

MATERIAL SAFETY DATA SHEET

MSDS

Last changed: 05/10/2001

Internal no.: 06

Replaces date:

SAFEGUARD UNIVERSAL - COMP. A

1. PRODUCT AND COMPANY

- Approved for use
 Approved for laboratory use
 Approved by Jotun AS

TRADE NAME SAFEGUARD UNIVERSAL - COMP. A
APPLICATION Two-pack. modified epoxy based paint

ART-NO PM3367

Producer/Importer JOTUN-HENRY CLARK LTD.
Address Flixborough, Scunthorpe
Zipcode & City North Lincolnshire DN15 8RR
Telephone +44 1724 40 00 00
Fax +44 1724 40 01 00
Contactperson QA/Environm. dept., JOTUN A/S, NORWAY
Responsible QA/Environm. dept., JOTUN A/S, NORWAY
Emergency number Contact the National Poison Center

2. COMPOSITION OF PRODUCT

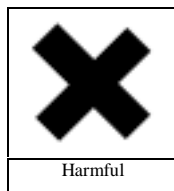
| No | Ingredients name | CAS-NO | Cons.(weight%) | Classification |
|----|--------------------------------|------------|----------------|--------------------|
| 1 | EPOXY RESIN, LOW MOL. (MW<700) | 25068-38-6 | 10-25 | XiN,36/38-43-51/53 |
| 2 | XYLENE, mixed isomers | 1330-20-7 | 10-25 | Xn,10-20/21-38 |
| 3 | BENZYL ALCOHOL | 100-51-6 | 1-2,5 | Xn,20/22 |
| 4 | ISOBUTANOL | 78-83-1 | 2,5-10 | Xn,10-37/38-41-67 |

Legend T+=Very toxic, T=Toxic, C=Corrosive, Xn=Harmful, Xi=Irritant, IK=No classification required, E=Explosive, O=Oxidising, F+=Extremely flammable, F=Very flammable, N=Dangerous for the environment, Muta=Mutagenic, Carc=Carcinogenic, Repr=Toxic for reproduction

INGREDIENT COMMENTS

Substances presenting a health hazard within the meaning of the current issue of the CHIP Regulations or assigned occupational exposure limits.

3. HAZARD IDENTIFICATION



FLAMMABLE. HARMFUL BY INHALATION AND IN CONTACT WITH SKIN. IRRITATING TO EYES AND SKIN. MAY CAUSE SENSITISATION BY SKIN CONTACT.

For potential danger for the environment, see section 12.

4. FIRST AID

GENERAL

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In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

INHALATION

Keep the patient warm in a quiet place with fresh air. If breathing has stopped, administer artificial respiration. If unconscious place in the recovery position. Seek medical advice.

SKIN CONTACT

Remove contaminated clothing. Wash skin thoroughly with soap and water or use an appropriate skin cleaner. Do NOT use solvents or thinners.

EYE CONTACT

Remove any contact lenses. Hold the eyelids apart. Irrigate copiously with clean, fresh water for at least 10 minutes. Seek medical advice if symptoms persist.

INGESTION

DO NOT INDUCE VOMITING. If accidentally swallowed obtain immediate medical attention. Keep at rest. Seek medical advice.

MEDICAL INFORMATION

Risk of chemical pneumonia by aspiration. Keep attention: danger of lung damage. General health examination. Professional evaluation of the work station. Regular medical control. Person developing a skin rash are to be directed to a dermatologist for examination.

5. FIRE FIGHTING MEASURES

PROPER FIREFIGHTING EQUIPMENT

Recommended: alcohol resistant foam, CO₂, powders, water spray. Not to be used: water jet.

FIRE AND EXPLOSION HAZARDS

Fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Decomposition products may be a hazard to health.

PERSONAL PROTECTION WHEN FIREFIGHTING

The personal protective equipment required is provided in section 8. Professional fire-fighters are required to use an air-fed system when dealing with major fires.

OTHER INFORMATION

Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

OTHER INFORMATION

Exclude sources of ignition and ventilate the area. Avoid breathing vapours. Refer to protective measures listed in sections 7 and 8. Place in container for disposal according to local regulations (see section 13). Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite and diatomaceous earth. Do not allow to enter drains or watercourses. Clean preferably with a detergent; avoid use of solvents. 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 Environmental Agency.

