

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

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

1.1 Product identifier

- Trade name: **Hardener for Mirror Gloss 2K-HS Clearcoat 2:1**
- Article number: 72000, 72002
- UFI: 4HF0-Q0E5-200Y-MAY1

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: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg
- Tel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

Further information obtainable from:

Laboratory

1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

- Flam. Liq. 3 H226 Flammable liquid and vapour.
- Acute Tox. 4 H332 Harmful if inhaled.
- Skin Sens. 1 H317 May cause an allergic skin reaction.
- STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms

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



GHS02 GHS07

Signal word

Warning

Hazard-determining components of labelling:

Hexamethylene-1,6-diisocyanate homopolymer
n-butyl acetate
hexamethylene-di-isocyanate

Hazard statements

- H226 Flammable liquid and vapour.
- H332 Harmful if inhaled.
- H317 May cause an allergic skin reaction.
- H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read carefully and follow all instructions.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P261 Avoid breathing vapours.

(Contd. on page 2)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 1)

P280 Wear protective gloves / eye protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information: EUH066 Repeated exposure may cause skin dryness or cracking.
 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards· Results of PBT and vPvB assessment· PBT: Not applicable.· vPvB: Not applicable.· Determination of endocrine-disrupting properties

For information on endocrine disrupting properties see section 11.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**· Description: Mixture of substances listed below with nonhazardous additions.· Dangerous components:

CAS: 28182-81-2 EC number: 931-274-8 Reg.nr.: 01-2119485796-17-0000	Hexamethylene-1,6-diisocyanate homopolymer Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335 EUH204	50-100%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	25-50%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226 STOT SE 3, H336	12.5-25%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 Reg.nr.: 01-2119457571-37-0001	hexamethylene-di-isocyanate Acute Tox. 3, H311; Acute Tox. 1, H330 Resp. Sens. 1, H334 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 EUH204 Specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	<1%

· Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures**· General information: Take affected persons out into the fresh air.

Position and transport stably in side position.

· 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: If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 3)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 2)

- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**
 - Breathing difficulty
 - Headache
 - Dizziness
 - Nausea
 - Allergic reactions
 - Danger of impaired breathing.
- **Hazards**
- **4.3 Indication of any immediate medical attention and special treatment needed**
 - If swallowed, gastric irrigation with added, activated carbon.
 - If swallowed or in case of vomiting, danger of entering the lungs.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
 - Formation of toxic gases is possible during heating or in case of fire.
 - In case of fire, the following can be released:
 - Carbon monoxide (CO)
 - Nitrogen oxides (NO_x)
 - Hydrogen cyanide (HCN)
 - Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- Protective equipment:
 - Wear self-contained respiratory protective device.
 - Do not inhale explosion gases or combustion gases.
 - Wear fully protective suit.
- Additional information
 - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 - Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - Ensure adequate ventilation
 - Keep away from ignition sources.
 - Use respiratory protective device against the effects of fumes/dust/aerosol.
 - Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
 - Do not allow product to reach sewage system or any water course.
 - 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).
 - Ensure adequate ventilation.

(Contd. on page 4)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 3)

- **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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Keep receptacles tightly sealed.
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Use only in well ventilated areas.
Ensure good ventilation/exhaustion at the workplace.

- **Information about fire - and explosion protection:**

Highly volatile, flammable constituents are released during processing.
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:**

Store away from oxidising agents.
Store away from foodstuffs.

- **Further information about storage conditions:**

Store receptacle in a well ventilated area.
Keep container tightly sealed.

- **Storage class:**

3

- **7.3 Specific end use(s)**

No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:

28182-81-2 Hexamethylene-1,6-diisocyanate homopolymer

TLV Short-term value: 1 mg/m³

123-86-4 n-butyl acetate

IOELV Short-term value: 723 mg/m³, 150 ppm
Long-term value: 241 mg/m³, 50 ppm

108-65-6 2-methoxy-1-methylethyl acetate

IOELV Short-term value: 550 mg/m³, 100 ppm
Long-term value: 275 mg/m³, 50 ppm
Skin

822-06-0 hexamethylene-di-isocyanate

TLV Short-term value: 0.15 mg/m³, 0.02 ppm
Long-term value: 0.075 mg/m³, 0.01 ppm

- **DNELs**

28182-81-2 Hexamethylene-1,6-diisocyanate homopolymer

Inhalative	DNEL (Kurzzeit-akut)	1 mg/m ³ Air (ARB)
	DNEL (Langzeit-wiederholt)	0.5 mg/m ³ Air (ARB)

(Contd. on page 5)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 4)

