

MATERIAL SAFETY DATA SHEET

Product Name: Efatherm Silicon Enamel 0331 - xxxxx

Page 1/5

Date of revision: 9. Jul. 2003 Replace: 7. Feb. 2003 Data Sheet no.: 0331

Version no.: 4 Date of printing: 20-03-2007

Efatherm Silicon Enamel 0331 - xxxxx

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name: Efatherm Silicon Enamel 0331 - xxxxx

PR-no:

Product Category: Enamel based on silicon resin.

Manufacturer:

Esbjerg Farve- & Lakfabrik A/S

Energivej 13
6700 Esbjerg

Telephone no.: 75 12 86 00

Fax no.: 75 45 33 68

Emergency telephone number :

The doctor may contact the
Danish Poisons Information
Center by calling: +45 35 31 60
60.

Uses:

Coating of metal.

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Hazardous compounds in accordance with EC Directives 1999/45/EEC; 2001/59/EEC (symbol and R-phrases are stated for the pure compound). Any volatile compounds are stated in item 8 in units of ppm.

Contains:

CAS number:	EINECS no.:	%:	Chemical Name:	Classification:	Note:
123-86-4	204-658-1	25 - 50%	n-butyl acetate		R10, R66, R67
108-65-6	203-603-9	10 - 25%	2-methoxy-1-methylethyl acetate	Xi	R10, R36
1330-20-7	215-535-7	2,5 - 10%	xylene	Xn, Xi	R10, R38, R20/21
71-36-3	200-751-6	< 2,5%	butan-1-ol	Xn, Xi	R10, R22, R41, R67, R37/38
100-41-4	202-849-4	< 2,5%	ethylbenzene	Xn, F	R11, R20

3. HAZARDS IDENTIFICATION:

Main Toxicological and Ecological hazards:

This product is flammable and a local irritant. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

4. FIRST AID MEASURES:

General information:

If in doubt, seek medical advice. Also see para. 1

Inhalation:

If patient feels unwell move to fresh air and keep under surveillance. If the victim is unconscious, ascertain whether the victim is breathing. If breathing has stopped, apply artificial respiration. If the victim is unconscious but breathing, place in the recovery position and keep warm with blankets. Obtain immediate medical attention or call an ambulance.

Contact with eyes:

If necessary, remove contact lenses. Immediately flush eyes with water for at least 10 minutes. Hold eyelids wide apart. Seek medical attention.

Contact with skin:

Remove contaminated clothes immediately, and wash skin thoroughly with soap and water. Skin cleaner may be used. Do not use organic solvents or thinners.

Ingestion:

Do NOT induce vomiting. If vomiting occurs, hold head low to prevent aspiration of liquid into lungs. Obtain medical help or ambulance.

Burns:

Flush with plenty of water until pain ceases. Whilst flushing with water, remove all loose clothing from area of burns. If medical treatment is necessary, continue rinsing until a doctor takes over the treatment.

5. FIRE-FIGHTING MEASURES:

Suitable extinguishing media:

Extinguish fire with foam, carbon dioxide, powder, or water vapor.

MATERIAL SAFETY DATA SHEET

Product Name: Efatherm Silicon Enamel 0331 - xxxxx

Page 2/5

Date of revision: 9. Jul. 2003 Replace: 7. Feb. 2003 Data Sheet no.: 0331

Version no.: 4 Date of printing: 20-03-2007

Extinguishing media that must not be used:

Do not use a water jet as it spreads the fire.

Special hazards:

Fire will produce a thick black smoke.

Special protective equipment:

Products of combustion are harmful and respiratory protection is required.

General information:

Cool closed containers with water.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions:

Avoid inhalation of vapours. See protection measures in item 7 and 8.

Environmental precautions:

If lakes, waterways or drains become contaminated, inform the environmental authorities.

Methods for cleaning up:

If spillage occurs, prevent material from entering drains or water courses. Recover spill with non-flammable, absorbent material, e.g. sand, dirt, or granular substances and place in a disposable container (see item 13). Clean preferably with cleansing agents. Avoid using solvents.

General information:

Remove all ignition sources and ensure sufficient ventilation.