7. HANDLING AND STORAGE

HANDLING ADVICE

Avoid any skin contact with products containing epoxy; they may cause allergic reactions. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. The product should not be used in vicinity of open flames or other sources of ignition. Use explosion-proof electrical equipment. The product may charge electrostatically. Always use earth (ground) wire when transferring from one container to another. Personnel should wear anti-static clothing and footwear. Floors should be

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electrically conductive. Keep container tightly closed. Exclude sources of heat, sparks and open flame. Use non-sparking tools. Avoid skin and eye contact. Avoid inhalation of vapour and spray mist. Smoking, eating and drinking are forbidden in the work area. For personal protective equipment see Section 8. Always keep in containers made of the same material as the supply container. Never use pressure to empty the container, it is not a pressure vessel. Electrical equipment should be protected to appropriate standards. The Manual Handling Operations Regulations may apply to the handling of containers of this product. Smoking, eating and drinking are forbidden in the work area.

STORAGE

Store in accordance with the regulations for flammable materials. Observe the label precautions. Store in a dry, cold and well ventilated place away from sources of heat, ignition and direct sunlight. Store separately from oxidising agents and strongly alkaline and strongly acidic materials. No smoking. Containers which are opened should be properly resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

| Ingredients name | CAS-no | OEL value (long-term) | OEL value (short-term) | OEL |
|-----------------------|-----------|-----------------------------|-----------------------------|-----|
| XYLENE, mixed isomers | 1330-20-7 | 441,0 mg/m ³ ;Sk | 662,0 mg/m ³ ;Sk | |
| ISOBUTANOL | 78-83-1 | - | 154,0 mg/m ³ | |

EXPOSURE CONTROL

Persons with allergic reactions to epoxy should not work with epoxy containing products. Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Use respiratory protection when the concentration of solvents/compounds exceeds the Occupational Exposure Limit. Spray mist contains all substances of the product and must not be inhaled. OEL's are taken from the current version of EH40 (by Health & Safety Executive, UK).

RESP. PROTECTION

When use of roller or brush, then charcoal filter is sufficient. Use respiratory protective mask with charcoal and dust filter (A2/P2) when spraying this product.

EYE PROTECTION

Eye protection designed to protect against liquid splashes should be worn.

HAND PROTECTION

Use (e.g. 4H) gloves or PVA. Barrier creams may help to protect exposed areas of the skin but are not substitutes for full physical protection. Never apply barrier cream to contaminated skin.

SKIN PROTECTION

Wear anti-static clothing made of natural fibre or of heat resistant synthetic fibre. When spraying use suit covering the whole body.

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9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------------|------------------|-------------------------------|-------------|
| Form | Liquid. | | |
| Colour | Various. | | |
| Odour | Organic solvent. | | |
| Solubility | Organic solvent. | | |
| Melting point/range | - | Density | 1.43 |
| Expl. limit LEL-UEL, %-%: | 1.1 - 10.9 | Solubility in water | |
| Vapor pressure | | Saturation conc. | |
| Decomposition temp. | | Rel. density sat. air (air=1) | |
| pH Solution | | Boiling point/range | 108 - 205°C |
| Flash point | 35°C | pH concentrate | - |
| Molecular weight | | Viscosity | |
| Ignition temp | 425°C | Smelling limits lo-hi | |
| Rel. vapor density (air=1) | | Rel. evap. velocity | |
| Air reactive | | Water reactive | |
| | | | |
| | | | |

10. STABILITY AND REACTIVITY

STABILITY

Stable under recommended storage and handling conditions (see section 7).

MATERIALS TO AVOID

Keep away from oxidising agents, strongly alkaline and strongly acidic materials to prevent the exothermic reactions.

HAZARDOUS DECOMPOSITION PRODUCTS

In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced.

11. TOXICOLOGICAL INFORMATION

GENERAL

There are no toxicological data available on the product itself. Based on the properties of the epoxyconstituents and considering toxicological data on similar preparations, this preparation may be a skin sensitizer and an irritant. It contains low molecular epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the preparation and exposure to spray mist and vapour should be avoided.

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 renal and central nervous system. Symptoms and signs include headache; dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

SKIN CONTACT

Repeated or prolonged contact with the product may lead to removal of natural fats from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Repeated or prolonged contact with skin may cause sensitisation. Repeated skin contact may lead to irritation and sensitization, possible with cross-sensitisation to other epoxies. Allergic reactions may occur after short time exposure.

