETHER	LD50 17100 mg/kg Rat
Dermal	
Benzyl Alcohol	LD50 2000 mg/kg Rabbit
BISPHENOL A-EPICHLOROHYDRIN RESIN	LD50 > 20000 mg/kg Rabbit
C12-C14 ALKYL GLYCIDYL ETHER	No Data
Inhalation	
Benzyl Alcohol	LC50 0.9 mg/l 4 hr Rat
BISPHENOL A-EPICHLOROHYDRIN RESIN	No Data
C12-C14 ALKYL GLYCIDYL ETHER	No Data

Skin Corrosion/Irritation

No Data

Serious Eye Damage/Irritation

No Data

Respiratory sensitization

No Data

Skin sensitization

No Data

Carcinogenicity

No Data

IARC

No Data

OSHA

No Data

ACGIH

No Data

NTP

No Data

EU CLP

No Data

Germ Cell Mutagenicity

No Data

Reproductive toxicity

No Data

Germ Cell Mutagenicity

No Data

Reproductive toxicity

No Data

Aspiration hazard

No Data

## 12. Environmental information

### a. Aquatic and terrestrial ecotoxicity

#### Fish toxicity (Acute)

Benzyl Alcohol	LC50 10 mg/l 96 hr
BISPHENOL A-EPICHLOROHYDRIN RESIN	LC50 1.41 mg/l 96 hr <i>Oryzias latipes</i>
C12-C14 ALKYL GLYCIDYL ETHER	LC50 0.002 mg/l 96 hr
Water flea toxicity (Acute)	
Benzyl Alcohol	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN	EC50 1.7 mg/l 48 hr
C12-C14 ALKYL GLYCIDYL ETHER	LC50 0.003 mg/l 48 hr
Birds growth hinderance test (Acute)	
Benzyl Alcohol	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN	No Data
C12-C14 ALKYL GLYCIDYL ETHER	EC50 0.003 mg/l 96 hr

### b. Persistence and degradability

Persistence	log Kow 7.25
Degradability	No Data
c. Bioaccumulative potential: condensability	No Data
Benzyl Alcohol	BCF 0.56 ~ 0.67
BISPHENOL A-EPICHLOROHYDRIN RESIN	BCF 934.9
C12-C14 ALKYL GLYCIDYL ETHER	94 (%) 28 day
biodegradability	0 (%) 28 day
Benzyl Alcohol	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN	No Data
C12-C14 ALKYL GLYCIDYL ETHER	No Data
d. Mobility in soil:	No Data
e. Other adverse effects	No Data

### 13. Disposal considerations

Incineration is the recommended disposal method for all chemical wastes. Material collected on absorbent material may be disposed in a landfill in accordance with all applicable local, state and federal regulations

### 14. Transport information

a. UN No.	3082
b. Proper Shipping Name	ALCOHOLS,N.O.S.
Benzyl Alcohol	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
BISPHENOL A-EPICHLOROHYDRIN RESIN	Not applicable
C12-C14 ALKYL GLYCIDYL ETHER	
c. Transportation Class	9
d. Packing Group	III
e. Marine Pollutant	No Data
f. Special precautions for user	
fire emergency	F-A
spill Emergency	S-F

### 15. Regulation information

a. Industrial Safety and Health Act	No Data
b. Toxic Chemical Control Act	Observational chemicals
c. Dangerous Material Safety Control Act	Chapter 4 third petroleum 2000
d. Wastes Management Act	

Designated Waste

e. Other requirements in domestic and other countries

National regulation

POPs Control Act

Not applicable

other countries regulation

U.S.A(OSHA )

Not applicable

U.S.A(CERCLA)

Not applicable

U.S.A(EPCRA 302)

Not applicable

U.S.A(EPCRA 304)

Not applicable

U.S.A(EPCRA 313)

Not applicable

EU

Benzyl Alcohol

Xn: R20/22

BISPHENOL A-EPICHLOROHYDRIN RESIN

Xi: R36/38R43N; R51-53

C12-C14 ALKYL GLYCIDYL ETHER

Xi: R38, R43

EU

Benzyl Alcohol

R20/22

BISPHENOL A-EPICHLOROHYDRIN RESIN

R36/38, R43, R51/53

C12-C14 ALKYL GLYCIDYL ETHER

R38, R43

EU

Benzyl Alcohol

S2, S26

BISPHENOL A-EPICHLOROHYDRIN RESIN

S2, S28, S37/39, S61

C12-C14 ALKYL GLYCIDYL ETHER

S2, S24, S37

16. Other requirements in domestic and other countries

a. Information source and references

Benzyl Alcohol

ICSC

Corporate Solution From Thomson Micromedex(<http://csi.micromedex.com>)

ECB-ESIS(European chemical Substances Information System)(<http://ecb.jrc.it/esis>)

ECOTOX Database, EPA(<http://cfpub.epa.gov/ecotox>)

IUCLID Chemical Data Sheet, EC-ECB

International Chemical Safety Cards(ICSC)(<http://www.nihs.go.jp/ICSC>)

TOXNET, U.S. National Library of Medicine(<http://toxnet.nlm.nih.gov>)

The Chemical Database, The Department of Chemistry at the University of Akron(<http://ull.chemistry.uakron.edu/erd>)

BISPHENOL A-EPICHLOROHYDRIN RESIN

National Institute of Technology and Evaluation(NITE)([http://www.safe.nite.go.jp/ghs/h18\\_bunrui.html](http://www.safe.nite.go.jp/ghs/h18_bunrui.html))

Corporate Solution From Thomson Micromedex(<http://csi.micromedex.com>)

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National Library of Medicine(NLM)(<http://toxnet.nlm.nih.gov/cgi-bin/isis/htmlgen?CHEM>)  
Corporate Solution From Thomson Micromedex(<http://csi.micromedex.com>)  
European chemical Substances Information System(ECB-ESIS)(<http://ecb.jrc.it/esis>)  
National Institute of Technology and Evaluation(NITE)([http://www.safe.nite.go.jp/ghs/h18\\_bunrui.html](http://www.safe.nite.go.jp/ghs/h18_bunrui.html))  
Corporate Solution From Thomson Micromedex(<http://csi.micromedex.com>)  
National Institute of Technology and Evaluation(NITE)([http://www.safe.nite.go.jp/ghs/h18\\_bunrui.html](http://www.safe.nite.go.jp/ghs/h18_bunrui.html))  
European chemical Substances Information System(ECB-ESIS)(<http://ecb.jrc.it/esis>)  
National Library of Medicine/Chemical Carcinogenesis Research Information  
National Library of Medicine/genetic toxicology(NLM/GENETOX)(<http://toxnet.nlm.nih.gov/>)  
National Institute of Technology and Evaluation(NITE)([http://www.safe.nite.go.jp/ghs/h18\\_bunrui.html](http://www.safe.nite.go.jp/ghs/h18_bunrui.html))  
Corporate Solution From Thomson Micromedex(<http://csi.micromedex.com>)

C12-C14 ALKYL GLYCIDYL ETHER

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Ecological Structure Activity Relationships(ECOSAR)  
Ecological Structure Activity Relationships(ECOSAR)  
Ecological Structure Activity Relationships(ECOSAR)  
Quantitative Structure Activity Relation(QSAR)

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|-----------------------------|------------|
| b. Issuing date             | 2013-06-28 |
| c. Revision number and date |            |
| Revision number             | -          |
| Date                        | -          |
| d. Others                   |            |