Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2015/830

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

1.1. product identifiers

Article No. (manufacturer/supplier)	57851 Kroschke sign-international GmbH, vertrieb@kroschke.com
Identification of the substance or mixture	Hardener for Epoxy-white Primer, comp. B EPWXT 9110 white

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses
coating for industrial and marine use
For commercial user only.

1.3. Details of the supplier of the safety data sheet

supplier (manufacturer/importer/downstream user/distributor)
Corroconsult GmbH
Elstorfer Ring 70
D-21149 Hamburg
Telefon: +49 (0) 40 2786 1277
E-mail: office@corroconsult.de

Department responsible for information:
laboratory
E-mail (competent person) lab@wilckens.com

1.4. Emergency telephone number
Emergency telephone number +49 4124 606 188

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

Danger

Hazard statements

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves and eye/face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P370 + P378	In case of fire: Use extinguishing powder or sand to extinguish.
P403 + P235	Store in a well-ventilated place. Keep cool.
P501.W1	Content / container disposal in accordance with national official regulations

contains:

aliphatic polyamines
2-Propennitril, reaction product with 3-Amino-1,5,5Trimethlcyclohexanamine
m-phenylenebis(methylamine)
3-aminomethyl-3,5,5-trimethylcyclohexylamine

Supplemental hazard information

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures *

Product description / chemical characterization

Description epoxycoat

Hazardous ingredients

Classification according to Regulation (EC) No 1272/2008 [CLP]

EC No. CAS No. Index No.	REACH No. Chemical name classification: // Remark	weight-%
	aliphatic polyamines Acute Tox. 4 H332 / Eye Dam. 1 H318 / Aquatic Acute 1 H400 / Aquatic Chronic 1 H410	10 < 12,5
292-053-3 90530-15-7	01-2120094715-47-0000 2-Propennitril, reaction product with 3-Amino-1,5,5Trimethlcyclohexanamine Acute Tox. 4 H302 / Acute Tox. 4 H332 / Skin Corr. 1B H314 / Skin Sens. 1 H317	2,5 < 5
203-539-1 107-98-2 603-064-00-3	01-2119457435-35-XXXX 1-methoxy-2-propanol Flam. Liq. 3 H226 / STOT SE 3 H336	1 < 2
200-661-7 67-63-0 603-117-00-0	01-2119457558-25-XXXX propan-2-ol Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336	1 < 2
216-032-5 1477-55-0	01-2119480150-50-XXXX m-phenylenebis(methylamine) Acute Tox. 4 H302 / Acute Tox. 4 H332 / Skin Corr. 1B H314 / Skin Sens. 1 H317 / Aquatic Chronic 3 H412	0,5 < 1
220-666-8 2855-13-2 612-067-00-9	01-2119514687-32-XXXX 3-aminomethyl-3,5,5-trimethylcyclohexylamine Acute Tox. 4 H302 / Acute Tox. 4 H312 / Skin Corr. 1B H314 / Eye Dam. 1 H318 / Skin Sens. 1A H317	0,5 < 1

Additional information
Full text of R-phrases: see section 16.
Full text of H-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed
In all cases of doubt, or when symptoms persist, seek medical advice.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Extinguishing media which must not be used for safety reasons:
strong water jet

5.2. Special hazards arising from the substance or mixture
Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3. Advice for firefighters
Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours. See protective measures under point 7 and 8.

6.2. Environmental precautions
Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up
Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

6.4. Reference to other sections
Observe protective provisions (see section 7 and 8).

SECTION 7: Handling and storage

Due to the content of organic solvents in the preparation:

7.1. Precautions for safe handling

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Precautions against fire and explosion:
Vapours are heavier than air. Vapours form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

Hints on joint storage
Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions
Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3. Specific end use(s)
Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters *
Occupational exposure limit values:

1-methoxy-2-propanol
Index No. 603-064-00-3 / EC No. 203-539-1 / CAS No. 107-98-2
WEL, TWA: 375 mg/m3; 100 ppm
WEL, STEL: 560 mg/m3; 150 ppm
Remark: (may be absorbed through the skin)

propan-2-ol
Index No. 603-117-00-0 / EC No. 200-661-7 / CAS No. 67-63-0
WEL, TWA: 999 mg/m3; 400 ppm
WEL, STEL: 1250 mg/m3; 500 ppm

