

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.08.2016

Version number 61

Revision: 03.08.2016

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

- 1.1 Product identifier
- Trade name *Okapox GF-M Komp.A*
- 1.2 Relevant identified uses of the substance or mixture and uses advised against *none*
- Sector of Use *SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)*
- Application of the substance / the mixture *Epoxy resin adhesive*
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: *Kiesel Bauchemie GmbH & Co. KG
Wolf-Hirth-Str. 2

D-73730 Esslingen

Tel.:+49(0)711/93134-0
Fax:+49(0)711/93143-140
E-Mail: sida@kiesel.com*
- Informing department: *Laboratory, departments of environmental protection and labor protection*
- 1.4 Emergency telephone number: *Poison Information Center Freiburg Tel.: +49(0)761/ 19240 (24h German and English)*

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

*Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.*

- 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.



GHS07 GHS09

- Signal word
- Hazard-determining components of labelling:

Warning

*reaction product
phenol, polymer with formaldehyde, glycidyl ether
oxirane, mono[(C12-14-alkyloxy)methyl] derivs*

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- **Hazard statements**
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H317 May cause an allergic skin reaction.
 - H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 - P280 Wear protective gloves/protective clothing/eye protection/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.**
 - P332+P313 **If skin irritation occurs: Get medical advice/attention.**
 - P302+P352 **IF ON SKIN: Wash with plenty of water.**
 - P501 **Dispose of contents/container in accordance with local/regional/national/international regulations.**
- **Additional information:** Contains epoxy constituents. May produce an allergic reaction.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 14808-60-7 EINECS: 238-878-4	Quartz (SiO ₂) ⚠ STOT RE 2, H373	25-<50%
	reaction product ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	25-<50%
CAS: 28064-14-4	phenol, polymer with formaldehyde, glycidyl ether ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	2.5-<10%
CAS: 68609-97-2 EINECS: 271-846-8	oxirane, mono[(C12-14-alkyloxy)methyl] derivs ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	2.5-<10%
CAS: 16096-31-4 EINECS: 240-260-4	Hexanediol diglycidyl ether ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	1-<2.5%

- **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**
- **After inhalation** Provide plenty of fresh air.
In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
Instantly rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

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- | | |
|---|--|
| <ul style="list-style-type: none"> · After swallowing · 4.2 Most important symptoms and effects, both acute and delayed · 4.3 Indication of any immediate medical attention and special treatment needed | <p><i>In case of persistent symptoms consult doctor.</i></p> <p><i>No further relevant information available.</i></p> <p><i>No further relevant information available.</i></p> |
|---|--|

SECTION 5: Firefighting measures

- | | |
|---|---|
| <ul style="list-style-type: none"> · 5.1 Extinguishing media · Suitable extinguishing agents · 5.2 Special hazards arising from the substance or mixture · 5.3 Advice for firefighters · Protective equipment: | <p><i>Use fire fighting measures that suit the environment.</i></p> <p><i>Formation of poisonous gases during heating or in fires.</i>
 <i>Formation of toxic gases is possible during heating or in case of fire.</i></p> <p><i>Wear breathing equipment</i>
 <i>Wear non-circulation breathing equipment and chemical-protective clothing. Do not inhale explosion gases or fire fumes.</i></p> |
|---|---|

SECTION 6: Accidental release measures

- | | |
|---|--|
| <ul style="list-style-type: none"> · 6.1 Personal precautions, protective equipment and emergency procedures · 6.2 Environmental precautions: · 6.3 Methods and material for containment and cleaning up: · 6.4 Reference to other sections | <p><i>Ensure adequate ventilation</i>
 <i>Put on breathing apparatus.</i></p> <p><i>Do not allow to enter drainage system, surface or ground water.</i>
 <i>Inform respective authorities in case product reaches water or sewage system.</i></p> <p><i>Take-up with liquid binding material (sand, diatomaceous earth, acid binding agent, universal binding agent).</i>
 <i>Dispose of contaminated material as waste according to item 13.</i></p> <p><i>See Section 7 for information on safe handling</i>
 <i>See Section 8 for information on personal protection equipment.</i>
 <i>See Section 13 for information on disposal.</i></p> |
|---|--|

