according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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

1 1 product identifiers

> 57852 Kroschke sign-international GmbH, vertrieb@kroschke.com Article No. (manufacturer/supplier)

Hardener for Epoxy-Resin, photoluminescent Trade name/designation

**EPXT 0000** 

UFI: GO13-F02X-8005-F8YA

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

Relevant identified uses:

Additives / Paint related materials

Details of the supplier of the safety data sheet 1.3.

supplier (manufacturer/importer/downstream user/distributor)

Corroconsult GmbH

Elstorfer Ring 70 Telefon: +49(0)40 /27861277 D-21149 Hamburg E-mail: office@corroconsult.de

Department responsible for information:

laboratory

E-mail (competent person) lab@wilckens.com

Emergency telephone number

Emergency telephone number +49 4124 606 188

## **SECTION 2: Hazards identification**

#### Classification of the substance or mixture 21

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

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

Acute toxicity (oral) Acute Tox. 4 / H302 Harmful if swallowed.

Skin Corr. 1A / 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.

Repr. 2 / H361 Reproductive toxicity Suspected of damaging fertility or the unborn

child.

STOT SE 3 / H335 STOT-single exposure May cause respiratory irritation.

Very toxic to aquatic life with long lasting Aquatic Chronic 1 / H410 Hazardous to the aquatic environment

effects.

#### 2.2. Label elements

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

## Hazard pictograms









Danger

## Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eve damage. H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

May cause respiratory irritation. H335

Very toxic to aquatic life with long lasting effects. H410

### Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

Do not breathe vapour. P260 P261 Avoid breathing vapours.

P270 Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. P271

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/.?. P280

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P301 + P330 + P331 P302 + P352

IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/attention. P310 Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell. P312

Rinse mouth. P330

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention. P362 + P364 Take off contaminated clothing and wash it before reuse.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Content / container disposal in accordance with national official regulations P501.W1

Hazard components for labelling

Trimethylhexane-1,6-diamine

Butvlphenol

m-phenylenebis(methylamine)

Supplemental hazard information

not applicable

#### 2.3. Other hazards

No information available.

# SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Hardener Description

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

EC No.	REACH No.		
CAS No.	Designation	weight-%	
Index No.	classification // Remark		
247-134-8	01-2119560598-25		
25620-58-0	Trimethylhexane-1,6-diamine	10 < 12,5	
	Acute Tox. 4 H302 / Skin Corr. 1B H314 / Skin Sens. 1 H317 / Aquatic		
	Chronic 3 H412		
202-679-0	01-2119489419-21		
98-54-4	Butylphenol	30 < 40	
	This substance has been listed as SVHC (substance of very high concern) in		
	the Candidate List according to Article 59 of REACH.		
216-032-5	01-2119480150-50-XXXX		
1477-55-0	m-phenylenebis (methylamine)	30 < 40	
	Acute Tox. 4 H302 / Acute Tox. 4 H332 / Skin Corr. 1B H314 / Skin Sens.		
	1 H317 / Aquatic Chronic 3 H412		
	Acute toxicity estimate (ATE), ATE (oral): 1040 mg/kg bw / ATE (inhalation, vapour): 2,40 mg/L		

Additional information

Full text of classification: 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

according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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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 First Aid, decontamination, treatment of symptoms.

## **SECTION 5: Firefighting measures**

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media

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

 $\label{thm:continuous} \textbf{Keep away from sources of ignition. Ventilate affected area.} \ \textbf{Do not breathe vapours.}$ 

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

## 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. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. 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.

Further information

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

according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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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:

not applicable

**DNEL:** 

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/m<sup>3</sup>

PNEC:

m-phenylenebis(methylamine)

EC No. 216-032-5 / CAS No. 1477-55-0 PNEC aquatic, freshwater: 0,094 mg/L

PNEC aquatic, freshwater. 0,094 ffig/L

PNEC aquatic, marine water: 0,0094 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.

#### Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. 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/face protection

Wear closely fitting protective glasses in case of splashes.

**Body protection** 

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 section 7. No additional measures necessary.

### **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Physical state: solid
Colour: refer to label
Odour: characteristic

according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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> Odour threshold: not applicable Melting point/freezing point: not applicable Initial boiling point and boiling range: not applicable Flammable solid. Flammability:

Lower and upper explosion limit:

Lower explosion limit: not applicable Upper explosion limit: not applicable

75 °C Flash point:

Method: DIN 53213-1

Auto-ignition temperature: not applicable Decomposition temperature: not applicable

not applicable pH at 20 °C: Cinematic viscosity (40°C):  $> 22 \text{ mm}^2/\text{s}$ 

Method: Cinematic viscosity (40°C):

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Viscosity at 20 °C: 800-1200 cp

Solubility(ies):

Water solubility at 20 °C: completely miscible Partition coefficient: n-octanol/water: see section 12 Vapour pressure at 20 °C: not applicable

Density and/or relative density:

1,12 g/cm<sup>3</sup> Density at 20 °C: Relative vapour density: not applicable particle characteristics: not applicable

9.2. Other information

> Solid content: 100 weight-%

solvent content:

Organic solvents: 0 weight-% Water: 0 weight-%

## SECTION 10: Stability and reactivity

Reactivity

No information available.

