

**Safety Data Sheet according to Directive 1907/2006/
(EG)1272/2008/(EU)215/830/(EC)453/2010/(EU)1999/45/EG**

1. Identification of the Substance/the Preparation and the Company

Article Number: KL1201-H, KL1202-H

Trade Name of the Product: Hardener

Manufacturer: CWT Vertriebs- und Verwaltungs- GmbH
Braunsberger Feld 13,
51429 Bergisch Gladbach (Germany)

Phone: +49 (0) 2204 703 96 46

Fax: +49 (0) 2204 703 69 89

Contact: CWT Vertriebs- und Verwaltungs-GmbH
Phone: +49 (0) 2204 703 96 46

Supplier: Company FIOR & GENTZ Gesellschaft für Entwicklung und Vertrieb von orthopädietechnischen Systemen mbH
Dorette-von-Stern-Straße 5
21337 Lüneburg (Germany)

Phone: +49 (0) 4131 24445-0

Fax: +49 (0) 4131 24445-57

Emergency Telephone Number:

Poison Information Centre Berlin
Poison Information Centre Bonn
Poison Information Centre Munich

Phone: +49 (0)30 19240
Phone: +49 (0)288 19240
Phone: +49 (0)89 19240

2. Hazards Identification

Risk Phrase:	Xi	Irritant	GHS07	Caution
	N	Dangerous for the Environment	GHS09	Environment

Additional Hazard Information for Humans and the Environment: see paragraph 15

Classification No. 1272/2008: Mixture



GHS08
Health Danger



GHS05
Etching Effect

Pictograms:**Signal Word:****N:****C:**

Danger

Dangerous for the Environment

Corrosive

H-Phrases:

- H302: Harmful if swallowed
 H312: Harmful in contact with skin
 H317: May cause an allergic skin reaction.
 H412: Harmful for aquatic organisms on a long-term
 H304: May be fatal if it is swallowed and if it enters the airways.
 H314: Causes severe skin burns and eye damage.

R-Phrases:

- R50/53: Toxic to aquatic organisms.
 R43: May cause sensitisation by skin contact.
 R21/22: Harmful in case of contact with skin.
 R34: Causes chemical burns.
[C] 1999/45/EC
 R65: Harmful; it may cause damage to the lungs if swallowed.
[Xn] 1999/45/EC
 R52/53: Harmful for aquatic life with long-lasting effect.

S-Phrases:

- S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S36/37/39: Wear suitable protective clothing, protective gloves, protective glasses/face protection at work.
 S45: In case of accident or if you feel unwell, immediately seek medical advice.
 S60: Dispose the product and container as hazardous waste.
 S61: Avoid release to the environment.

Contains: pentaethylene hexyamine, isophorone diamine, hexaethylene polyamine

Hazardous Ingredients: PEHA, IPA, HEPA

Hazards/Safety Instructions: H315, H319, H317, H411 / P262, P273, P264, P280

- H411: Toxic to aquatic organisms.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P262: Do not get it in eyes and on skin or clothing.
 P273: Avoid release to the environment.
 P264: Wash hands thoroughly after use.

Additional Requirements:

P 305+351+338: In case of contact with eyes, rinse immediately with plenty of water and remove contact lenses.

P303/+361+353: In case of contact with skin and hair, remove all contaminated clothing and shower with water.

P405: keep locked up

P501: Dispose the content/container in a legal company for disposal.

Other Hazards:

PBT: not applicable

vPvB: not applicable

3. Composition/Information on Components**Chemical Characterisation:**

Hazardous Ingredients:	CAS No.:	Content [%]	GHS
HEPA	68131-73-7	5–20%	GHS07, GHS09
PEHA	4067-16-7	20–60%	GHS05, GHS08
IPA	2855-13-2	20-60%	GHS07, GHS05

Classification No. 1272/2008:

Mixture

Hazard Symbol:

Xi – irritant;

N – dangerous for the environment (N/Xi)

4. First Aid Measures:

General Information:

Immediately remove spilled and contaminated clothing.