SECTION 7: Handling and storage

- | | |
|--|--|
| <ul style="list-style-type: none"> · 7.1 Precautions for safe handling · Information about protection against explosions and fires: · 7.2 Conditions for safe storage, including any incompatibilities · Storage · Requirements to be met by storerooms and containers: | <p><i>Do not leave the container standing open.</i>
 <i>Ensure good ventilation/exhaustion at the workplace.</i>
 <i>Prevent formation of aerosols.</i></p> <p><i>Keep breathing equipment ready.</i></p> <p><i>No special requirements.</i></p> |
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- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:** *Keep container tightly sealed.*
- **7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** *No further data; see item 7.*
- **8.1 Control parameters**
- **Components with critical values that require monitoring at the workplace:**

· DNELs

reaction product

Oral	Langzeitwert	0.75 mg/kg/d (20)
	Kurzzeitig	0.75 mg/kg/d (20)
Dermal	Langzeitwert	3.6 mg/kg/d (20)
		8.3 mg/kg/d (21)
	Kurzzeitig	3.6 mg/kg/d (20)
		8.3 mg/kg/d (21)
Inhalative	Langzeitwert	0.75 mg/m ³ (20)
		12.3 mg/m ³ (21)
	Kurzzeitig	0.75 mg/m ³ (20)
		12.3 mg/m ³ (21)

28064-14-4 phenol, polymer with formaldehyde, glycidyl ether

Inhalative	Kurzzeitig	12.3 mg/m ³ (21)
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· PNECs

reaction product

Süßwasser	0.006 mg/l (-)
Salzwasser	0.0006 mg/l (-)
Süßwassersediment	0.1 mg/kg (-)
Salzwassersediment	0.01 mg/l (-)
Erdboden	0.15 mg/kg (-)
Kläranlage (STP)	10 mg/l (-)

- **CAS No. Designation of material % Type Value Unit**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** *The lists that were valid during the compilation were used as basis.*

- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**

*Do not eat, drink or smoke while working.
 Keep away from foodstuffs, beverages and food.*

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- **Breathing equipment:** *Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
In case of brief exposure or low pollution use breathing filter apparatus.
In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.*
- **Protection of hands:** *Use gloves of stable material (e.g. Nitrile) - if necessary tricoted to improve the wearability.
Protective gloves.
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.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*
- **Material of gloves** *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** *The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.*
- **Eye protection:** *Safety glasses*
- **Body protection:** *Protective work clothing.*

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **Appearance:**

Form:	Fluid
Colour:	Yellow
Smell:	Weak, characteristic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	not used
Boiling point/Boiling range:	>200 °C

· **Flash point:** > 100 °C

· **Inflammability (solid, gaseous)** Not applicable.

· **Ignition temperature:** 235 °C

· **Decomposition temperature:** n.d.

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

· **Critical values for explosion:**

Lower: Not determined.

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Upper:	Not determined.
• Steam pressure at 20 °C:	0.1 hPa
• Density at 20 °C	1.13 g/cm ³
• Relative density	Not determined.
• Vapour density	Not determined.
• Evaporation rate	Not determined.
• Solubility in / Miscibility with Water:	Not miscible, or only slightly miscible
• Partition coefficient (n-octanol/water):	Not determined.
• Viscosity:	
dynamic at 20 °C:	800 mPas
kinematic:	Not determined.
• Solvent content:	
Organic solvents:	0.0 %
• 9.2 Other information	The physical data are average values.

