

# Material Safety Data Sheet

## 1. Chemical Product and Company Identification

가. Trade Name	JP-107(Resin)
General Use	Colored 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

a. Hazards Classification and Statements	Acute. Tox. : Category 3 Acute. Tox. : Category 1 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  
H310 Fatal in contact with skin  
H315 Causes skin irritation  
H317 May cause an allergic skin reaction  
H319 Causes serious eye irritation  
H330 Fatal if inhaled  
H340 May cause genetic defects  
H350 May cause cancer  
H370 Causes damage to organs  
H372 Causes damage to organs through prolonged or repeated exposure

Prevention precautionary statements

P201 Obtain special instructions before use  
P202 Do not handle until all safety precautions have been read and understood  
P260 Do not breathe dust/fume/gas/mist/vapours/spray  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray  
P262 Do not get in eyes, on skin, or on clothing  
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
	P281 Use personal protective equipment as required
	P284 Wear respiratory protection
Response precautionary statements	P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
	P302+P350 IF ON SKIN: Gently wash with plenty of soap and water
	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.
	P307+P311 IF exposed: Call a POISON CENTER or doctor/physician
	P308+P313 IF exposed or concerned: Get medical advice/attention
	P310 Immediately call a POISON CENTER or doctor/physician
	P314 Immediately call a POISON CENTER or doctor/physician
	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
Storage precautionary statements	P403+P233 Store in a well ventilated place Keep container tightly closed
	P405 Store locked up
Disposal precautionary statements	P501 Dispose of contents/container in accordance with local/regional/national/international regulation (to be specified).

C. Other harmful or danger characteristic (NFPA)

Benzyl Alcohol

Health hazard	2
Fire	1
Reactivity Hazard	0

SiO2

Health hazard	1
Fire	0
Reactivity Hazard	0

BISPHENOL A-EPICHLOROHYDRIN RESIN

Health hazard	2
Fire	1
Reactivity Hazard	0

Extract Residues (Coal), Tar Oil Alk., Carbonated, Limed; Crude Phenols; [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3, Ca(OH)2, Na2Co3 And Other Organic And Inorganic Impurities.]

Health hazard	No Data
Fire	No Data
Reactivity Hazard	No Data

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS NO.	Amount(%)
Benzyl Alcohol	BENZENEMETHANOL 100-51-6	5 ~ 8
SiO2	QUARTZ (SiO2) 14808-60-7	18 ~ 23

BISPHENOL A-EPICHLOROHYDRIN RESIN	BISPHENOL A-EPICHLOROHYDRIN RESIN	25068-38-6	45 ~ 50
Extract Residues (Coal), Tar Oil Alk., Carbonated, Limed; Crude Phenols; [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3, Ca(OH)2, Na2Co3 And Other Organic And Inorganic Impurities.]		90641-06-8	20 ~ 25

#### 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-107. |

#### 8. Exposure controls/personal protection

a. Exposure Limits

National regulations

Benzyl Alcohol No Data  
SiO<sub>2</sub> TWA – 0.05mg/m<sup>3</sup> SiO<sub>2</sub>

BISPHENOL A-EPICHLOROHYDRIN RESIN No Data

Extract Residues (Coal), Tar Oil Alk., No Data  
Carbonated, Limed; Crude Phenols; [The

Product Obtained By Treatment Of Coal Tar  
Oil Alkaline Extract With Co<sub>2</sub> And Cao.

Composed Primarily Of Caco<sub>3</sub>, Ca(OH)<sub>2</sub>,  
Na<sub>2</sub>Co<sub>3</sub> And Other Organic And Inorganic  
Impurities.]

ACGIH regulations

Benzyl Alcohol No Data

SiO<sub>2</sub> TWA 0.025 mg/m<sup>3</sup>

BISPHENOL A-EPICHLOROHYDRIN RESIN No Data

Extract Residues (Coal), Tar Oil Alk., No Data  
Carbonated, Limed; Crude Phenols; [The

Product Obtained By Treatment Of Coal Tar  
Oil Alkaline Extract With Co<sub>2</sub> And Cao.

Composed Primarily Of Caco<sub>3</sub>, Ca(OH)<sub>2</sub>,  
Na<sub>2</sub>Co<sub>3</sub> And Other Organic And Inorganic  
Impurities.]

