according to 1907/2006/EC, Article 31

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

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

- · 1.1 Product identifier
- · Trade name: Relocryl Acryl-Härter Multi normal
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against *No further relevant information available.*
- · Application of the substance / the mixture Hardening agent/ Curing agent
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

RELO

Postfach 1132 D-84049 Essenbach Tel.: +49 (0)8703/922 -0

Fax: +49 (0)8703/922 -100 Email: relo@b2bmail.eu

· 1.4 Emergency telephone number: +49(0)700 24112112 (MIP)

2 Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Acute Tox. 4 H332 Harmful if inhaled. Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction. STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R20/21-48/20: Harmful by inhalation and in contact with skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

Xi; Sensitising

May cause sensitisation by skin contact. R43:

(Contd. on page 2)

according to 1907/2006/EC, Article 31

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

(Contd. of page 1)

R10-52/53: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms







GHS02

GHS07

GHS0

· Signal word Danger

· Hazard-determining components of labelling:

xvlene

Hexamethylene diisocyanate, oligomers

Ethylbenzene

Solvent naphtha (petroleum), light arom.

· Hazard statements

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways. H412 Harmful to aquatic life with long lasting effects.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

· Additional information:

EUH204 Contains isocyanates. May produce an allergic reaction.

Restricted to professional users.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

- · **PBT**: Not applicable.
- · vPvB: Not applicable.

GB

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

(Contd. of page 2)

3 Composition/information on ingredients

- · 3.2 Chemical characterisation: Mixtures
- · Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	xylene Xn R20/21-48/20-65; Xi R36/37/38 R10 Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	25-50%
CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119485796-17 01-2119488934-20	Hexamethylene diisocyanate, oligomers Xn R20; Xi R37; Xi R43 ♦ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35	Ethylbenzene Xn R20-48/20-65; F R11 Flam. Liq. 2, H225; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	3-<10%
CAS: 64742-95-6 EINECS: 265-199-0	Solvent naphtha (petroleum), light arom. Xn R65; Xi R37; N R51/53 R10-66-67 → Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; N STOT SE 3, H335-H336	3-<10%
CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate R10 Flam. Liq. 3, H226	3-<10%
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	n-butyl acetate R10-66-67 (*) Flam. Liq. 3, H226; (†) STOT SE 3, H336	3- <u><</u> 5%
CAS: 4083-64-1 EINECS: 223-810-8	4-isocyanatosulphonyltoluene Xi R36/37/38; Xn R42 R14 ♣ Resp. Sens. 1, H334; ♠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.1-<0.3

[·] Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- · 4.1 Description of first aid measures
- · General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: Seek immediate medical advice.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

(Contd. on page 4)

according to 1907/2006/EC, Article 31

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

(Contd. of page 3)

• 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Nitrogen oxides (NOx)

Carbon monoxide (CO)

Hydrogen cyanide (HCN)

- · 5.3 Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Contain and collect spillages with non-combustible absorbent materials (e.g. sand, earth, diatomaceous earth) and place in a suitable container.

Decontaminate immediately with suitable mixture (flammable):

- as such usable (inflammatory!):

water 45 Vol.% ethanol or isopropanol 50 Vol.% ammonia solution (Density= 0.88) 5 Vol.%

- alternatively (non-flammable):

sodium carbonate 5 Vol.% water 95 Vol.%

Add the same decontaminant to any residues and allow to stand for several days in an non-sealed container until no further reaction occurs. Once this stage is reached, close the container and dispose of in accordance with the waste regulations (see Section 13).

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Persons with a history of asthma, allergies or chronic or recurrent respiratory diseases should only be employed in processes in which this product is used under appropriate medical supervision.

(Contd. on page 5)

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

(Contd. of page 4)

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility:

Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

Store away from foodstuffs.

· Further information about storage conditions:

Keep container tightly sealed.

Store separately from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohol and water.

- · Storage class: 3
- · 7.3 Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

	dients with limit values that require monitoring at the workplace:
1330-	20-7 xylene
WEL	Short-term value: 441 mg/m³, 100 ppm
	Long-term value: 220 mg/m³, 50 ppm
	Sk; BMGV
28182	2-81-2 Hexamethylene diisocyanate, oligomers
EBW	Short-term value: 0.5 mg/m³
	exposition evaluation valu TRGS 430 (EBW)
100-4	1-4 Ethylbenzene
WEL	Short-term value: 552 mg/m³, 125 ppm
	Long-term value: 441 mg/m³, 100 ppm
	Sk
108-6	5-6 2-methoxy-1-methylethyl acetate
WEL	Short-term value: 548 mg/m³, 100 ppm
	Long-term value: 274 mg/m³, 50 ppm
	Sk
123-8	6-4 n-butyl acetate
WEL	Short-term value: 966 mg/m³, 200 ppm
	Long-term value: 724 mg/m³, 150 ppm
Ingre	dients with biological limit values:
	20-7 xylene
BMG	V 650 mmol/mol creatinine
	Medium: urine
	Sampling time: post shift
	Parameter: methyl hippuric acid

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:

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.