123-86-4 n-butyl acetate

Oral	DNEL (Kurzzeit-akut)	2 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	2 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	11 mg/kg bw/day (ARB)
	DNEL (Langzeit-wiederholt)	6 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	11 mg/kg bw/day (ARB)
	DNEL (Langzeit-wiederholt)	6 mg/kg bw/day (BEV)
	DNEL (Kurzzeit-akut)	600 mg/m ³ Air (ARB)
	DNEL (Langzeit-wiederholt)	300 mg/m ³ Air (BEV)
		48-300 mg/m ³ Air (ARB)
		12-35.7 mg/m ³ Air (BEV)

108-65-6 2-methoxy-1-methylethyl acetate

Oral	DNEL (Kurzzeit-akut)	500 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	1.67 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	153.5 mg/kg bw/day (ARB)
		54.8 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	550 mg/m ³ Air (ARB)
		33 mg/m ³ Air (BEV)
	DNEL (Langzeit-wiederholt)	275 mg/m ³ Air (ARB)
		33 mg/m ³ Air (BEV)

822-06-0 hexamethylene-di-isocyanate

Inhalative	DNEL (Kurzzeit-akut)	0.07 mg/m ³ Air (ARB)
	DNEL (Langzeit-wiederholt)	0.035 mg/m ³ Air (ARB)

· PNECs

28182-81-2 Hexamethylene-1,6-diisocyanate homopolymer

PNEC (wässrig)	38.28 mg/l (KA)
	0.0127 mg/l (MW)
	0.127 mg/l (SW)
	1.27 mg/l (WAS)
PNEC (fest)	53,200 mg/kg Trockengew (BO)
	26,670 mg/kg Trockengew (MWS)
	266,700 mg/kg Trockengew (SWS)

123-86-4 n-butyl acetate

PNEC (wässrig)	35.6 mg/l (KA)
	0.018 mg/l (MW)
	0.18 mg/l (SW)
	0.36 mg/l (WAS)
PNEC (fest)	0.0903 mg/kg Trockengew (BO)
	0.0981 mg/kg Trockengew (MWS)
	0.981 mg/kg Trockengew (SWS)

108-65-6 2-methoxy-1-methylethyl acetate

PNEC (wässrig)	100 mg/l (KA)
	0.0635 mg/l (MW)
	0.635 mg/l (SW)
	6.35 mg/l (WAS)

(Contd. on page 6)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 5)

PNEC (fest)	0.29 mg/kg Trockengew (BO) 0.329 mg/kg Trockengew (MWS) 3.29 mg/kg Trockengew (SWS)
822-06-0 hexamethylene-di-isocyanate	
PNEC (wässrig)	8.42 mg/l (KA) >0.00774 mg/l (MW) >0.0774 mg/l (SW) 0.774 mg/l (WAS)
PNEC (fest)	0.0026 mg/kg Trockengew (BO) 0.001334 mg/kg Trockengew (MWS) 0.01334 mg/kg Trockengew (SWS)

· Additional information: The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· Appropriate engineering controls No further data; see section 7.

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.

Use skin protection cream for skin protection.

Clean skin thoroughly immediately after handling the product.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

· Respiratory protection:

Short term filter device:

Filter A/P2

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.

· Hand protection

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.



Protective gloves

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type.

The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

STOKO EMULSION (<http://www.stoko.com>)

(Contd. on page 7)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 6)

Skin protection recommendation for skin cleaning after product handling:

FRAPANTOL (<http://www.stoko.com>)

Skin protection agent recommendation for skin aftercare:

STOKO VITAN (<http://www.stoko.com>)

· Material of gloves

Butyl rubber, BR

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

Value for the permeation: Level \leq 5, 480 min

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

· For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR

Butoject (KCL, Art_No. 897, 898)

· As protection from splashes gloves made of the following materials are suitable:

Butyl rubber, BR

Butoject (KCL, Art_No. 897, 898)

Nitrile rubber, NBR

Camatril (KCL, 730, 731, 732, 733)

· Not suitable are gloves made of the following materials:

Leather gloves

Strong material gloves

· Eye/face protection



Tightly sealed goggles

· Body protection:

Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Colour:

According to product specification

· Odour:

Characteristic

· Melting point/freezing point:

Undetermined.

· Boiling point or initial boiling point and boiling range

124-128 °C

· Lower and upper explosion limit

· Lower:

1.5 Vol %

· Upper:

10.8 Vol %

· Flash point:

26 °C

· Auto-ignition temperature:

315 °C

· pH

Not determined.

· Viscosity:

· Kinematic viscosity

Not determined.

· Dynamic:

Not determined.

· Solubility

· water:

Partly soluble.