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

Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. Incompatible materials

not applicable

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

Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Harmful if swallowed.

Trimethylhexane-1.6-diamine

oral, LD50, Rat

according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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m-phenylenebis(methylamine) oral, LD50, Rat: 1040 mg/kg

inhalative (Gases), LC50, Rat: 2,4 ppmV (4 h)

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes severe skin burns and eye damage.

Trimethylhexane-1,6-diamine

Skin (4 h)

Butylphenol

Skin (4 h)

eyes

m-phenylenebis(methylamine)

Skin (4 h)

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Trimethylhexane-1,6-diamine

Skin:

m-phenylenebis(methylamine)

Skin:

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Suspected of damaging fertility or the unborn child.

Butylphenol

Reproductive toxicity

Endocrine disrupting potential

Method: This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

STOT-single exposure; STOT-repeated exposure

May cause respiratory irritation.

Butylphenol

Specific target organ toxicity (single exposure), Irritation

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience/human evidence

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.

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

## SECTION 12: Ecological information

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

Do not allow to enter into surface water or drains.

12.1. Toxicity

Based on available data, the classification criteria are not met.

Long-term Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Trimethylhexane-1,6-diamine

according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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Fish toxicity, LC50 (96 h)

Butylphenol

Fish toxicity, LC50 (96 h) 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.

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. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

## **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. Dispose of waste according to applicable legislation.

List of proposed waste codes/waste designations in accordance with EWC

080111\* Waste paint and varnish containing organic solvents or other dangerous substances

\*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package

Recommendation

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

## **SECTION 14: Transport information**

14.1. UN number or ID number

UN 2735

14.2. UN proper shipping name

Land transport (ADR/RID): Amines, liquid, corrosive, n.o.s.

(AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, COR)

Sea transport (IMDG): AMINES, LIQUID, CORROSIVE, N.O.S.

(AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, COR,

**Butylphenol**)

Air transport (ICAO-TI / IATA-DGR): Amines, liquid, corrosive, n.o.s.

(AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, COR)

14.3. Transport hazard class(es)

8

14.4. Packing group

Ш

14.5. Environmental hazards

Land transport (ADR/RID) UMWELTGEFAEHRDEND

Marine pollutant p / Butylphenol

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

according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID) Tunnel restriction code

Е

Sea transport (IMDG)

EmS-No. F-A, S-B

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according IBC - Code.

# 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): 0

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

15.2. Chemical Safety Assessment

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

EC No. CAS No.	Designation	REACH No.
247-134-8	Trimethylhexane-1,6-diamine	01-2119560598-25
25620-58-0		
202-679-0	Butylphenol	01-2119489419-21
98-54-4		
216-032-5	m-phenylenebis(methylamine)	01-2119480150-50-XXXX
1477-55-0		

## SECTION 16: Other information

Full text of classification in section 3

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.

Aquatic Chronic 3 / H412 Hazardous to the aquatic environment Harmful to aquatic life with long lasting effects.

Acute Tox. 4 / H332 Acute toxicity (inhalative) Harmful if inhaled.

Classification procedure

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP] Acute Tox. 4 Acute toxicity (oral) Calculation method. Skin Corr. 1A Skin corrosion/irritation Calculation method. Respiratory or skin sensitisation Calculation method. Skin Sens. 1 Repr. 2 Reproductive toxicity Calculation method. STOT SE 3 STOT-single exposure Calculation method. Aquatic Chronic 1 Hazardous to the aquatic environment Calculation method.

Abbreviations and acronyms

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road

OEL Occupational Exposure Limit Value

BLV Biological Limit Value
CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging
CMR Carcinogenic, Mutagenic and Reprotoxic

DIN German Institute for Standardization / German industrial standard

according to Regulation (EC) No. 1907/2006 (REACH)

according to Regulation (EU) 2020/878

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DNEL Derived No-Effect Level

EAKV European Waste Catalogue Directive

EC Effective Concentration EC European Community EN European Standard

IATA-DGR International Air Transport Association – Dangerous Goods Regulations

IBC Code International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk ICAO-TI International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous

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Goods by Air

IMDG Code International Maritime Code for Dangerous Goods
ISO International Organization for Standardization

LC Lethal Concentration

LD Lethal Dose

MARPOL Maritime Pollution: The International Convention for the Prevention of Pollution from Ships

OECD Organisation for Economic Cooperation and Development

PBT persistent, bioaccumulative, toxic PNEC Predicted No Effect Concentration

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

RID Regulations concerning the International Carriage of Dangerous Goods by Rail

UN United Nations

VOC Volatile Organic Compounds

vPvB very persistent and very bioaccumulative

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.