After inhalation:

In case of respiratory tract irritation, ensure sufficient supply of fresh air.

After Skin Contact:

Wash immediately with plenty of water; place sterile covering, seek medical attention.

After Eye Contact:

Flush eyes thoroughly with running water holding eyelids open, immediately seek medical attention.

After Ingestion:

Clean mouth and drink plenty of water afterwards, immediately seek medical attention.

5. Firefighting Measures:

Suitable Extinguishing Media:	extinguishing powder, carbon dioxide, foam, water spray
Special Protective Equipment:	breathing apparatus with independent air supply: hazmat suit
Further Information:	Dispose the extinguishing water and firefighting residues according to the administrative regulations.

6. Accidental Release Measures

Personal Precautions:	Avoid inhaling (vapour/mist). Keep unprotected personnel away.
Environmental Precautions:	Prevent run-off into sewerage, surface/ground water.
Clean-Up Methods/ Absorption:	Absorb with inert materials, e.g. sawdust, sand or calcium silicate hydrate. Reduce greater quantities and fill them in boxes.

7. Handling and Storage:

Information on Safe Handling:	Do not leave the boxes unattended. Ensure well-ventilated work areas or exhaust ventilation. Air suction extraction required for spraying procedures. Avoid contact with skin and eyes.
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Advice on Protection Against Fire and Explosion:	Keep away from ignition sources. No smoking.
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Storage Conditions:

Requirements for Storage Rooms and Containers:	Keep container cool (20°C) dry and tightly closed in a well-ventilated place. Protect from heat and acid substances. Avoid formation of aerosol.
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Storage Class:	according to BetrSichV
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VbF Class:	not applicable
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8. Exposure Monitoring or Reduction and Personal Protective Equipment

Additional Requirements for Technical Equipment:	not elsewhere specified; see paragraph 7
General Precautions and Hygiene Measures:	No eating, drinking or smoking when handling the product. Wash hands before breaks and at the end of each workday. Avoid contact with skin and eyes.
Personal protective equipment	
Respiratory Protection:	Filter A/P2
Hand Protection:	protective gloves
Glove Material:	of NBR, IIR, FKM or rubber
Eye Protection:	tightly fitting safety glasses
Body Protection:	Wear protective clothing and hazmat suit.
General Precautions and Hygiene Measures:	No eating, drinking or smoking when handling the product. Wash hands before breaks and at the end of each workday. Avoid contact with skin and eyes.

9. Physical and Chemical Properties

Form:	liquid, viscous
Colour:	colourless, yellow
Odour:	amine-like
Change in State:	
Melting Point / Melting Range:	not applicable
Boiling Point / Boiling Range:	> 200 °C not determined (setting point: - 16°C)
Flash Point:	appr. 200 °C (EU A.9)
Explosive Limits:	not determined
Ignition Temperature:	appr. 455°C DIN 51794
Vapour Pressure:	at 20°C appr. 0.0000046 hPambar
Density:	at 20°C appr. 1.18g/cm ³
Solubility in Water:	at 20°C appr.0,0069g/l
Solubility in Other Solvents:	not determined
Solvent:	mixable with organic solvents
pH Value:	not determined
Partition Coefficient n-Octanol/Water:	not determined
Viscosity, Dynamic:	at 25°C appr. 10–14mPa*s
Solubility in Other Solvents:	not determined
Solvent:	mixable with organic solvents
pH Value:	at 100g/l, at 20°C = 11
Partition Coefficient N-Octanol/Water (log POW):	3.242 log POW
Viscosity, Dynamic:	not determined at 25°C appr. 60mPa*s

10. Stability and Reactivity

Thermal Decomposition / Conditions to Avoid:	not determined
Materials to avoid:	not determined
Hazardous Decomposition Products:	irritant gases/vapours

11. Toxicological Information

Primary Irritant Effect

On the Skin:	irritant
On the Eye:	irritant
Sensitisation:	possible by skin contact

Additional Toxicological Requirements:	fish toxicity LC 50/96 h <i>Leuciscus idus</i> : 2.0mg /l/9h
Special Properties/Effects:	no experimental evidence for mutagenic impact available

