according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22

Revision Date 22.01.2019

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

1.1 Product identifier

Trade name	:	MACROFAN ULTRA HS FAST HARDENER
Product code	:	L0MH0410

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

Use of the	: Paints, varnishes and enamels
Substance/Mixture	
Chemical nature	: Poliysocyanic compound - professional use

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 3 Respiratory sensitisation, Category 1	H226: Flammable liquid and vapour. H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1 Specific target organ toxicity - single exposure, Category 3	H317: May cause an allergic skin reaction. H336: May cause drowsiness or dizziness.
Specific target organ toxicity - single exposure, Category 3	H335: May cause respiratory irritation.
Label elements	

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22	Revision Date	22.01.2019	Print Date 05.02.2019
Hazard pictograms			
Signal word	Danger	•	
Hazard statements	H226 H317 H334	Flammable liquid and v May cause an allergic s May cause allergy or a breathing difficulties if i	skin reaction. sthma symptoms or nhaled.
	H335 H336	May cause respiratory May cause drowsiness	
	EUH066Repeate cracking.	ed exposure may cause sk	kin dryness or
Precautionary statements	Prevention: P210	Keep away from heat, l open flames and other smoking.	
	P261 P284 Response:	Avoid breathing vapour Wear respiratory protect	
	P342 + P311	If experiencing respirat POISON CENTER/doc	
	P362 + P364	Take off contaminated before reuse.	clothing and wash it
	P370 + P378	In case of fire: Use dry or alcohol-resistant foa	

Hazardous components which must be listed on the label:

- 28182-81-2 Polysocyanate HDI Derivative
- 53880-05-0 Isophorondiisocyanate homopolymer
- 822-06-0 hexamethylene-di-isocyanate
- 4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

Additional Labelling:

Restricted to professional users. EUH204 Contains isocyanates. May produce an allergic reaction. EUH066 Repeated exposure may cause skin dryness or cracking.

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

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22

Revision Date 22.01.2019

Print Date 05.02.2019

3.2 Mixtures

Chemical nature

: Liquid solution

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Polysocyanate HDI Derivative	28182-81-2 500-060-2 01-2119485796-17	Acute Tox. 4; H332 Skin Sens. 1; H317 STOT SE 3; H335 Resp. Sens. 1; H334	>= 30 - < 50
Isophorondiisocyanate homopolymer	53880-05-0 500-125-5 01-2119488734-24	Resp. Sens. 1; H334 Skin Sens. 1B; H317 STOT SE 3; H335	>= 17,5 - < 20
Hydrocarbons, C9, aromatics	64742-95-6 918-668-5 01-2119455851-35-0006	Flam. Liq. 3; H226 STOT SE 3; H335, H336 Aquatic Chronic 2; H411 Asp. Tox. 1; H304 EUH066 Note P	>= 0,1 - < 1
ethylene bis(3- mercaptopropionate)	22504-50-3 245-044-3	Acute Tox. 4; H302 Aquatic Chronic 2; H411	>= 0,1 - < 1
3-isocyanatomethyl- 3,5,5- trimethylcyclohexyl isocyanate	4098-71-9 223-861-6 01-2119490408-31	Acute Tox. 3; H331 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 Aquatic Chronic 2; H411 Note 2	>= 0,1 - < 0,5
hexamethylene-di- isocyanate	822-06-0 212-485-8 01-2119457571-37	Acute Tox. 3; H331 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 Note 2	>= 0,1 - < 0,5
Substances with a work			
n-butyl acetate	123-86-4 204-658-1 01-2119485493-29	Flam. Liq. 3; H226 STOT SE 3; H336	>= 25 - < 30

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

SECTION 4: First aid measures

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22	Revision Date 22.01.2019	Print Date 05.02.2019
4.1 Description of first aid mea	asures	
General advice	: When symptoms persist or in all case advice. Never give anything by mouth to an u	
If inhaled	 Remove to fresh air. Keep patient warm and at rest. If breathing is irregular or stopped, ac respiration. If unconscious, place in recovery pos advice. 	
In case of skin contact	 Take off all contaminated clothing imp Wash skin thoroughly with soap and skin cleanser. Do NOT use solvents or thinners. Put shower on working place 	
In case of eye contact	 Irrigate copiously with clean, fresh ware minutes, holding the eyelids apart. Seek medical advice. Put eye-washer on working place Remove contact lenses. 	ater for at least 10
If swallowed	: If accidentally swallowed obtain imme Do NOT induce vomiting. Keep at rest.	ediate medical attention.
4.2 Most important symptoms an	nd effects, both acute and delayed	
Symptoms	: No information available.	
Risks	: No information available.	