SECTION 10: Stability and reactivity

- 10.1 Reactivity *No further relevant information available.*
- 10.3 Possibility of hazardous reactions *No dangerous reactions known*
- 10.4 Conditions to avoid *No further relevant information available.*
- 10.5 Incompatible materials: *No further relevant information available.*
- 10.6 Hazardous decomposition products: *Formation of toxic gases possible when heated or in the event of fire.*

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity *Based on available data, the classification criteria are not met.*
- LD/LC50 values that are relevant for classification:

68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs		
Oral	LD50	>10000 mg/kg (rat)
16096-31-4 Hexanediol diglycidyl ether		
Oral	LD50	8500 mg/kg (rat)
Dermal	LD50	>4900 mg/kg (rat)
- Primary irritant effect: *Causes skin irritation.*
- Skin corrosion/irritation *Causes serious eye irritation.*
- Serious eye damage/irritation *May cause an allergic skin reaction.*
- Respiratory or skin sensitisation *May cause an allergic skin reaction.*
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- 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 *Based on available data, the classification criteria are not met.*
- STOT-repeated exposure *Based on available data, the classification criteria are not met.*

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· Aspiration hazard

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

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SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

reaction product

LC 50 (96h) 3.6 mg/l (Oncorhynchus mykiss (Regenbogenforelle))

EC50 (48h) 2.8 mg/l ((Wasserfloh (Daphnia magna)))

< 10 mg/l (Desmodesmus subspicatus (Grünalge))

16096-31-4 Hexanediol diglycidyl ether

LC 50 (96h) 47 mg/l ((Wasserfloh (Daphnia magna)))

30 mg/l (Oncorhynchus mykiss (Regenbogenforelle))

· 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.

· Ecotoxicological effects:

· Remark: Toxic for fish

· Additional ecological information:

· General notes:

Water hazard class 2 (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system.

Danger to drinking water if even small quantities leak into soil.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

· 12.5 Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal according to official regulations

· European waste catalogue

08 01 11* waste paint and varnish containing organic solvents or other hazardous substances

· Uncleaned packagings:

· Recommendation:

Disposal must be made according to official regulations.

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SECTION 14: Transport information

<ul style="list-style-type: none"> • 14.1 UN-Number • ADR, IMDG, IATA 	UN3082
<ul style="list-style-type: none"> • 14.2 UN proper shipping name • ADR • IMDG, IATA 	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
<ul style="list-style-type: none"> • 14.3 Transport hazard class(es) • ADR, IATA 	
 <ul style="list-style-type: none"> • Class • Label 	9 Miscellaneous dangerous substances and articles. 9
<ul style="list-style-type: none"> • IMDG 	
 <ul style="list-style-type: none"> • Class • Label 	9 Miscellaneous dangerous substances and articles. 9
<ul style="list-style-type: none"> • 14.4 Packing group • ADR, IMDG, IATA 	III
<ul style="list-style-type: none"> • 14.5 Environmental hazards: • Marine pollutant: • Special marking (ADR): • Special marking (IATA): 	No Symbol (fish and tree) Symbol (fish and tree)
<ul style="list-style-type: none"> • 14.6 Special precautions for user • Kehler Number: • Stowage Category 	Warning: Miscellaneous dangerous substances and articles. 90 A
<ul style="list-style-type: none"> • 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> • Transport/Additional information: 	
<ul style="list-style-type: none"> • ADR • Limited quantities (LQ) • Excepted quantities (EQ) • Transport category • Tunnel restriction code 	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3 E

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<ul style="list-style-type: none"> • IMDG • Limited quantities (LQ) • Excepted quantities (EQ) • Remarks: • UN "Model Regulation": 	<p>5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml Special Provision 375</p> <p>UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III</p>
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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.
- **Seveso category** E2 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations**
- **Other regulations, limitations and prohibitive regulations** -
- **15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

SECTION 16: Other information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

(n.a. - not applicable, n.d. - not determined)

This information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. It does not constitute a legal warranty regulations. The delivery specifications are contained in the corresponding product sheet.