(Contd. on page 6)

according to 1907/2006/EC, Article 31

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

(Contd. of page 5)

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· Respiratory protection:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves (EN 374)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Fluid

Colour: According to product specification

Odour: CharacteristicOdour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Undetermined. **Boiling point/Boiling range:** 124 °C

• Flash point: 30 °C (DIN 53213)

(Contd. on page 7)

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

	(Contd. of page	
· Flammability (solid, gaseous):	Not applicable.	
· Ignition temperature:	315 °C (DIN 51794)	
Decomposition temperature:	Not determined.	
Self-igniting:	Product is not selfigniting.	
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.	
Explosion limits:		
Lower:	1.1 Vol %	
Upper:	7.0 Vol %	
Vapour pressure at 20 °C:	9.5 hPa	
Density at 20 °C:	0.964 g/cm³ (DIN 53217)	
Relative density	Not determined.	
· Vapour density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
water:	Not miscible or difficult to mix.	
Partition coefficient (n-octanol/we	ater): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic at 20 °C:	13 s (DIN 53211/4)	
· Solvent content:		
VOC (EC)	63.88 %	
Solids content (weight-%):	36.1 %	
9.2 Other information	No further relevant information available.	

10 Stability and reactivity

- · 10.1 Reactivity
- · 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products:

Possible in traces.

Nitrogen oxides

Hydrogen chloride (HCl)

Hydrogen cyanide (prussic acid)

Carbon monoxide

Nitrogen oxides (NOx)

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

(Contd. of page 7)

11 Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity:

· LD/LC5	· LD/LC50 values relevant for classification:			
1330-20	1330-20-7 xylene			
Oral	LD50 8700 mg/kg (rat)			
	100-41-4 Ethylbenzene			
Oral	LD50	3500 mg/kg (rat)		
Dermal	LD50	15500 mg/kg (rabbit)		
	64742-95-6 Solvent naphtha (petroleum), light arom.			
Oral	LD50	>2000 mg/kg (rat)		
Dermal	LD50	>2000 mg/kg (rab)		

- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- · Sensitisation: Sensitisation possible through skin contact.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful Irritant

12 Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Remark: Harmful to fish
- · Additional ecological information:
- · General notes:

Water hazard class 2 (German Regulation): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

- · 12.5 Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · **vPvB**: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

13 Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

08 01 11* waste paint and varnish containing organic solvents or other dangerous substances

(Contd. on page 9)

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

(Contd. of page 8)

- · Uncleaned packaging:
- · Recommendation: Disposal must be made according to official regulations.

14.1 UN-Number ADR, IMDG, IATA	UN1263
· 14.2 UN proper shipping name · ADR	1263 PAINT RELATED MATERIAL, special provision 640E
· IMDG, IATA	PAINT RELATED MATERIAL
· 14.3 Transport hazard class(es)	
· ADR	

· Class · Label	3 (F1) Flammable liquids. 3
· IMDG, IATA	
· Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler): · EMS Number:	30 F-E,S-E
· 14.7 Transport in bulk according to Ann MARPOL73/78 and the IBC Code	
· Transport/Additional information:	
· ADR · Transport category · Tunnel restriction code	3 D/E
· IMDG · Limited quantities (LQ)	5L
· UN "Model Regulation":	UN1263, PAINT RELATED MATERIAL, special provisio 640E, 3, III

Printing date 10.08.2015 Version number 45 Revision: 30.03.2015

Trade name: Relocryl Acryl-Härter Multi normal

(Contd. of page 9)

15 Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · National regulations:

Class	Share in %	
Ι	0.1-<0.3	
NK	50-100	

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H225	Highly flar	nmable liquid	and vapour.
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H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

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.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

R10 Flammable.

R11 Highly flammable.

R14 Reacts violently with water.

R20 Harmful by inhalation.

R20/21 Harmful by inhalation and in contact with skin.

R36/37/38 Irritating to eyes, respiratory system and skin.

R37 Irritating to respiratory system.

R42 May cause sensitisation by inhalation.

R43 May cause sensitisation by skin contact.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

(Contd. on page 11)

Version number 45 Revision: 30.03.2015 Printing date 10.08.2015

Trade name: Relocryl Acryl-Härter Multi normal

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

* * Data compared to the previous version altered.

(Contd. of page 10)