

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

Revision date: 05.04.2024

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

**Product details**

**Trade name:** HS Hardener standard

**Article number:** 12224, 12227

**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 700241 12112 (CH)

**2 – HAZARDS IDENTIFICATION**

**Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**



flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



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

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

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:		
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%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	Xylene 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	2.5-<5%

#### 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:

Nitrogen oxides (NO<sub>x</sub>)

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.

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 a 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.

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.

### 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.

#### 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

**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/m <sup>3</sup> , 200 ppm Long-term value: 724 mg/m <sup>3</sup> , 150 ppm
28182-81-2 Hexamethylene diisocyanate, oligomers	
EBW	Short-term value: 0.5 mg/m <sup>3</sup> exposition evaluation valu TRGS 430 (EBW)
108-65-6 2-Methoxy-1-methylethyl acetate	
WEL	Short-term value: 548 mg/m <sup>3</sup> , 100 ppm Long-term value: 274 mg/m <sup>3</sup> , 50 ppm Sk
1330-20-7 Xylene	
WEL	Short-term value: 441 mg/m <sup>3</sup> , 100 ppm Long-term value: 220 mg/m <sup>3</sup> , 50 ppm

	Sk; BMGV
<b>Ingredients with biological limit values:</b>	
1330-20-7 Xylene	
BMGV	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.

#### 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 protective 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:

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:  $\geq 0.7$  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

Colour:

Odour:

Odour threshold:

Melting point/freezing point:

Boiling point or initial boiling point and boiling range:

Flammability:

Lower and upper explosion limit

Lower:

Upper:

Flash point:

Auto-ignition temperature:

Decomposition temperature:

pH:

Viscosity:

Kinematic viscosity at 20 °C:

Dynamic:

Solubility

water:

Partition coefficient n-octanol/water (log value):

Vapour pressure at 20 °C:

Vapour pressure at 50 °C:

Density and/or relative density

Density at 20 °C:

Relative density

Vapour density

Other information

Appearance:

Form:

Important information on protection of health and environment, and on safety.

Ignition temperature:

Explosive properties:

Solvent content:

VOC (EC)

Solids content (weight-%):

Fluid

According to product specification

Characteristic

Not determined.

Undetermined.

124-128 °C (123-86-4 n-Butyl acetate)

Flammable.

1.2 Vol % (123-86-4 n-Butyl acetate)

10.8 Vol % (108-65-6 2-Methoxy-1-methylethyl acetate)

27 °C (DIN 53213)

315 °C (DIN 51794, 108-65-6 2-Methoxy-1-methylethyl acetate)

Not determined.

Not determined.

10-15 s (DIN 53211/4)

Not determined

Not miscible or difficult to mix.

Not determined.

10.7 hPa (123-86-4 n-Butyl acetate)

55 hPa

0.976 g/cm<sup>3</sup> (DIN 53217)

Not determined.

Not determined.

Fluid

Product is not selfigniting.

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

63.95 %

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

## 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 (NO<sub>x</sub>)



## 11 – TOXICOLOGICAL 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.

**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.

## 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



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.

**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.

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.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- 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

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)

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

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.