- **Relevant phrases**
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H319 Causes serious eye irritation.
 - H373 May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.
 - H411 Toxic to aquatic life with long lasting effects.
- **Department issuing data specification sheet:** Health protection and safety

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· **Abbreviations and acronyms:**

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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 européen sur le transport 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

vPvB: very Persistent and very Bioaccumulative

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 RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· * **Data compared to the previous version altered.**

· **Comment**

The information is based on our knowledge we do have so far. However it is not a confirmation of productfeatures and does not establish contractual legal relationship. Use, operation and processing are the responsibility of the customer.

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

- 1.1 Product identifier
- Trade name Okapox GF-M Komp. B
- 1.2 Relevant identified uses of the substance or mixture and uses advised against none
- Sector of Use *SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)*
- Product category *PC1 Adhesives, sealants*
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: *Kiesel Bauchemie GmbH & Co. KG*
Wolf-Hirth-Str. 2

D-73730 Esslingen

Tel.:+49(0)711/93134-0
Fax:+49(0)711/93143-140
E-Mail: sida@kiesel.com
- Informing department: *Laboratory, departments of enviromental protection and labor protection*
- 1.4 Emergency telephone number: *Poison Information Center Freiburg Tel.: +49(0)761/ 19240 (24h German and English)*

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

**GHS05 corrosion***Skin Corr. 1B H314 Causes severe skin burns and eye damage.**Eye Dam. 1 H318 Causes serious eye damage.***GHS07***Acute Tox. 4 H302 Harmful if swallowed.**Acute Tox. 4 H332 Harmful if inhaled.**Skin Sens. 1 H317 May cause an allergic skin reaction.**Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.*

- 2.2 Label elements

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

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

- Hazard pictograms

**GHS05 GHS07**

- Signal word

Danger

- Hazard-determining components of labelling:

3-aminomethyl-3,5,5-trimethylcyclohexylamine

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- 1,3-Benzoldimethanamin**
2-piperazin-1-ylethylamine
2,4,6-Tri-(dimethylaminomethyl)phenol
H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
- **Hazard statements**
- **Precautionary statements**
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.**
P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P273 Avoid release to the environment.**
P270 Do not eat, drink or smoke when using this product.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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/doctor.**
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P405 Store locked up.**
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
 · **Results of PBT and vPvB assessment**
 · **PBT: Not applicable.**
 · **vPvB: Not applicable.**

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Dangerous components:**

CAS: 61788-44-1 EINECS: 262-975-0	phenol, styrenated ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	25-<50%
CAS: 2855-13-2 EINECS: 220-666-8	3-aminomethyl-3,5,5-trimethylcyclohexylamine ⚠ Skin Corr. 1B, H314 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317 Aquatic Chronic 3, H412	<25%
CAS: 1477-55-0 EINECS: 216-032-5	1,3-Benzoldimethanamin ⚠ Skin Corr. 1B, H314 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317 Aquatic Chronic 3, H412	10-<25%
	2,4,6-Tri-(dimethylaminomethyl)phenol ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319 Aquatic Chronic 3, H412	<10%

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CAS: 140-31-8 EINECS: 205-411-0	2-piperazin-1-ylethylamine ⚠ Skin Corr. 1B, H314 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317 Aquatic Chronic 3, H412	<10%
CAS: 9046-10-0	Polyoxypropylendiamin ⚠ Skin Corr. 1B, H314	2.5-<10%

· 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
- After inhalation

Immediately remove contaminated clothing.

Provide plenty of fresh air.

- After skin contact

In case of unconsciousness bring patient into stable side position for transport.

Instantly wash with water and soap and rinse thoroughly.

Instantly rinse with water.

- After eye contact

Rinse opened eye for several minutes under running water. Then consult doctor.

- After swallowing

Instantly call for doctor.

Drink copious amounts of water and provide fresh air. Instantly call for doctor.

