

SAFETY DATA SHEET

according to Regulation (EC) No. 830/2015

EPOFAN R-EC HARDENER FAST

Version 2.24

Revision Date 19.12.2018

Print Date 31.01.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : EPOFAN R-EC HARDENER FAST
Product code : L0000451

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Paints, varnishes and enamels
Chemical nature : Compound for pigmented epoxy

1.3 Details of the supplier of the safety data sheet

Company : Lechler SpA
Via Cecilio 17
22100 Como- CO-
Telephone : +39031586111
Telefax : +39031586206
E-mail address : safety@lechler.eu
Responsible/issuing person

1.4 Emergency telephone number

Tel. +39-031-586301 Fax +39-031-586299

This telephone number is available during office hours only.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
Skin corrosion, Category 1C	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H225 Highly flammable liquid and vapour. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation.
Precautionary statements	:	Prevention: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:

- 78-83-1 2-methylpropan-1-ol
- 90-72-2 2,4,6-tris(dimethylaminomethyl)phenol
- 112-24-3 3,6-diazaoctanethylenediamin

2.3 Other hazards

None known.

No hazards resulting from the material as supplied.

The information required is contained in this Material Safety Data Sheet.

SECTION 3: Composition/information on ingredients

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3.2 Mixtures

Chemical nature : Liquid solution

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Fatty acids, tall-oil, dimers, polymers with tall-oil fatty acids and triethylenetetramine	68915-18-4	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 30 - < 50
2-methylpropan-1-ol	78-83-1 201-148-0 01-2119484609-23	Flam. Liq. 3; H226 STOT SE 3; H335, H336 Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 17,5 - < 20
xylene	1330-20-7 215-535-7 01-2119488216-32	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Note C	>= 15 - < 17,5
2,4,6- tris(dimethylaminometh yl)phenol	90-72-2 202-013-9 01-2119560597-27	Acute Tox. 4; H302 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1B; H317	>= 5 - < 10
4-hydroxy-4- methylpentan-2-one	123-42-2 204-626-7 01-2119473975-21	Flam. Liq. 3; H226 Eye Irrit. 2; H319 STOT SE 3; H335	>= 1 - < 5
4-methylpentan-2-one	108-10-1 203-550-1 01-2119473980-30	Flam. Liq. 2; H225 Acute Tox. 4; H332 Eye Irrit. 2; H319 STOT SE 3; H335	>= 1 - < 5
3,6- diazaoctanethylenedia min	112-24-3 203-950-6 01-2119487919-13	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 0,25 - < 1
Substances with a workplace exposure limit :			
2-methoxy-1- methylethyl acetate	108-65-6 203-603-9 01-2119475791-29	Flam. Liq. 3; H226	>= 5 - < 10

For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : When symptoms persist or in all cases of doubt seek medical advice.
Never give anything by mouth to an unconscious person.
- If inhaled : Remove to fresh air.
Keep patient warm and at rest.
If breathing is irregular or stopped, administer artificial respiration.
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : Take off all contaminated clothing immediately.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Do NOT use solvents or thinners.
Put shower on working place
- In case of eye contact : Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.
Seek medical advice.
Put eye-washer on working place
Remove contact lenses.
- If swallowed : If accidentally swallowed obtain immediate medical attention.
Do NOT induce vomiting.
Keep at rest.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No information available.
- Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.
Seek medical advice.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Keep containers and surroundings cool with water spray.
- Unsuitable extinguishing : Do NOT use water jet.

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5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : 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 containers exposed to fire with water spray.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Solvent vapours are heavier than air and may spread along floors.
Ensure adequate ventilation.
Use personal protective equipment.
Evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Ventilate the area.

6.2 Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water courses.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Clean with detergents. Avoid solvents.
Contain and collect spillages with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises water (45 parts by volume)/ethanol or isopropanol (50 parts)/concentrated (d: 0.880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts)/water (95 parts).

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Pick up and transfer to properly labelled containers.
Clean contaminated surface thoroughly.
Dam up.
Soak up with inert absorbent material and dispose of as hazardous waste.