7. HANDLING AND STORAGE:

Handling:

Vapors may form explosive mixtures with air. Prevent the formation of flammable or explosive mixtures. Minimize vapor concentrations. Do not use this material near naked flames or any other ignition source. Electrical installations must be protected according to regulations. The product may be charged electrostatically. Always use underground wire when transferring from one container to another. Personnel should wear antistatic shoes and clothing. Floors should be conductive. Do not use tools which may produce sparks. Avoid contact with eyes and skin. Avoid inhaling vapors and spray mists. Smoking and the consumption of food and drink are not permitted in work rooms. Personal protective equipment: Refer to section 8. Do not eat, drink, smoke or store tobacco, food or drink in work places or areas where there is a risk of contact with the product.

Storage:

Follow the Danish Emergency Management Agency guidelines for flammable liquids. The product must be kept away from children. Store in a tightly closed container and in accordance with the current regulations in a dry and well-ventilated place away from food. Keep away from ignition sources, oxidizing agents and strong acidic and basic substances. No smoking. No admittance to unauthorized persons. Opened containers must be carefully closed and stored upright to prevent any leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Engineering Control Measures:

All work must be planned with a view to limit the breathing of fumes and the exposure to the skin. Ensure adequate ventilation. If this is not possible, use respiratory protection according to the MAL code number.

Respiratory Protection:

Wear a breathing apparatus.

Hand Protection:

Use nitrile protection gloves. A 15-mil thickness glove provides a one-hour breakthrough-time. Follow the glove manufacturer's recommendations on use and replacement.

Eye protection:

Use suitable protective goggles or full face mask for protection against splashes.

Body Protection:

If possible, wear special work clothes. When spraying wear coveralls.

General information:

Prevent employee exposure to substances which may be hazardous by pregnancy or breast feeding.

Occupational Exposure Limits:

The specified exposure limit values are in accordance with the Danish National Working Environment Authority's list of recommended Exposure Limit Values.

MATERIAL SAFETY DATA SHEET

Product Name: Efatherm Silicon Enamel 0331 - xxxxx

Page 3/5

Date of revision: 9. Jul. 2003 Replace: 7. Feb. 2003 Data Sheet no.: 0331

Version no.: 4 Date of printing: 20-03-2007

CAS number:	Chemical Name:	Occupational Exposure Limits:	Note:
123-86-4	n-butyl acetate	150 ppm 710 mg/m ³	
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm 275 mg/m ³	H
1330-20-7	xylene	25 ppm 109 mg/m ³	H
71-36-3	butan-1-ol	50 ppm 150 mg/m ³	H, L
100-41-4	ethylbenzene	50 ppm 217 mg/m ³	K

9. PHYSICAL AND CHEMICAL PROPERTIES:

Form:	Liquid
Flash point:	> 23
Density:	1,07
Fire class:	II - 1
Explosion limits:	1 - 12
Weight % organic solvents:	53
VOC content (g/liter):	567

10. STABILITY AND REACTIVITY:

Conditions to avoid:

Stable at normal temperature. When exposed to high temperatures, toxic decomposition products may be formed.

Substances to avoid:

To prevent heat-generating reactions, keep the product away from oxidizing agents and strong acidic and basic substances.

11. TOXICOLOGICAL INFORMATION:

Inhalation:

Inhalation of vapors may cause symptoms of poisoning such as memory and concentration difficulties, abnormal tiredness, irritability and, in extreme cases, unconsciousness. Prolonged and repeated inhalation of high concentrations may cause damage to liver, kidneys, brain and nervous system.

Contact with skin:

Organic solvents have a degreasing effect on the skin. Repeated and/or prolonged contact with this product may cause inflammation and irritation. Organic solvents may be absorbed through skin.

Contact with eyes:

Eye irritation. Splashes in the eye may cause irritation.

Ingestion:

Chemical pneumonia may occur if organic solvents enter the lungs through vomiting. Accidental swallowing may cause vomiting and stomach pains.

General information:

Contains Ethylbenzene, which is included in the Danish National Working Environment Authority's list of substances and processes considered to be carcinogenic.

