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SAFETY DATA SHEET
according to 1907/2006/EC, Article 31

Revision date: 03.11.2025

1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/ UNDERTAKING

Product details
Trade name: UNI Hardener standard
Article number: 12503,12504,12507
Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
Sector of Use
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Product category PC9a Coatings and paints, thinners, paint removers
Intended use: Car refinishing Product/ Hardening agent/ Curing agent
Manufacturer/Supplier:
Chamäleon GmbH
Rudolf-Diesel-Straße, 8a, 69115 Heidelberg
Germany
Further information obtainable from: Product Safety Department
Information in case of emergency: + 49 70024112112 (CH)

2 – HAZARDS IDENTIFICATION

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

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
Label elements
Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms

GHS02 GHS07

Signal word Warning

Hazard-determining components of labelling:

Hexamethylene diisocyanate, oligomers
n-Butyl acetate
2-Methoxy-1-methylethyl acetate
Reaction mass of ethylbenzene and xylene

Hazard statements

H226 Flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.

Additional information:

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

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

3– COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

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CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	n-Butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	25-50%
CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119485796-17	Hexamethylene diisocyanate, oligomers Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335, EUH204	25-50%
CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-Methoxy-1-methylethyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	10-25%
EC number: 905-588-0 Reg.nr.: 01-2119488216-32	Reaction mass of ethylbenzene and xylene Flam. Liq. 3, H226; 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	2.5-<10%

Additional information: For the wording of the listed hazard phrases refer to section 16.

4– FIRST - AID MEASURE

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
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 rinse with water.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If symptoms persist consult doctor.
Most important symptoms and effects, both acute and delayed No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5– FIRE - FIGHTING MEASURE

Extinguishing media
Suitable extinguishing agents: Alcohol resistant foam
For safety reasons unsuitable extinguishing agents: Water with full jet
Special hazards arising from the substance or mixture:
In case of fire, the following can be released:

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Nitrogen oxides (NOx)
Carbon monoxide (CO)
Hydrogen cyanide (HCN)
Advice for firefighters
Protective equipment: Mouth respiratory protective device.

6– ACCIDENTAL RELEASE MEASURE

Personal precautions, protective equipment and emergency procedures:
Wear protective equipment. Keep unprotected persons away.
Environmental precautions: Do not allow to enter sewers/ surface or ground water.
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 section 13.
Ensure adequate ventilation.
Contain and collect spillages with non-combustible absorbent materials (e.g. sand, earth, diatomaceous earth) and place in a suitable container.
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).
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

Precautions for safe handling:
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
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.

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Further information about storage conditions: Keep container tightly sealed.
Storage class: 3
Specific end use(s): No further relevant information available.

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Ingredients with limit values that require monitoring at the workplace:		
123-86-4 n-Butyl acetate		
WEL	Short-term value: 966 mg/m³, 200 ppm Long-term value: 724 mg/m³, 150 ppm	
28182-81-2 Hexamethylene diisocyanate, oligomers		
EBW	Short-term value: 0.5 mg/m³ exposition evaluation valu TRGS 430 (EBW)	
108-65-6 2-Methoxy-1-methylethyl acetate		
WEL	Short-term value: 548 mg/m³, 100 ppm Long-term value: 274 mg/m³, 50 ppm Sk	
DNELs		
123-86-4 n-Butyl acetate		
Dermal	DNEL	6 mg/kg (general population) 11 mg/kg (Arbeiter)
Inhalative	DNEL	300 mg/m³ (general population) 600 mg/m³ (Arbeiter)
Reaction mass of ethylbenzene and xylene		
Dermal	DNEL	212 mg/kg (Arbeiter)
Inhalative	DNEL	221 mg/m³ (Arbeiter)

Additional information: The lists valid during the making were used as basis.
Exposure controls
Appropriate engineering controls: No further data; see section 7.
Individual protection measures, such as personal protective equipment
All personal protective equipment, including respiratory protecitve equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.
General protective and hygienic measures:
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Respiratory protection:
Filter A/P2 (EN 141, EN 143)
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:

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Protective gloves (EN 374)
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves

Butyl rubber, BR
Recommended thickness of the material: ≥ 0.7 mm
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.

Breakthrough time of glove material

For the mixture of chemicals the penetration time has to be at least 60 minutes (Permeation according to EN 374 Part 3: Level 3).

