

SIGMA EPOXY SEALER HARDENER

Version 4

Print Date April 2016

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Code	0654
Trade name	SIGMA EPOXY SEALER HARDENER
Manufacturer	Sigma Paints Saudi Arabia Ltd.
Address	P.O. Box 7509 Dammam 31472 Saudi Arabia
Telephone	+966-13-8473100
Telefax	+966 - 13- 8471734
Emergency telephone number	+966-13-8572394

2. COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous components In Product for EC:**

Components	CAS-No.	Symbol(s):	R-phrases	Concentration
2-METHYLPROPAN-1-OL	78-83-1	F, Xn	R10, R20	5.00-10.00
NONYL PHENOL	090481-04-2	C, N	R22, R34, R50/53	25.00-50.00
ETHYLBENZENE	112-24-3	Xn, F	R11, R20	1.00-5.00
2,4,6-TRIS(DIMETHYLAMINOMETHYL)	90-72-2	Xn, Xi		1.00-5.00
POLY AMINOAMIDE		Xi	R41, R36/R38	25.00-50.00
XYLENE, MIXTURE OF ISOMERS	001330-20-7	F, Xn, Xi	R10, R20/21, R38	10.00-25.00

3. HAZARDS IDENTIFICATION

Main Hazards	Highly flammable, Cause burns. May cause sensitization by skin contact. Harmful by inhalation, in contact with skin and if swallowed.
Health Effects – Eyes	Liquid, mist or vapour will cause conjunctiva irritation and possibly corneal damage.
Health Effects – Skin	Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis.
Health Effects - Ingestion	Swallowing may have the following effects: irritation of mouth, throat and digestive tract, drowsiness, damage to the central nervous system, diarrhea, nausea, vomiting, abdominal pain.
Health Effects - Inhalation	Exposure to vapor may have the following effects: irritation of nose, throat and respiratory tract, drowsiness, loss of consciousness, headache, muscular weakness, fatigue.

4. FIRST AID MEASURES

First Aid - Eyes	Contact lenses should be removed. Irrigate copiously with clean fresh water for at least 10 minutes, holding eye lids apart and seek medical advice.
First Aid - Skin	Remove contaminated clothing as washing proceeds. Wash skin thoroughly with soap and water or use a proprietary skin cleaner. Solvents should not be used to clean skin because they may increase the penetration of the material. Contaminated clothing should be washed or dry-cleaned before re-use.
First Aid - Ingestion	Do not induce vomiting. Keep warm and at rest. Obtain immediate medical attention.

SIGMA EPOXY SEALER HARDENER

Version 4

Print Date April 2016

First Aid - Inhalation

Remove from exposure. Obtain medical attention. Keep warm and at rest. If there is difficulty in breathing, give oxygen. If breathing stops or shows signs of failing, give artificial respiration. Give nothing by mouth.

5. FIRE-FIGHTING MEASURES**Extinguishing Media**

Use water spray, alcohol-resistant foams; dry chemical or carbon dioxide. Keep containers and surroundings cool with water spray.

**Unsuitable Extinguishing Media
Special Hazards of Product**

Do not use water jet.
As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Exposure to decomposition products may be a hazard to health. Cool closed container exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or watercourses.

Protective Equipment for Fire-Fighting

Wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Wear appropriate protective clothing. Wear respiratory protection. Consider need for evacuation. Eliminate all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Try to prevent the material from entering drains or watercourses. Advise authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation. If the product enters drains or sewers, the local water company should be contacted immediately, in the case of contamination of streams, rivers or lakes, the National Rivers Authority.

Spillage

Sweep up into suitable containers for recovery or disposal. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with the waste regulations (see Section 13). Do not allow entering drains or watercourses. Avoid breathing vapours. Refer to protective measures listed in Sections 7 and 8. Exclude non-essential personnel. Ventilate the area.

7. HANDLING AND STORAGE**Handling**

Adequate ventilation should be provided if there is risk of vapour build-up. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Exclude sources of heat, sparks and open flame. Non-sparking tools should be used. Electrical equipment should be protected to the appropriate standard. Avoid skin and eye contact. Avoid inhalation of vapour or mist. For personal protection see Section 8. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits. In cases of doubt about the adequacy of local exhaust ventilation, air fed respiratory protective equipment should be used. All personnel in the work area should be so protected, whether working directly with the product or not.