12. Ecological Information

Information on Elimination: Reaction in Environmental Compartments:	The material is non-readily biodegradable. Water Hazard Product WHC 2 water hazardous
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General Information:	The product is a lye. Before introducing the waste water into waste water plants, a neutralisation is necessary. In case of proper introduction of small concentrations in adapted biological waste water plants, difficulties with the degradability of activated sludge are not to be expected.
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13. Disposal Information

Product:	Hardener
Recommendation:	Incinerate in approved facility in accordance with administrative regulations.
European Waste Catalogue Uncleaned Packaging:	Disposal of empty containers according to official regulations. Recycling according to national legislation and environmental protection.

14. Transport Information

Land Transport: ADR/RID

Class:	8
Packaging Group:	III
Hazard No.:	80
Classification:	C7
UN No.:	2735

Designation of the Item: amines, liquid, corrosive, n.o.s. (polyamine)

Maritime Transport: IMDG/GGVMaritime:

Class:	8
UN No.:	2735
Packaging Group, PG:	III
EMS:	F-A, S-B
MPO:	no
MFAG:	A-F
ADNR. Class:	III
Marine Pollutant:	GHS05, GHS08
Correct Technical Name:	3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine
Express Goods Admitted According to GGVE:	Germany

Declaration: environmentally hazardous substance, liquid, n.o.s.
(containing epoxide derivatives)

Air Transport: - IATA-DGR/ ICAO-T1

Class:	8
UN/ID No.:	2735
Packaging Group, PG:	III
Declaration Air:	3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine PBT: not applicable, vPvB: not applicable

Tunnel Restriction Code: E

UN"Model Reg.": UN 2735, amines, liquid, corrosive, n.o.s. (polyamine)

15. Legal Regulations**Classification according to the Hazardous Substances Ordinance and EC Directives**

Code Letter:	Xi – Irritant, N – Dangerous for the Environment
Risk Phrase:	GHS09, GHS07

R-Phrases:

R 36/37/38	Irritating to respiratory tract, eyes and skin.
R 42/43	May cause sensitisation by inhalation and skin contact.
R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-Phrases:	Avoid contact with skin.
S 24	In case of contact with eyes, immediately rinse with plenty of water and seek medical advice.
S 26	Wear suitable protective gloves and protective glasses.
S 37/38/39	After contact with skin, immediately wash with plenty of water and soap.
S45	In case of accident or if you feel unwell, immediately seek medical advice.
S61	Avoid release to the environment. Refer to special instructions.
Particular Labelling of Specified Preparations:	Contains epoxy-containing compounds.
National Regulations:	
Hazardous Incident Ordinance:	Respect the quantity thresholds according to the Hazardous Incident Ordinance.
Classification according to VbF:	ot applicable
Water Hazard Class:	WHC 2 water hazardous (decision of the KBwS)
CAS No.:	TCSA
25068-38-6	listed
25068-38-6	listed
9003-36-5	listed
25322-68-3	listed
16096-31-4	listed
Document of the APME:	“Epoxy Resins and Curing Agents (Toxicology, Health, Safety, Environment)”
BG Data Sheet:	M023 Polyester and Epoxy Resins (ZH 1/301)

16. Other Information

Applicable EC Directives

Preparation Directives (1999/45/EG), last adapted by Directive 2006/8/EC;
Substance Directive (67/548/EEC), last adapted by Directive 2006/121/EC.
According to Directive 1907/2006 (REACH)/(EU)1272/2008/(EC)215/830

Reasons for Adaptations: Adaptation according to REACH Regulation (EC) No. 1907/2006
Training Information: Instruction by means of the operating instruction TRGS 555
Sources: Details based on the information of former suppliers
<http://www.hvbg.de/d/bia/fac/stoffdb/index.html>
UBMEDIA Expert Database: Hazardous Material Transport (as amended)
<https://www.umweltbundesamt.de/en>

The information contained herein is based on current knowledge and experience. The information does not constitute any guarantee with regard to product properties and does not create a contractual legal relationship.