

Material Safety Data Sheet

1. Chemical Product and Company Identification

Trade Name	JA-153CF(Hardener)
General Use	Construction Flooring
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 Skin Irrit. : Category 3 Eye Irrit. : Category 1 Skin Sens. : Category 1 STOT Rep. : Category 3 Aquatic Chronic : Category 2
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b. Hazards Description:

Pictogram



Signal word	DANGER
Hazards Classification and Statements	H301 Toxic if swallowed H311 Toxic in contact with skin H314 Causes severe skin burns and eye damage H318 Causes serious eye damage H335 May cause respiratory irritation H351 Very toxic to aquatic life with long lasting effects H360 May damage fertility or the unborn child H411 Toxic to aquatic life with long lasting effects
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 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 Wash...thoroughly after handling
Response precautionary statements	P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P302+P352 IF ON SKIN (or hair): Wash with plenty of soap and water. 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. P314 Get medical advice/attention if you feel unwell. P321 Specific treatment (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	P405 Store locked up

Disposal precautionary statements: P501 Dispose of contents/container in accordance with local/regional/national/international regulation (to be specified).

Cf. Other harmful or danger characteristic (NFPA)

Health hazard	3
Fire	1
Reactivity Hazard	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS NO.	Amount(%)
POLY(OXYPROPYLENE)DIAMINE	9046 10 0	75~85
Dodecyl phenol	27193-86-8	10~20
Secret	-	1~10

4. First aid measures

- | | |
|-----------------|--|
| a. Eye contact | Flush eyes with plenty of water for at least 15 minutes while holding eyelids open. 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
Special fire fighting Procedures	When fire fighting, wear full protective equipment including self-contained breathing

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 HOC-701. |

8. Exposure controls/personal protection

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|----------------------|---------|
| 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	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	0.93~0.97
15. n-Octanol/Water Partition coefficient	No Data
16. Autoignition Temperature	No Data
17. Decomposition Temperature	No Data
18. Viscosity(at 25℃)	20~40cps(at 25℃)
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	
POLY(OXYPROPYLENE)DIAMINE	LD50 242 mg/kg Rat
Dodecyl phenol	No Data
Dermal	
POLY(OXYPROPYLENE)DIAMINE	LD50 360 mg/kg Rabbit
Dodecyl phenol	No Data
Inhalation	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Skin Corrosion/Irritation	

POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Serious Eye Damage/Irritation	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Respiratory sensitization	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Skin sensitization	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Carcinogenicity	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
IARC	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
OSHA	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
ACGIH	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
NTP	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
EU CLP	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Germ Cell Mutagenicity	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Reproductive toxicity	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Specific target organ toxicity (single exposure):	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Specific target organ toxicity (repeated exposure):	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Aspiration hazard	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data

12. Environmental information

a. Aquatic and terrestrial ecotoxicity:

Fish toxicity (Acute):	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
Water flea toxicity (Acute):	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data

Birds growth hinderance test (Acute):

POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data

b. Persistence and degradability:

Persistence:	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data

Degradability:	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
c. Bioaccumulative potential:	
condensability	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
biodegradability	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
d. Mobility in soil:	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
e. Other adverse effects:	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	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.	1263
b. Proper Shipping Name	PAINT(including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
c. Transportation Class	UN grade : Class 3 Flammable liquids IMDG grade : Class 3.3 High flashpoint group
d. Packing Group	
POLY(OXYPROPYLENE)DIAMINE	I
Dodecyl phenol	No Data
e. Marine Pollutant	
POLY(OXYPROPYLENE)DIAMINE	No Data
Dodecyl phenol	No Data
f. Special precautions for user	
fire emergency	
POLY(OXYPROPYLENE)DIAMINE	F-A
Dodecyl phenol	No Data
spill Emergency	
POLY(OXYPROPYLENE)DIAMINE	S-B
Dodecyl phenol	No Data

15. Regulation information

a. Industrial Safety and Health Act	
BENZENEMETHANOL	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN	No Data
b. Toxic Chemical Control Act	
BENZENEMETHANOL	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN	No Data
c. Dangerous Material Safety Control Act	
BENZENEMETHANOL	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN	No Data
d. Wastes Management Act	
BENZENEMETHANOL	No Data
BISPHENOL A-EPICHLOROHYDRIN RESIN	No Data
e. Other requirements in domestic and other countries	
National regulation	
BENZENEMETHANOL	Not applicable
BISPHENOL A-EPICHLOROHYDRIN RESIN	Not applicable
other countries	

U.S.A(OSHA)	
BENZENEMETHANOL	Not applicable
BISPHENOL A-EPICHLOROHYDRIN RESIN	Not applicable
U.S.A(CERCLA)	
BENZENEMETHANOL	Not applicable
BISPHENOL A-EPICHLOROHYDRIN RESIN	Not applicable
U.S.A(EPCRA 302)	
BENZENEMETHANOL	Not applicable
BISPHENOL A-EPICHLOROHYDRIN RESIN	Not applicable
USA(EPCRA 304)	
BENZENEMETHANOL	Not applicable
BISPHENOL A-EPICHLOROHYDRIN RESIN	Not applicable
EU	
BENZENEMETHANOL	Not applicable
BISPHENOL A-EPICHLOROHYDRIN RESIN	Not applicable

16. Other requirements in domestic and other countries

a. Information source and references

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

b. Issuing date 2013-06-28

c. Revision number and date

Revision number -

Date -

d. Others -