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 media	: Do NOT use water jet.

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22

Revision Date 22.01.2019

Print Date 05.02.2019

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	: Wear self-contained breathing apparatus for firefighting if

for firefighters 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).
		Pick up and transfer to properly labelled containers.

Clean contaminated surface thoroughly.

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22

Revision Date 22.01.2019

Print Date 05.02.2019

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. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. 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. Store between 5° an 35°C in a dry, well ventilated place away from source of heat, ignition and direct sunlight. Electrical installations / working materials must comply with the technological safety standards. Store in accordance with the particular national regulations.
Advice on common storage	: Keep away from oxidizing agents, strongly acid or alkaline materials, as well as of amines, alcohols and water.

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22	Revision Date 22.01.2019	Print Date 05.02.2019
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
n-butyl acetate	123-86-4	TWA	50 ppm	2016-03-01	ACGIH
		STEL	150 ppm	2016-03-01	ACGIH
3- isocyanatomet hyl-3,5,5- trimethylcyclo hexyl isocyanate	4098-71-9	TWA	0,005 ppm		ACGIH
Further information	: Resp. Sens	s.: Respirator	ry sensitisation		
hexamethylen e diisocyanate	822-06-0	TWA	0,005 ppm	2007-01-01	ACGIH

DNEL Polysocyanate HDI Derivative : End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 0,5 mg/m3 End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term local effects Value: 1 mg/m3 hexamethylene-di-isocyanate : End Use: Workers Exposure routes: Inhalation Potential health effects: Acute systemic effects Value: 0,07 mg/m3 End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 0,07 mg/m3 End Use: Workers

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22	Revision Date 22.01.2019	Print Date 05.02.2019
	Exposure routes: Inhalation Potential health effects: Long-term systemic eff Value: 0,035 mg/m3	ècts
	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 0,035 mg/m3	
n-butyl acetate	: End Use: Professional use Exposure routes: Skin contact Potential health effects: Local effects Exposure time: 8 h Value: 7 ppm	
	End Use: Professional use Exposure routes: Inhalation Potential health effects: Local effects Value: 48 mg/m3	
PNEC Polysocyanate HDI Derivative	: Marine water	
	Value: 0,0127 mg/l Fresh water Value: 0,127 mg/l	
	Marine sediment Value: 26670 mg/kg	
	Fresh water sediment Value: 266700 mg/kg	
	Intermittent use/release Value: 1,27 mg/l	
	Sewage treatment plant Value: 38,3 mg/l	
	Soil Value: 53182 mg/kg	
hexamethylene-di-isocyanate	: Marine water Value: 0,00774 mg/l	
	Fresh water Value: 0,0774 mg/l	
	Marine sediment Value: 0,001334 mg/kg	
	Fresh water sediment 8 / 16	

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22	Revision Date 22.01.2019	Print Date 05.02.2019
	Value: 0,01334 mg/kg	
	Intermittent use/release Value: 0,774 mg/l	
	Sewage treatment plant Value: 8,42 mg/l	
	Soil Value: 0,0026 mg/kg	
n-butyl acetate	: Water Value: 0,18 mg/l	
	Soil Value: 0,093 mg/kg	
8.2 Exposure controls		
Engineering measures		

Use only in spray paint booth or enclosure.

Personal protective equipmen	t
Respiratory protection	 In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. Wear a positive-pressure supplied-air respirator. Apply technical measures to comply with the occupational exposure limits.
Hand protection	 For prolonged or repeated contact use protective gloves. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to 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.