SIGMA EPOXY SEALER HARDENER

Version 4

Print Date April 2016

Storage

Observe Label precautions. Store between 5 and 25°C in a dry, well-ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers, which are opened, should be properly sealed and kept upright to prevent leakage. Store in accordance with the conditions of the licence which is necessary under the Petroleum (Consolidation) Act. Further guidance is given in the HSE guidance note "Storage of Flammable Liquids in Containers". The storage of this product is subject to the requirements of the "Highly Flammable Liquids and Liquefied Gases Regulations". Upto 50 litres of such highly flammable liquids may be kept in a workroom provided they are kept in a fireproof cupboard or bin. Larger quantities must be kept in a separate storeroom conforming to the structural requirements of the Regulations. Further guidance is contained in the HSE guidance note "Storage of Flammable Liquids in Containers".

General

The Manual Handling Operations may apply to the containers of this product. Refer to the guide weight indicated on the container when carrying out assessments. The product may charge electrostatically. Use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be electrically conductive. Good Housekeeping standards and regular safe removal of waste materials will minimise the risk of spontaneous combustion and other fire hazards. The principles contained in the HSE's guidance note "Storage of Packaged Dangerous Substances" should be observed when storing this product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Occupational Exposure Standards**

- | | |
|-------------------------------|--|
| 1. 2-METHYLPROPAN-1-OL | UK EH40 : OES 50ppm (150 mg/m ³) 8h TWA.
UK EH40 : OES 75ppm (225 mg/m ³) 15min. STEL |
| 2. ETHYLBENZENE | UK EH40 : OES 100ppm (435 mg/m ³) 8h TWA.
UK EH40 : OES 125ppm (545 mg/m ³) 15min. STEL |
| 3. XYLENE, MIXTURE OF ISOMERS | UK EH40 : OES 100ppm (435 mg/m ³) 8h TWA.
UK EH40 : OES 150ppm (650 mg/m ³) 15min. STEL |

Can be absorbed through skin.

Engineering Control Measures

Provide adequate ventilation, where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are insufficient to maintain concentrations of particulate and/or solvent vapours below the relevant occupational exposure limits, suitable respiratory protective equipment should be worn. (See Personal Protection below). All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

Respiratory Protection

During spraying, wear suitable respiratory equipment. When applying by brush roller to large interior surfaces or in confined spaces, wear a suitable cartridge respirator or air fed respiratory protective equipment.

Hand Protection

When skin exposure may occur, advice should be sought from glove suppliers on appropriate types. Barrier creams may help to protect exposed areas of skin but are not substitutes for full physical protection. They should not be applied once exposure has occurred.

Eye Protection

Chemical resistant goggles must be worn.

Body Protection

If there is danger of splashing, wear: PVC or other impermeable suit.

Discard contaminated protective equipment.

Air Dilution Threshold limit value (TLV)

Refer to the data sheet for the Base.

Air Dilution to 10% lower explosive limit (LEL)

Refer to the data sheet for the Base.

SIGMA EPOXY SEALER HARDENER

Version 4

Print Date April 2016

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Viscous liquid
Odour	Characteristic
Explosion Limits (%)	Lower limit 1.
Solubility in Water (kg/m³)	Slightly soluble
Density (kg/m³)	0.91 at 23 °C (measured as kg/litre)
Auto-flammability (°C)	Above 400
Flash Point (CC) (°C)	Minimum 20°C
Volatile Organic Content, (VOC)	Refer to the data sheet for the Base.

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Materials to Avoid	Oxidising agents. Strong bases. Strong acids.
Hazardous Decomposition Products	Combustion will generate: oxides of carbon, oxides of nitrogen, acrid smoke and irritating fumes, smoke, possibly thick and choking, resulting in zero visibility.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	There is no data available for this product
Irritancy – Eyes	This material is corrosive to the eye.
Irritancy – Skin	This material is corrosive to the skin.
Sub-acute/Subchronic Toxicity	No relevant studies identified.
Chronic Toxicity/Carcinogenicity	No relevant studies identified.
Genotoxicity	No relevant studies identified.
Reproductive/Developmental Toxicity	No relevant studies identified.
Human Data	No relevant studies identified.
Additional Data	No relevant information known.
Ingestion	Abdominal pain, nausea, vomiting, and diarrhea. In extreme case it may cause serious damage to health.
Inhalation	Exposure to organic solvent vapours may result in adverse health effects such as irritation of the mucous membrane and the respiratory system and adverse effects on the central nervous system. Symptoms include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases loss of consciousness.