EYE CONTACT

Splashes in the eyes may cause irritation and reversible local damage.

INGESTION

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Absorbed by the gastric intestinal system. May cause liver and kidney damage. Accidental ingestion may cause vomiting and abdominal pains. Risk of chemical pneumonia.

CANCER

The product contains ethylbenzene. IARC has classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

12. ECOLOGICAL INFORMATION

BREAKDOWN

Epoxy resin, low mol. (MW<700): 12% (OECD 301B (mod.Sturm))

ECOTOXICITY

Epoxy resin, low mol. (MW<700):

LC50 (Rainbow trout) = 1,5 mg/l (OECD 203)

EC50 (Daphnia) = 3,6 mg/l (OECD 202)

IC50 (Resp. inhibition activated mud) > 100 mg/l (EEC(1998))

OTHER INFORMATION

The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters. The product contains epoxy compounds labelled "Dangerous for the environment".

13. DISPOSAL

Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Do not allow into drains or water courses. Waste must be disposed of at approved landfill/waste storage or treatment facility.

WASTEGROUP

08 00 00 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVE, SEALANTS AND PRINTING INKS. 08 01 02 Waste paints and varnish free of halogenated solvents.

14. TRANSPORT INFORMATION

| | | | |
|-----------------------------|-----------|-------------------------|--------|
| PROPER SHIPPING NAME | PAINT | | |
| Toll. reg. no. | | | |
| HAZCHEM | | | |
| ADR (Road) | | | |
| UN No. | 1263 | Dang. goods | |
| Class | 3, PG III | Label | 3 |
| Haz. id. no | 30 | Marginno. | |
| RID (Railway) | | | |
| UN No. | 1263 | Dang. goods | |
| Class | 3, PG III | Label | 3 |
| Haz.id.no | 30 | | |
| IMDG (Sea) | | | |
| UN No. | 1263 | Dang. goods | |
| Class | 3 | Label | 3 |
| Packaging group | III | EmS | 3 - 05 |
| MFAG | | Marine Pollutant | |
| Sub. risk | | Page | |
| IATA (Airplane) | | | |

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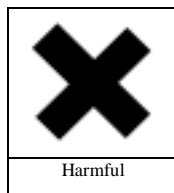
| | | |
|--------|-------------|---------------------|
| UN No. | 1263 | Dang. goods |
| Class | 3 | Sub. risk |
| Label | Flamm. liq. | Packaging group III |

GENERAL

Transport only in accordance with ADR for road, RID for rail, IMDG for sea transport and IATA for airtransport. ADR / RID: Not restricted, ref. chapter 2.2.3.1.5 (applicable to receptacles of < 450 litre capacity). IMDG: Not restricted, ref. chapter. 2.3.2.5, (applicable to receptacles of < 450 litre).

15. REGULATORY INFORMATION

Classification



COMPOSITION

EPOXY RESIN, LOW MOL. (MW<700) (10-25), XYLENE, mixed isomers (10-25)

R-PHRASES

R10 Flammable. R20/21 Harmful by inhalation and in contact with skin. R36/38 - Irritating to eyes and skin. R43 May cause sensitization by skin contact.

S-PHRASES

S23 Do not breathe vapour/spray. S36/37 Wear suitable protective clothing and gloves. S38 In case of insufficient ventilation, wear suitable respiratory equipment. P92 Contains epoxy constituents - See information supplied by the manufacturer This information is supplied in the present MSDS.

REFERENCES

The product is labelled for supply in accordance with the current issue of CHIP Regulations, and latest version of the approved supply list.

16. OTHER INFORMATION

PRINTED 22/10/2001

OUT:

VENDOR NOTES

Persons with epoxy allergic reactions, should not work with this kind of products. The information contained in this MSDS is based on the present state of knowledge and current national legislation. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information in this MSDS provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The Environmental Protection (Duty of Care) Regulations 1992 (SI 1992:2839). Further information and relevant advice can be found in: The Control of Substances Hazardous to Health Regulations 1988 (SI1988:1657). The Highly Flammable Liquids and liquefied Petroleum Gases Regulations 197 (SI 1972:917). The Manual Handling Operations Regulations 1992 (SI 1992:2793). Storage of Flammable Liquids in Containers, HS(G)51. Storage of Packaged Dangerous Substances, HS(G)71. The selection, use and maintenance of respiratory protective equipment: A practical guide HS(G)53.