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.	22
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Revision Date 22.01.2019

Print Date 05.02.2019

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	: > 23 - 55 °C
Ignition temperature	: not determined
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Auto-ignition temperature	: Not applicable
рН	: not determined
Freezing point	: Not applicable
Boiling point	: not determined
Vapour pressure	: 1 hPa at 50 °C
Density	: 1,0235 g/cm3
Water solubility	: not determined
Partition coefficient: n- octanol/water	: No data available
Solubility in other solvents	: not determined
Flow time	: 18 s 4 mm Method: ASTM D 1200 '82
Relative vapour density	: Not applicable
Evaporation rate	: not determined

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22

Revision Date 22.01.2019

Print Date 05.02.2019

9.2 Other information

Solids by weight:69,3 %Volatile organic compounds:30,69 %(VOC) content::

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	:	Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. Avoid moisture. Amines and alcohols cause exothermic reactions. Mixture reacts slowly with water resulting in evolution of CO2. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.
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 pro	od	ucts
	Hazardous decomposition products	:	Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.
	Thermal decomposition	:	Not applicable

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product

Acute inhalation toxicity	: Acute toxicity estimate: > 20 mg/l, 4 h, vapour, Calculation	
	11 / 17	

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22		Revision Date 22.01.2019	Print Date 05.02.2019
		method	
Acute toxicity (other routes of administration)	:	Isocyanates may cause acute irritation and/ the respiratory system leading to tightness of wheeziness and an asthmatic condition., Per isocyanates, and particularly those suffering other respiratory conditions, should not work	of the chest, ersons allergic to g from asthma or
Skin corrosion/irritation	:	Repeated or prolonged contact with the mix removal of natural fat from the skin resulting the skin., The product may be absorbed thr	g in desiccation of
Further information	:	The concentration of each substance should in assessing the toxicological effects derivin preparation.	
<u>Components:</u>			

Acute oral toxicity	: LD50: 746 mg/kg, Rat
Acute dermal toxicity	: LD50: 599 mg/kg, Rabbit
Skin corrosion/irritation	: Rabbit, Result: Corrosive, OECD Test Guideline 404, 4 h
Serious eye damage/eye irritation	: Rabbit, Result: Corrosive, OECD Test Guideline 405, 30 s

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish

Remarks: No data is available on the product itself.

Toxicity to fish	
hexamethylene-di-isocyanate	: LC50: 22 mg/l Exposure time: 96 h

:

Species: Fish

12.2 Persistence and degradability

Biodegradability	: No data available
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according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22	Revision Date 22.01.2019	Print Date 05.02.2019
12.3 Bioaccumulative potential		
Bioaccumulation	: No data available	
12.4 Mobility in soil		
Mobility	: No data available	
12.5 Results of PBT and vPvB as	ssessment	
	ntains no components considered to be eithe rsistent and very bioaccumulative (vPvB) at	
12.6 Other adverse effects		
Additional ecological information	: The product contains dangerous sub environment (see chapter no 3). The concentration of each substance in assessing the toxicological effects preparation.	e should be borne in mind

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. Must be incinerated.
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 1263
IMDG	: UN 1263
ΙΑΤΑ	: UN 1263

14.2 Proper shipping name

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22	Revision Date 22.01.2019	Print Date 05.02.2019
ADR	PAINT RELATED MATERIAL	
IMDG	PAINT RELATED MATERIAL	
ΙΑΤΑ	Paint related material	
14.3 Transport hazard class(es)		
ADR	: 3	
IMDG	: 3	
ΙΑΤΑ	: 3	
14.4 Packing group		
ADR		
Packing group	: 111	
Classification Code	: F1	
Hazard Identification Number	: 30	
Labels	: 3	
IMDG		
Packing group	: 111	
Labels	: 3	
EmS Code	: F-E,S-E	
IATA		
Packing group	: 111	
Labels	: 3	
14.5 Environmental hazards		
ADR		
Environmentally hazardous	: no	
IMDG		
Marine pollutant	: no	
ΙΑΤΑ		
Environmentally hazardous	: no	

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22

Revision Date 22.01.2019

Print Date 05.02.2019

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 Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
REACH - Restrictions on the		Banned and/or

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

64742-95-6	Hydrocarbons, C9, aromatics
MAL-Code-Number	: 5-5 (1993) 1.418.061-m3 air/10 g
German storage class (TRGS 510)	: 3: Flammable liquids
Risk classification according to VbF	: Exempt see user defined free text
Water contaminating class (Germany)	: water endangering VWVWS 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.

according to Regulation (EC) No. 830/2015

MACROFAN ULTRA HS FAST HARDENER

Version 1.22

Revision Date 22.01.2019

SECTION 16: Other information

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

EUH066	Repeated exposure may cause skin dryness or cracking.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic 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.