12. ECOLOGICAL INFORMATION

Mobility	No relevant studies identified.
Persistence/Degradability	No relevant studies identified.
Bio-accumulation	No relevant studies identified.
Ecotoxicity	The product may be harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

SIGMA EPOXY SEALER HARDENER

Version 4

Print Date April 2016

Product Disposal

Incineration is the recommended method of disposal. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under the Special Waste Regulations and the Environmental Protection Act. Using information provided in this data sheet, advice should be obtained from the Waste Regulation Authority whether the special waste regulations apply.

Container Disposal

Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care.

14. TRANSPORT INFORMATION

UN Number	2924
UN Proper Shipping Name	Flammable liquids, corrosive, N.O.S.
UN Class	3.2
UN Packaging Group	II
ADR/RID Substance Identification Number	2924
ADR/RID - Description	Corrosive or slightly corrosive liquids, flammable, having a flash-point below 21°C
ADR/RID - Class	3
ADR/RID - Item No.	26° (b)
ADR/RID - Hazard Identification Number	338
IMDG - Proper Shipping Name	Flammable liquid, corrosive, N.O.S.
IMDG - Packaging Group	II
IMDG - Code Page Number	3231
IMDG - Class	3.2
IMDG - Subsidiary Risk	Corrosive.
IMDG - Ems Number	3-02
IMDG - MFAG Table Number	760
Tremcard No. TEC®	30G32

15. REGULATORY INFORMATION**Labeling Information**

Corrosive



Highly flammable

**R-phrases(s)**

Highly flammable.
Causes burns.
May cause sensitisation by skin contact.

S-phrases(s)

Harmful by inhalation, in contact with skin and if swallowed.
Do not breathe vapour or spray.
In case of insufficient ventilation, wear suitable respiratory equipment.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
Avoid exposure – obtain special instructions before use.
Wear suitable protective clothing and gloves.
Before use, refer to the safety data sheet.

SIGMA EPOXY SEALER HARDENER

Version 4

Print Date April 2016

P-phrase(s)

Restricted to professional users. Empty containers should be disposed of in accordance with the requirements of the Special Waste Regulations and Environmental Protection Acts.

16. EXPLANATION OF R-PHASES MENTIONED IN SECTION 2

2-METHYLPROPAN-1-OL	R10	Flammable.
	R20	Harmful by inhalation.
NONYL PHENOL	R22	Harmful if swallowed.
	R34	Causes burns.
	R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
TRIETHYLENETETRAMINE	R21	Harmful by contact with skin.
	R34	Causes burns.
	R43	May cause sensitization by skin contact.
ETHYLBENZENE	R11	Highly flammable
	R20	Harmful by inhalation.
2,4,6-TRIS(DIMETHYLAMINOMETHYL)	R22	Harmful if swallowed.
	R36/38	Irritating to eyes and skin.
POLY AMINOAMIDE	R41	Risk of serious damage to eyes.
XYLENE, MIXTURE OF ISOMERS	R10	Flammable.
	R20/21	Harmful by inhalation and in contact with skin.
	R38	Irritating to skin

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation at the date of issue. The company reserves the right to modify data without notice. Any change in data will normally be followed by issue of a new safety data sheet. The user should check the date of issue and if more than 12 months have elapsed, then the data should only be used after checking with our nearest sales office to establish that they are still valid. . As the specific conditions of use of the product are outside the suppliers' control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. None of the information contained in this safety data sheet can be constructed as a guarantee with regard to the properties of the product described. No liability can be accepted on the basis of this safety data sheet.

After all component(s) stated on the relevant Technical Data Sheet have been mixed the safety precautions mentioned on each of the component(s) safety data sheets and labels should be used in assessing the safety precautions of the mixed product.

For further information see technical data sheet number: 0654