- 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents
- 5.2 Special hazards arising from the substance or mixture

Use fire fighting measures that suit the environment.

Formation of poisonous gases during heating or in fires.

Formation of toxic gases is possible during heating or in case of fire.

- 5.3 Advice for firefighters
- Protective equipment:

Wear breathing equipment

Wear non-circulation breathing equipment and chemical-protective clothing. Do not inhale explosion gases or fire fumes.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
- 6.2 Environmental precautions:

Put on breathing apparatus.

Do not allow product to reach sewage system or water bodies.

Inform respective authorities in case product reaches water or sewage system.

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- 6.3 Methods and material for containment and cleaning up: *Take-up with liquid binding material (sand, diatomaceous earth, acid binding agent, universal binding agent).
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.*
- 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 information on disposal.*

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling *Do not leave the container standing open.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.*
- Information about protection against explosions and fires: *Keep breathing equipment ready.*
- 7.2 Conditions for safe storage, including any incompatibilities
- Storage
- Requirements to be met by storerooms and containers: *No special requirements.*
- Information about storage in one common storage facility: *Not required.*
- Further information about storage conditions: *Keep container tightly sealed.*
- 7.3 Specific end use(s) *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical systems: *No further data; see item 7.*
- 8.1 Control parameters
- Components with critical values that require monitoring at the workplace:
- Additional information: *The lists that were valid during the compilation were used as basis.*
- 8.2 Exposure controls
- Personal protective equipment
- General protective and hygienic measures *Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.*
- Breathing equipment: *In case of brief exposure or low pollution use breathing filter apparatus.
In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.*
- Protection of hands: *Protective gloves.
The glove material has to be impermeable and resistant to the product/
the substance/ the preparation.*

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- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation**
- **Material of gloves** *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** *The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.*
 - **Eye protection:** *Tightly sealed safety glasses.*

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Appearance:

Form: Fluid
 Colour: Brown

· Smell: Amine-like

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Not determined
 Boiling point/Boiling range: 220 °C

· Flash point: > 100 °C

· Inflammability (solid, gaseous) Not applicable.

· Ignition temperature: 450 °C

· Decomposition temperature: Not determined.

· Self-inflammability: Product is not selfigniting.

· Danger of explosion: Product is not explosive.

· Critical values for explosion:

Lower: Not determined.
 Upper: Not determined.

· Steam pressure at 20 °C: 0.1 hPa

· Density 1,135 g/cm³
 · Relative density Not determined.
 · Vapour density Not determined.
 · Evaporation rate Not determined.

· Solubility in / Miscibility with

Water: less miscible

· Partition coefficient (n-octanol/water): Not determined.

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- | | |
|--------------------------------|---|
| · Viscosity: | |
| dynamic: | <i>Not determined.</i> |
| kinematic: | <i>Not determined.</i> |
| · Solvent content: | |
| Organic solvents: | <i>0.0 %</i> |
| · 9.2 Other information | <i>No further relevant information available.</i> |

SECTION 10: Stability and reactivity

- | | |
|--|---|
| · 10.1 Reactivity | <i>No further relevant information available.</i> |
| · 10.3 Possibility of hazardous reactions | <i>No dangerous reactions known</i> |
| · 10.4 Conditions to avoid | <i>No further relevant information available.</i> |
| · 10.5 Incompatible materials: | <i>No further relevant information available.</i> |
| · 10.6 Hazardous decomposition products: | <i>None known.</i> |

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** *Harmful if swallowed or if inhaled.*

- **LD/LC50 values that are relevant for classification:**

2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine

Oral	LD50	1030 mg/kg (rat)
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Inhalative	LC50/4 h	4.6 mg/l (rat)
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1477-55-0 1,3-Benzoldimethanamin

Oral	LD50	2000 mg/kg (rab)
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930 mg/kg (rat)