· Vapour pressure at 20 °C:

10.7 hPa

· Vapour pressure at 50 °C:

55 hPa

(Contd. on page 8)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 7)

· <u>Density and/or relative density</u>	
· <u>Density at 20 °C:</u>	1.07 g/cm ³
· 9.2 Other information	
· <u>Appearance:</u>	
· <u>Form:</u>	Fluid
· <u>Important information on protection of health and environment, and on safety.</u>	
· <u>Ignition temperature:</u>	Product is not selfigniting.
· <u>Explosive properties:</u>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <u>Solvent content:</u>	
· <u>Organic solvents:</u>	43.0 %
· <u>Information with regard to physical hazard classes</u>	
· <u>Explosives</u>	Void
· <u>Flammable gases</u>	Void
· <u>Aerosols</u>	Void
· <u>Oxidising gases</u>	Void
· <u>Gases under pressure</u>	Void
· <u>Flammable liquids</u>	Flammable liquid and vapour.
· <u>Flammable solids</u>	Void
· <u>Self-reactive substances and mixtures</u>	Void
· <u>Pyrophoric liquids</u>	Void
· <u>Pyrophoric solids</u>	Void
· <u>Self-heating substances and mixtures</u>	Void
· <u>Substances and mixtures, which emit flammable gases in contact with water</u>	Void
· <u>Oxidising liquids</u>	Void
· <u>Oxidising solids</u>	Void
· <u>Organic peroxides</u>	Void
· <u>Corrosive to metals</u>	Void
· <u>Desensitised explosives</u>	Void

SECTION 10: Stability and reactivity

· 10.1 Reactivity	No further relevant information available.
· 10.2 Chemical stability	
· <u>Thermal decomposition / conditions to be avoided:</u>	No decomposition if used and stored according to specifications.
· 10.3 Possibility of hazardous reactions	Reacts with acids, alkalis and oxidising agents. Violent reactions with -NH _x , -OH and -SH- groups.
· 10.4 Conditions to avoid	No further relevant information available.
· 10.5 Incompatible materials:	No further relevant information available.
· 10.6 Hazardous decomposition products:	Hydrogen cyanide (prussic acid) Isocyanate Carbon monoxide and carbon dioxide Possible in traces.

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008	
· <u>Acute toxicity</u>	Harmful if inhaled.

(Contd. on page 9)

EU

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 8)

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Inhalative LC50/4 h 0.69-0.95 mg/l (rat)

28182-81-2 Hexamethylene-1,6-diisocyanate homopolymer

Oral	LD50	>2,000 mg/kg (rat) (OECD 423)
	NOAEL-Werte	3 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit) (OECD 402)
		>2,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4h	400 mg/m ³ (rat)
	LC50/4 h	0.39-0.543 mg/l (rat) (OECD TG 403)

123-86-4 n-butyl acetate

Oral	LD50	10,760 mg/kg (rat) (OECD 423)
Dermal	LD50	>14,112 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	23.4 mg/l (rat) (OECD 403)
	LC50	390 mg/m ³ (rat)
	LC50/48h	64 mg/l (Brachydanio rerio)

108-65-6 2-methoxy-1-methylethyl acetate

Oral	LD50	8,500 mg/kg (rat) (OECD 401)
	NOAEL-Werte	1,500 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD 402)
		>2,000 mg/kg (rat)
Inhalative	LC50/4h	>10,000 mg/m ³ (rat)
	LC50	>23.8 mg/l (rat)
	LC50/4 h	35.7 mg/l (rat)
	LC50/48h	100 mg/l (Desmodesmus subspicatus)

822-06-0 hexamethylene-di-isocyanate

Oral	LD50	746 mg/kg (rat) (OECD 401)
Dermal	LD50	593 mg/kg (rabbit)
		<7,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	0.124 mg/l (rat) (OECD 403)
	NOAEL	0.41 mg/m ³ (rat)

- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation May cause an allergic skin reaction.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure May cause respiratory irritation. May cause drowsiness or dizziness.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

11.2 Information on other hazards

· Endocrine disrupting properties

128-37-0 Butylated hydroxytoluene

List II

(Contd. on page 10)

EU

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 9)

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:****28182-81-2 Hexamethylene-1,6-diisocyanate homopolymer**

EC50	3,828 mg/l (BES) (OECD 209)
LC 0/96h	>82.8 mg/l (Brachydanio rerio) (OECD 203)
EC50/48h	127 mg/l (daphnia magna) (RL 67/548/EWG, Anhang V, C.3.)
ErC50/72h	>1,000 mg/l (Desmodesmus subspicatus) (DIN 38412)
EC0	>100 mg/l (daphnia magna) (OECD 202)
EL50/48h	127 mg/l (daphnia magna)
LL50/96h	8.9 mg/l (Brachydanio rerio)
EC10	370 mg/l (Desmodesmus subspicatus)
EC50/72h	199 mg/l (Scenedesmus subspicatus) (OECD 201)
LC50/96h	>100 mg/l (Danio rerio.) (RL 67/548/EWG, Anhang V, C.1.)