6.4 Reference to other sections

Refer to section 15 for specific national regulation.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).
Use only in area provided with appropriate exhaust ventilation.
Avoid contact with skin, eyes and clothing.
Smoking, eating and drinking should be prohibited in the application area.
Avoid inhalation of vapour or mist.
For personal protection see section 8.
Thoroughly mix before using
After using, store in a well-sealed container
- Advice on protection against fire and explosion : Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
When transferring from one container to another apply earthing measures and use conductive hose material.
No sparking tools should be used.
The product should only be used in areas from which all naked lights and other sources of ignition have been excluded.
No smoking.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Observe label precautions.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Solvent vapours are heavier than air and may spread along floors.
Vapours may form explosive mixtures with air.
Electrical installations / working materials must comply with the technological safety standards.
Keep away from sources of ignition - No smoking.
Store between 5° an 35°C in a dry, well ventilated place away from source of heat, ignition and direct sunlight.
Store in accordance with the particular national regulations.
- Advice on common storage : Keep away from oxidizing agents and strongly acid or alkaline

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materials.

German storage class : 3 Flammable liquids

7.3 Specific end use(s)

: This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
2-methylpropan-1-ol	78-83-1	TWA	50 ppm	2007-01-01	ACGIH
xylenes	1330-20-7	TWA	50 ppm 221 mg/m ³	2000-06-16	2000/39/EC
Further information	:	skin: Identifies the possibility of significant uptake through the skinIndicative			
		STEL	100 ppm 442 mg/m ³	2000-06-16	2000/39/EC
Further information	:	skin: Identifies the possibility of significant uptake through the skinIndicative			
2-methoxy-1-methylethyl acetate	108-65-6	STEL	100 ppm 550 mg/m ³	2000-06-16	2000/39/EC
Further information	:	skin: Identifies the possibility of significant uptake through the skinIndicative			
		TWA	50 ppm 275 mg/m ³	2000-06-16	2000/39/EC
Further information	:	skin: Identifies the possibility of significant uptake through the skinIndicative			
4-hydroxy-4-methylpentan-2-one (Technical)	123-42-2	TWA	50 ppm		ACGIH
4-methylpentan-2-one	108-10-1	TWA	20 ppm 83 mg/m ³	2000-06-16	2000/39/EC
Further information	:	Indicative			
		STEL	50 ppm 208 mg/m ³	2000-06-16	2000/39/EC
Further information	:	Indicative			

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2,4,6-tris(dimethylaminomethyl)phenol	: End Use: Industrial use Exposure routes: Inhalation Potential health effects: Local effects Value: 0,31 mg/m ³
4-methylpentan-2-one	: End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 14,7 mg/m ³
	End Use: Consumers Exposure routes: Inhalation Potential health effects: Acute systemic effects Value: 115,2 mg/m ³
	End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 4,2 mg/kg bw/day
	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 83 mg/m ³
	End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 208 mg/m ²
	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 83 mg/m ³
	End Use: Workers Exposure routes: Inhalation Potential health effects: Acute systemic effects Value: 208 mg/m ³
	End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 11,8 mg/kg bw/day
PNEC 2,4,6-tris(dimethylaminomethyl)phenol	: Fresh water Value: 0,84 mg/l

8.2 Exposure controls

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Personal protective equipment

- Respiratory protection : Apply technical measures to comply with the occupational exposure limits.
This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.
If the occupational exposure limits cannot be met, in exceptional cases suitable respiratory equipment should be worn only for a short period of time.
Respirator with combination filter for vapour/particulate (EN 141)
- Hand protection : Solvent-resistant gloves (butyl-rubber) recommended.
For prolonged or repeated contact use protective gloves.
Protective gloves complying with EN 374.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves.
Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred.
Skin should be washed after contact.
Wash your hands and put on barrier creams
- Eye protection : Chemical resistant goggles must be worn.
- Skin and body protection : Skin should be washed after contact.
Personnel should wear protective clothing.
Flame retardant antistatic protective clothing.
Workers should wear antistatic footwear.