Eye/face protection

Tightly sealed goggles

9 – PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties	
General Information	
Physical state	Liquid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling range:	124-128 °C (123-86-4 n-Butyl acetate)
Flammability:	Flammable.
Lower and upper explosion limit	
Lower:	1.2 Vol % (123-86-4 n-Butyl acetate)
Upper:	10.8 Vol % (108-65-6 2-Methoxy-1-methylethyl acetate)
Flash point:	27 °C (DIN 53213)
Auto-ignition temperature:	315 °C (DIN 51794, 108-65-6 2-Methoxy-1-methylethyl acetate)
Decomposition temperature:	Not determined.
pH:	Not determined.
Viscosity:	
Kinematic viscosity at 20 °C:	10-15 s (DIN 53211/4)
Dynamic:	Not determined
Solubility	

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water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value):	Not determined.
Vapour pressure at 20 °C:	10.7 hPa (123-86-4 n-Butyl acetate)
Vapour pressure at 50 °C:	55 hPa
Density and/or relative density	
Density at 20 °C:	0.976 g/cm³ (DIN 53217)
Relative density	Not determined.
Vapour density	Not determined.
Other information	
Appearance:	
Form:	Fluid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Solvent content:	
VOC (EC)	63.95 %
Solids content (weight-%):	36.0 %
Change in condition	
Evaporation rate:	Not determined.
Information with regard to physical hazard classes	
Explosives:	Void
Flammable gases:	Void
Aerosols:	Void
Oxidising gases:	Void
Gases under pressure:	Void
Flammable liquids:	Flammable liquid and vapour.
Flammable solids:	Void
Self-reactive substances and mixtures:	Void
Pyrophoric liquids:	Void
Pyrophoric solids:	Void
Self-heating substances and mixtures:	Void
Substances and mixtures, which emit flammable gases in contact with water:	Void
Oxidising liquids:	Void
Oxidising solids:	Void
Organic peroxides:	Void
Corrosive to metals	Void
Desensitised explosives	Void

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10– STABILITY AND REACTIVITY

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products:
Possible in traces.
Nitrogen oxides
Hydrogen chloride (HCl)
Hydrogen cyanide (prussic acid)
Carbon monoxide
Nitrogen oxides (NOx)

11– TOXILOGICAL INFORMATION

Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:		
123-86-4 n-Butyl acetate		
Oral Dermal	LD50 LD50	13,100 mg/kg (rat) >5,000 mg/kg (rabbit)
108-65-6 2-Methoxy-1-methylethyl acetate		
Oral	LD50	8,532 mg/kg (rat)
Reaction mass of ethylbenzene and xylene		
Oral Dermal Inhalative	LD50 LD50 LC50/4 h	3,500 mg/kg (rat) 15,400 mg/kg (rat) 17.6 mg/l (rat)

Respiratory or skin sensitisation May cause an allergic skin reaction.
STOT-single exposure May cause respiratory irritation. May cause drowsiness or dizziness.
Information on other hazards
Endocrine disrupting properties None of the ingredients is listed.

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12 – ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Endocrine disrupting properties:
The product does not contain substances with endocrine disrupting properties.
Other adverse effects
Additional ecological information:
General notes:
Water hazard class 1 (German Regulation) : slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13– DISPOSAL CONSIDERATION

Waste treatment methods
Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

14– TRANSPORT INFORMATION

UN number or ID number
ADR, IMDG, IATA UN1263

UN proper shipping name
ADR UN1263 PAINT RELATED MATERIAL
IMDG, IATA PAINT RELATED MATERIAL

Transport hazard class(es)
ADR

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Class	3 (F1) Flammable liquids..
Label	3

IMDG, IATA

	3 Flammable liquids.
Label	3

Packing group

ADR, IMDG, IATA	III

Environmental hazards:

Marine pollutant:	No
Special precautions for user	Warning: Flammable liquids.
Hazard identification number (Kemler code):	30
EMS Number:	F-E,S-E
Stowage Category	A

Maritime transport in bulk according to IMO

Instruments:	Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)	5L
Transport category	3
Tunnel restriction code	D/E

IMDG

Limited quantities (LQ)	5L

UN "Model Regulation":	UN 1263 PAINT RELATED MATERIAL, 3, III

15 – REGULATORY INFORMATION

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

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Poisons Act
Regulated explosives precursors
None of the ingredients is listed.
Regulated poisons
None of the ingredients is listed.
Reportable explosives precursors
None of the ingredients is listed.
Reportable poisons
None of the ingredients is listed.
Directive 2012/18/EU
Named dangerous substances - ANNEX I None of the ingredients is listed.
Seveso category P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes) for the application of lower-tier requirements 5000 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 50000 t
National regulations:
Additional classification according to Decree on Hazardous Materials, Annex II:

Class	Share in %
NK	50-100

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

16-OTHER INFORMATION

Relevant phrases
H226 Flammable liquid and vapour.
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.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.
EUH204 Contains isocyanates. May produce an allergic reaction.
Classification according to Regulation (EC) No 1272/2008
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the

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International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international 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)
DNEL: Derived No-Effect Level (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

The information contained in these sheets is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects and should not be construed as any guarantee of technical performance or suitability for particular applications.

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