Additional information
TWA : Long-term occupational exposure limit value
STEL : short-term occupational exposure limit value
Ceiling : peak limitation

DNEL:

propan-2-ol
Index No. 603-117-00-0 / EC No. 200-661-7 / CAS No. 67-63-0
DNEL long-term dermal (systemic), Workers: 888 mg/kg
DNEL long-term inhalative (systemic), Workers: 500 mg/m³
DNEL long-term oral (repeated), Consumer: 26 mg/kg
DNEL long-term dermal (systemic), Consumer: 319 mg/kg

m-phenylenebis(methylamine)
EC No. 216-032-5 / CAS No. 1477-55-0
DNEL long-term dermal (systemic), Workers: 0,33 mg/kg
DNEL long-term inhalative (systemic), Workers: 1,2 mg/m³

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Index No. 612-067-00-9 / EC No. 220-666-8 / CAS No. 2855-13-2
DNEL long-term inhalative (systemic), Workers:
DNEL long-term oral (repeated), Consumer: 0,526 mg/kg

PNEC:

m-phenylenebis(methylamine)
EC No. 216-032-5 / CAS No. 1477-55-0
PNEC aquatic, freshwater: 0,094 mg/L
PNEC aquatic, marine water: 0,0094 mg/L

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Index No. 612-067-00-9 / EC No. 220-666-8 / CAS No. 2855-13-2
PNEC aquatic, freshwater: 0,06 mg/L
PNEC aquatic, marine water: 0,006 mg/L
PNEC sediment, freshwater: 5,784 mg/kg
PNEC sediment, marine water: 0,578 mg/kg
PNEC, soil: 1,121 mg/kg
PNEC sewage treatment plant (STP): 3,18 mg/L

8.2. Exposure controls
Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Occupational exposure controls

Respiratory protection
If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)
Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.
Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374
Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye protection
Wear closely fitting protective glasses in case of splashes.

Protective clothing
Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective measures
After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls
Do not allow to enter into surface water or drains. See chapter 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties *

Physical state:	Liquid
Colour:	refer to label
Odour:	characteristic
Odour threshold:	not applicable
Melting point/freezing point:	1830 °C Source: titanium dioxide
Initial boiling point and boiling range:	82 °C Method: DIN 53171 Source: propan-2-ol
Upper/lower flammability or explosive limits:	
Lower explosion limit:	0,8 Vol-%
Upper explosion limit:	13,7 Vol-% Source: 1-methoxy-2-propanol
Flash point:	27 °C Method: DIN 53213-1
Auto-ignition temperature:	270 °C Source: 1-methoxy-2-propanol
Decomposition temperature:	not applicable
pH at 20 °C::	not applicable
Viscosity at °C::	8000 cp
Solubility(ies):	
Water solubility at 20 °C::	completely miscible
Partition coefficient: n-octanol/water:	see section 12
Vapour pressure at 20 °C::	1,78 mbar
Relative density:	
Density at 20 °C::	1,58 g/cm³
Vapour density:	not applicable

9.2. Other information

Solid content:	66 weight-%
solvent content:	
Organic solvents:	4 weight-%
Water:	30 weight-%
Explosive properties:	not applicable
Oxidising properties:	not applicable

Burning time:	not applicable
Evaporation rate:	not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. Possibility of hazardous reactions
Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. Conditions to avoid
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

Classification according to Regulation (EC) No 1272/2008 [CLP]
No data on preparation itself available.

11.1. Information on toxicological effects *

Acute toxicity

propan-2-ol
oral, LD50, Rat: 5840 mg/kg
dermal, LD50, Rabbit: 13900 mg/kg
inhalative (Gases), LC50:, Rat: > 25 mg/L (8 h)
Method: OECD 403

m-phenylenebis(methylamine)
oral, LD50, Rat: 1040 mg/kg
inhalative (Gases), LC50, Rat: 2,4 ppmV (4 h)

3-aminomethyl-3,5,5-trimethylcyclohexylamine
oral, LD50, Rat: 1030 mg/kg
dermal, LD50, Rat: > 2000 mg/kg
dermal, LD50, Rabbit: 1840 mg/kg

skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

Causes serious eye damage.

m-phenylenebis(methylamine)
Skin (4 h)

Respiratory or skin sensitisation

May cause an allergic skin reaction.

m-phenylenebis(methylamine)
Skin:

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Toxicological data are not available.