Environmental exposure controls

- General advice : Try to prevent the material from entering drains or water courses.
If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : liquid
- Odour : solvent-like
- Flash point : 0 - < 21 °C

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Ignition temperature	: not determined
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Auto-ignition temperature	: Not applicable
pH	: not determined
Freezing point	: Not applicable
Boiling point	: not determined
Vapour pressure	: 1,000 hPa at 50 °C
Density	: 0,9248 g/cm ³
Water solubility	: not determined
Partition coefficient: n- octanol/water	: No data available
Solubility in other solvents	: not determined
Flow time	: 55 s 4 mm Method: ASTM D 1200 '82
Relative vapour density	: Not applicable
Evaporation rate	: not determined

9.2 Other information

Solids by weight	: 50,01 %
Volatile organic compounds (VOC) content	: 49,98 %

SECTION 10: Stability and reactivity

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

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10.4 Conditions to avoid

Conditions to avoid : Our products were manufactured in compliance with safety standards to avoid decomposition and degrading under the defined conditions.
Taking the product type into account, it is advisable to leave the product in its original packaging thus avoiding transferring it.

10.5 Incompatible materials

Materials to avoid : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

Thermal decomposition : Not applicable

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg, Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l, 4 h, vapour, Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg, Calculation method

Skin corrosion/irritation : Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin., The product may be absorbed through the skin.

Further information : The concentration of each substance should be borne in mind in assessing the toxicological effects deriving from the preparation.

Components:

xylene :

Acute dermal toxicity : Acute toxicity estimate: 1.100 mg/kg, Converted acute toxicity point estimate

2,4,6-tris(dimethylaminomethyl)phenol :

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg, Converted acute

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toxicity point estimate

4-hydroxy-4-methylpentan-2-one :

Acute oral toxicity : LD50: 3.002 mg/kg, Rat

Acute inhalation toxicity : LC0: >= 7,6 mg/l, Rat

Acute dermal toxicity : LD50: > 1.875 mg/kg, Rat

3,6-diazaoctanethylenediamin :

Acute dermal toxicity : Acute toxicity estimate: 1.100 mg/kg, Converted acute toxicity point estimate

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish :
Remarks:
No data is available on the product itself.

Toxicity to fish
4-hydroxy-4-methylpentan-2-one : LC50: > 100 mg/l
Exposure time: 96 h
Species: *Oryzias latipes* (Orange-red killifish)

12.2 Persistence and degradability

Biodegradability : No data available

12.3 Bioaccumulative potential

Bioaccumulation : No data available

12.4 Mobility in soil

Mobility : No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Additional ecological information : The product contains dangerous substances for the environment (see chapter no 3).

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The concentration of each substance should be borne in mind in assessing the toxicological effects deriving from the preparation.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : The product should not be allowed to enter drains, water courses or the soil.
Disposal together with normal waste is not allowed. Special disposal required according to local regulations.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
The following Waste Codes are only suggestions:150110*

SECTION 14: Transport information

14.1 UN number

- ADR : UN 3469
- IMDG : UN 3469
- IATA : UN 3469

14.2 Proper shipping name

- ADR PAINT RELATED MATERIAL, FLAMMABLE,
CORROSIVE
- IMDG PAINT RELATED MATERIAL,
FLAMMABLE,CORROSIVE
- IATA PAINT RELATED MATERIAL, FLAMMABLE,
CORROSIVE

14.3 Transport hazard class(es)

- ADR : 3 (8)
- IMDG : 3 (8)

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IATA : 3 (8)

14.4 Packing group

ADR

Packing group : II
Classification Code : FC
Hazard Identification Number : 338
Labels : 3 (8)

IMDG

Packing group : II
Labels : 3 (8)
EmS Code : F-E,S-C

IATA

Packing group : II
Labels : 3 (8)

14.5 Environmental hazards

ADR

Environmentally hazardous : no

IMDG

Marine pollutant : no

IATA

Environmentally hazardous : no

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of : Not applicable

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Substances of Very High
Concern for Authorisation
(Article 59).

REACH - List of substances
subject to authorisation
(Annex XIV) : Not applicable

REACH - Restrictions on the
manufacture, placing on the
market and use of certain
dangerous substances,
preparations and articles
(Annex XVII) : Banned and/or restricted

78-83-1	2-methylpropan-1-ol
108-65-6	2-methoxy-1-methylethyl acetate
70657-70-4	2-methoxypropyl acetate
1589-47-5	2-methoxypropanol

MAL-Code-Number : 4-3 (1993)
2.233-m3 air/10 g

German storage class : 3: Flammable liquids
(TRGS 510)

Risk classification according
to VbF : Exempt
see user defined free text

Water contaminating class : highly water endangering
(Germany) VVWS A4

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

15.2 Chemical safety assessment

No data is available on the product itself.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.

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H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.