12. ECOLOGICAL INFORMATION:

Ecotoxicity:

Do not dispose of this product in drains, watercourses, or on the ground.

13. DISPOSAL CONSIDERATIONS:

Disposal considerations:

Waste receptacles must be labeled with black text on yellow background: "Contains a substance which is affected by the Danish work environmental legislation, on account of a risk of cancer". Product residues are classified as chemical waste.

Waste code:	08 01 11	waste paint and varnish containing organic solvents or other dangerous substances
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14. TRANSPORT INFORMATION:

MATERIAL SAFETY DATA SHEET

Product Name: Efatherm Silicon Enamel 0331 - xxxxx

Page 4/5

Date of revision: 9. Jul. 2003 Replace: 7. Feb. 2003 Data Sheet no.: 0331

Version no.: 4 Date of printing: 20-03-2007

ADR/RID:	UN no.	1263
	Class:	3
	Packaging group:	III
	Hazard Identification:	30
	Proper Shipping Name:	PAINT
IMDG:	UN no.	1263
	Class:	3
	Packaging group:	III
	EmS:	F-E, S-E
	Proper Shipping Name:	PAINT
IATA:	UN no.	1263
	Class:	3
	Packaging group:	III
	Proper Shipping Name:	PAINT


15. REGULATORY INFORMATION:

General information:

In accordance with the EC Directives 1999/45/EEC; 2001/59/EEC Statutory Order on classification, packaging, labelling, sale and storage of chemical substances and products the product is marked as follows:

Contains: n-butyl acetate
2-methoxy-1-methylethyl acetate

Labelling:

 Irritant	Xi	R10	Flammable.
		R36	Irritating to eyes.
		R66	Repeated exposure may cause skin dryness or cracking.
		R67	Vapours may cause drowsiness and dizziness.
		S23	Do not breathe vapour.
		S24	Avoid contact with skin.
		S51	Use only in well-ventilated areas.
		S36/37	Wear suitable protective clothing and gloves.

Uses and Restrictions:

Not to be handled by individuals under the age of 18 years, according to Danish Ministry of Employment's ministerial order No. 516 of 14th June 1996, concerning young people in employment.

Special Education:

Due to a ethylbenzene agent content, this product is affected by Danish National Working Environment Authority's instruction on cancer risk preventive measures when handling substances and products.

16. OTHER INFORMATION:

R phrases:

R10	Flammable.
R11	Highly flammable.
R20	Harmful by inhalation.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.
R20/21	Harmful by inhalation and in contact with skin.
R37/38	Irritating to respiratory system and skin.

General information:

The information in this Material Safety Data Sheet is based upon our knowledge and on European Union and national legislation. The user's working conditions are outside our control. It is the responsibility of the users to fulfil the requirements set by National Legislation. The information is no guarantee of the properties of the product.

Training advice:

The instructions in this Material Safety Data Sheet are given on the assumption that the product is used as stated in item 1. Restrictions of use and special training requirements must also be complied with. The information in this Material Safety Data Sheet should be regarded as a description of the safety issues concerning the product.

Final remarks:

The Material Safety Data Sheet may only be reproduced with the permission of the manufacturer.

MATERIAL SAFETY DATA SHEET

Product Name: Efatherm Silicon Enamel 0331 - xxxxx

Page 5/5

Date of revision: 9. Jul. 2003 Replace: 7. Feb. 2003 Data Sheet no.: 0331

Version no.: 4 Date of printing: 20-03-2007

References:

EC Directive 2001/58/EEC EC Directives 1999/45/EEC, 2001/59/EEC

Corrections:

Item 2: Revised in accordance with the list of dangerous substances dated 03 June 2002. Item 7: Updated in accordance with the Danish National Working Environment Authority Order nr. 140 (Order regarding cancer) Item 8: Specification of personal protection devices. Item 11: Updated in accordance with the Danish National Working Environment Authority Order nr. 140 (Order regarding cancer) Item 13: Updated in accordance with the Danish National Working Environment Authority Order nr. 140 (Order regarding cancer)

Drawn up by: GK

1. issue: 2000

Updated by: GK