Inhalative	LC50/4 h	2.4 mg/l (Ratte, weiblich)
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> 1.42 mg/l (rat)

2,4,6-Tri-(dimethylaminomethyl)phenol

Oral	LD50	1653 mg/kg (rat)
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Dermal	LD50	> 1000 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** *Causes severe skin burns and eye damage.*
- **Serious eye damage/irritation** *Causes serious eye damage.*
- **Respiratory or skin sensitisation** *May cause an allergic skin reaction.*
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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** *Based on available data, the classification criteria are not met.*
- **STOT-repeated exposure** *Based on available data, the classification criteria are not met.*

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· Aspiration hazard

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

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SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine

Oral	EbC50 (72h)	37 mg/l (Alge <i>Scenedesmus</i> sp)
	LC 50 (96h)	110 mg/l (Goldorfe (<i>Leuciscus idus</i>))
	EC50 (48h)	23 mg/l ((Wasserfloh (<i>Daphnia magna</i>)))
	EC10 (18h)	1120 mg/l (Bakterien)

1477-55-0 1,3-Benzoldimethanamin

	LC 50 (96h)	75 mg/l (Goldorfe (<i>Leuciscus idus</i>))
	EC50 (48h) (static)	48 mg/l ((Wasserfloh (<i>Daphnia magna</i>)))
	EC50 (72h)	12 mg/l (Alge <i>Scenedesmus</i> sp)

2,4,6-Tri-(dimethylaminomethyl)phenol

	LC 50 (96h)	180-240 mg/l (<i>Oncorhynchus mykiss</i> (Regenbogenforelle))
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140-31-8 2-piperazin-1-ylethylamine

	LC 50 (96h)	2190 mg/l (Akute Fischtoxizität (Zebrafisch))
	EC50 (48h)	58 mg/l ((Wasserfloh (<i>Daphnia magna</i>)))

9046-10-0 Polyoxypropylendiamin

	LC 50 (96h)	>220 mg/l (Goldorfe (<i>Leuciscus idus</i>))
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· 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.

· Ecotoxicological effects:

· Remark: Harmful to fish

· Additional ecological information:

· General notes:

Water hazard class 2 (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even small quantities leak into soil.

Harmful to aquatic organisms

· 12.5 Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods Must be forwarded for special treatment in accordance with local authority regulations, e.g. suitable incineration plant.

· Recommendation Disposal according to official regulations

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- Uncleaned packagings:
- Recommendation: **Disposal must be made according to official regulations.**

SECTION 14: Transport information

• 14.1 UN-Number • ADR, IMDG, IATA	UN2735
• 14.2 UN proper shipping name • ADR • IMDG, IATA	2735 AMINES, LIQUID, CORROSIVE, N.O.S. AMINES, LIQUID, CORROSIVE, N.O.S.
• 14.3 Transport hazard class(es) • ADR	
	
• Class • Label	8 Corrosive substances. 8
• 14.4 Packing group • ADR	II
• 14.5 Environmental hazards:	Not applicable.
• 14.6 Special precautions for user • Kemler Number: • EMS Number: • Segregation groups	Warning: Corrosive substances. 88 F-A,S-B Alkalis
• 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
• Transport/Additional information:	
• ADR • Limited quantities (LQ) • Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
• UN "Model Regulation":	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S., 8, II

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.**
- REGULATION (EC) No 1907/2006 ANNEX XVII **Conditions of restriction: 3**

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· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. It does not constitute a legal warranty regulations. The delivery specifications are contained in the corresponding product sheet.

· **Relevant phrases**

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.

· **Department issuing data specification sheet:**

· **Abbreviations and acronyms:**

Health protection and safety

ADR: Accord européen sur le transport 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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· * Data compared to the previous version altered.

· **Comment**

The information is based on our knowledge we do have so far. However it is not a confirmation of product features and does not establish contractual legal relationship. Use, operation and processing are the responsibility of the customer.