Specific target organ toxicity

1-methoxy-2-propanol
Specific target organ toxicity (single exposure), drowsiness

Aspiration hazard

Toxicological data are not available.

Practical experience/human evidence

Other observations:Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

Overall assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

SECTION 12: Ecological information

overall evaluation
Classification according to Regulation (EC) No 1272/2008 [CLP]
There is no information available on the preparation itself .
Do not allow to enter into surface water or drains.

12.1. Toxicity

propan-2-ol
Fish toxicity, LC50: 9640 mg/L (96 h)
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 13299 mg/L (48 h)
Algae toxicity, ErC50: > 1000 mg/L (72 h)
Bacteria toxicity, EC10, Pseudomonas putida (18 h)

aliphatic polyamines
Fish toxicity, LC50 (96 h)

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Fish toxicity, LC50, Leuciscus idus (golden orfe): 110 mg/L (96 h)
Daphnia toxicity, EC50, Daphnia magna: > 23 mg/L (48 h)
Algae toxicity, ErC50, Desmodesmus subspicatus.: 37 mg/L (72 h)
Algae toxicity, ErC50:, Scenedesmus subspicatus: > 50 mg/L (72 h)
Bacteria toxicity, EC10, Pseudomonas putida: 1120 (18 h)

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

m-phenylenebis(methylamine)
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): > 100 mg/L (96 h)
Daphnia toxicity, EC50, Daphnia magna: 15,2 mg/L (48 h)
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 33,3 mg/L (72 h)

12.2. Persistence and degradability
Toxicological data are not available.

12.3. Bioaccumulative potential
Toxicological data are not available.

Bioconcentration factor (BCF)

Toxicological data are not available.

12.4. Mobility in soil
Toxicological data are not available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6.

12.7. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate disposal / Product
Recommendation
Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste

disposal according to directive 2008/98/EC, covering waste and dangerous waste.

List of proposed waste codes/waste designations in accordance with EWC
080111* Waste paint and varnish containing organic solvents or other dangerous substances

packaging
Recommendation
Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1. UN number

UN 1263

14.2. UN proper shipping name

Land transport (ADR/RID):	Paint
Sea transport (IMDG):	PAINT
Air transport (ICAO-TI / IATA-DGR):	Paint

14.3. Transport hazard class(es)

3

14.4. Packing group

III

14.5. Environmental hazards

Land transport (ADR/RID)	UMWELTGEFAEHRDEND
Marine pollutant	p

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.
Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

Tunnel restriction code	D/E

Sea transport (IMDG)

EmS-No.	F-E, S-E

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU legislation

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]
VOC-value (in g/L): 62

National regulations

Restrictions of occupation
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

15.2. Chemical Safety Assessment *

For the following substances of this preparation a chemical safety assessment has been carried out:

EC No. CAS No.	Chemical name	REACH No.
292-053-3 90530-15-7	2-Propennitril, reaction product with 3-Amino-1,5,5Trimethlcyclohexanamine	01-2120094715-47-0000
203-539-1 107-98-2	1-methoxy-2-propanol	01-2119457435-35-XXXX
200-661-7 67-63-0	propan-2-ol	01-2119457558-25-XXXX

216-032-5 1477-55-0	m-phenylenebis(methylamine)	01-2119480150-50-XXXX
220-666-8 2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	01-2119514687-32-XXXX

SECTION 16: Other information *

Full text of classification in section 3:

Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment	Very toxic to aquatic life with long lasting effects.
Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.
Acute Tox. 4 / H312	Acute toxicity (dermal)	Harmful in contact with skin.
Skin Sens. 1A / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.

Abbreviations and acronyms
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

Further information
Classification according to Regulation (EC) No 1272/2008 [CLP]

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.

* Data changed compared with the previous version