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 Green

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 No Data

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 1.40 ~ 1.50

15. n-Octanol/Water Partition coefficient	No Data
16. Autoignition Temperature	No Data
17. Decomposition Temperature	No Data
18. Viscosity(at 25°C)	3,000 ~ 4,000CPS(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
SiO2	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN Extract Residues (Coal), Tar Oil Alk., Carbonated, Limed; Crude Phenols: [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3. Ca(Oh)2.	LD50 > 1000 mg/kg Rat
Dermal	No Data
Benzyl Alcohol	LD50 2000 mg/kg Rabbit
SiO2	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN Extract Residues (Coal), Tar Oil Alk., Carbonated, Limed; Crude Phenols: [The	LD50 > 20000 mg/kg Rabbit
Inhalation	No Data
Benzyl Alcohol	LC50 0.9 mg/l 4 hr Rat
SiO2	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN Extract Residues (Coal), Tar Oil Alk., Carbonated, Limed; Crude Phenols: [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3. Ca(Oh)2.	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	Group 1
OSHA	No Data
ACGIH	A2
NTP	No Data
EU CLP	No Data
Germ Cell Mutagenicity	No Data
Reproductive toxicity	No Data
Specific target organ toxicity (single exposure):	No Data
Specific target organ toxicity (repeated exposure):	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
SiO2	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN Extract Residues (Coal), Tar Oil Aik., Carbonated, Limed; Crude Phenols: [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3, Ca(OH)2, Na2Co3 And Other Organic And Inorganic Impurities.]	LC50 1.41 mg/l 96 hr Oryzias latipes
Water flea toxicity (Acute)	No Data

Benzyl Alcohol	No Data
SiO2	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN Extract Residues (Coal), Tar Oil Aik., Carbonated, Limed; Crude Phenols: [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3, Ca(OH)2, Na2Co3 And Other Organic And Inorganic Impurities.]	EC50 1.7 mg/l 48 hr
Birds growth hinderance test (Acute)	No Data

### b. Persistence and degradability

#### Persistence

log Kow 2.821

#### Degradability

No Data

### c. Bioaccumulative potential:

#### condenasability

BCF 0.56 ~ 0.67

#### biodegradability

94 (%) 28 day

### d. Mobility in soil:

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  
Benzyl Alcohol ALCOHOLS,N.O.S.  
SiO2 Not applicable  
BISPHENOL A-EPICHLOROHYDRIN RESIN ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Extract Residues (Coal), Tar Oil Alk.,  
Carbonated, Limed; Crude Phenols; [The Not applicable  
Product Obtained By Treatment Of Coal Tar  
Oil Alkaline Extract With Co2 And Cao.  
Composed Primarily Of Caco3, Ca(OH)2,  
Na2Co3 And Other Organic And Inorganic  
Impurities ]

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 Not applicable  
other countries regulation  
U.S.A(OSHA ) Not applicable  
U.S.A(CERCLA) Not applicable  
U.S.A(EPCRA 302 ) Not applicable  
USA(EPCRA 304 ) Not applicable  
USA(EPCRA 313 ) Not applicable

EU  
 Benzyl Alcohol Xn: R20/22  
 SiO2 Not applicable  
 BISPHENOL A-EPICHLOROHYDRIN RESIN Extract Residues (Coal), Tar Oil Alk., Carbonated, Limed; Crude Phenols; [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3, Ca(OH)2, Na2Co3 And Other Organic And Inorganic Impurities.]  
 EU Carc.Cat.2: R45, Muta.Cat.2: R46

EU  
 Benzyl Alcohol R20/22  
 SiO2 Not applicable  
 BISPHENOL A-EPICHLOROHYDRIN RESIN Extract Residues (Coal), Tar Oil Alk., Carbonated, Limed; Crude Phenols; [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3, Ca(OH)2, Na2Co3 And Other Organic And Inorganic Impurities.]  
 EU R36/38, R43, R51/53  
 R45, R46

EU  
 Benzyl Alcohol S2, S26  
 SiO2 Not applicable  
 BISPHENOL A-EPICHLOROHYDRIN RESIN Extract Residues (Coal), Tar Oil Alk., Carbonated, Limed; Crude Phenols; [The Product Obtained By Treatment Of Coal Tar Oil Alkaline Extract With Co2 And Cao. Composed Primarily Of Caco3, Ca(OH)2, Na2Co3 And Other Organic And Inorganic Impurities.]  
 EU S2, S28, S37/39, S61  
 S:53-45

## 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>)

SiO2

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>)

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

National Library of Medicine(NLM)(<http://toxnet.nlm.nih.gov/cgi-bin/sis/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>)

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