123-86-4 n-butyl acetate

EC50/24h	72.8 mg/l (daphnia magna) (DIN 38412)
EC50/96h	320 mg/l (algae)
LC50/24h	205 mg/l (daphnia magna)
IC50/72h	648 mg/l (Desmodesmus subspicatus)
EC10/18h	959 mg/l (pseudomonas putida)
EC50/48h	44 mg/l (daphnia magna) (OECD 202)
EC50/16h	959 mg/l (pseudomonas putida)
NOEC	200 mg/kg (Desmodesmus subspicatus)
NOEC/21d	23 mg/l (daphnia magna) (OECD 211)
EC50/72h	647.7 mg/l (Desmodesmus subspicatus) (Zellvermehrungshemmtest)
	397 mg/l (Scenedesmus subspicatus)
LC50/96h	62 mg/l (Danio rerio.)
	81 mg/l (piscis)
	100 mg/l (Iepomis macrochirus)
	62 mg/l (Leuciscus idus) (DIN 38412)
	18 mg/l (Pimephales promelas) (OECD 203)

108-65-6 2-methoxy-1-methylethyl acetate

EC50	>100 mg/l (daphnia magna)
LC50	63.5 mg/l (Oryzias latipes)
EC50/48h	>500 mg/l (daphnia magna) (RL 67/548/EWG, Anhang V, C.2.)
ErC50/72h	>1,000 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
EC20/0.5h	>1,000 mg/l (BES) (OECD 209)
NOEC	47.5 mg/l (Oryzias latipes)
NOEC/21d	≥100 mg/l (daphnia magna)
EC10	>1,000 mg/l (BES)
EC50/72h	>1,000 mg/l (Pseudokirchneriella subcapitata)
LC50/96h	100-180 mg/l (Oncorhynchus mykiss)
	>1,000 mg/l (Oryzias latipes)
	161 mg/l (Pimephales promelas)

(Contd. on page 11)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 10)

822-06-0 hexamethylene-di-isocyanate

EC50	842 mg/l (bacteria) (OECD 209)
LC 0/96h	82.8 mg/l (Brachydanio rerio) (OECD TG 203)
ErC50/72h	>77.4 mg/l (Desmodesmus subspicatus) (EU C.3)
EC0	>89.1 mg/l (daphnia magna) (OECD TG 202)
NOEC	11.7 mg/kg (Desmodesmus subspicatus) (EU C.3)
EC50/72h	>77.4 mg/l (Scenedesmus subspicatus) (OECD TG 201)
LC50/96h	22 mg/l (Brachydanio rerio)

- **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.

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Endocrine disrupting properties**

For information on endocrine disrupting properties see section 11.

- **12.7 Other adverse effects**

- **Remark:** Harmful to fish

- **Additional ecological information:**

- **General notes:** Do not allow product to reach ground water, water course or sewage system.
Harmful to aquatic organisms
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

SECTION 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 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
15 00 00	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01 00	packaging (including separately collected municipal packaging waste)
15 01 10*	packaging containing residues of or contaminated by hazardous substances

- **Uncleaned packaging:**

- **Recommendation:** Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

- **Recommended cleansing agents:** Alcohol

SECTION 14: Transport information

- **14.1 UN number or ID number**

- **ADR, IMDG, IATA** UN1263

- **14.2 UN proper shipping name**

- **ADR** 1263 PAINT

(Contd. on page 12)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31



Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 11)

· IMDG, IATA	PAINT
· 14.3 Transport hazard class(es)	
· ADR	
	
· Class	3 (F1) Flammable liquids.
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	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.
· Hazard identification number (Kemler code):	30
· EMS Number:	F-E, S-E
· Stowage Category	A
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1263 PAINT, 3, III

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Directive 2012/18/EU

Named dangerous substances -
ANNEX I

None of the ingredients is listed.

(Contd. on page 13)

EU

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 12)

· Seveso category P5c FLAMMABLE LIQUIDS· Qualifying quantity (tonnes) for the application of lower-tier requirements

5,000 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements

50,000 t

· REGULATION (EC) No 1907/2006 ANNEX XVII

Conditions of restriction: 3, 74

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:· Information about limitation of use: Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.· Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· VOC EU 459.6 g/l· DECOPAINT: subject to EU-regulations 2004/42/EG (ANNEX II)

EU limit for this product (product-category (Kat. B/d)): 420g/l (2010). The ready-to-use product (comprises of clear lacquer and hardener) contains max. 420 g/l VOC.

· **15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

SECTION 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.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· Department issuing SDS: Laboratory· Date of previous version: 08.12.2022· Version number of previous version:

3

· 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)

(Contd. on page 14)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.06.2024

Version number 4 (replaces version 3)

Revision: 25.06.2024

Trade name: Hardener for Mirror Gloss 2K-HS Clearcoat 2:1

(Contd. of page 13)

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)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

EU