Safety data sheet
according to UK REACH

Printing date 16.09.2026 Version 3.0 Revision: 16.09.2026

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

· **1.1 Product identifier**

· **Trade name: RA-4 CD-MR 108**

· **Article number:**
12210
12215
12216

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.

· **Application of the substance / the mixture**
Use by private consumers
Photographic developer
Processing colour photo paper

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Calbe Chemie GmbH
Stadtfeld 31
D-39240 Calbe
Phone: +49 (0)39291 425-0
Fax: +49 (0)39291 425-25
e-mail: info@calbe-chemie.de
www.calbe-chemie.de

· **Informing department:** E-Mail: info@calbe-chemie.de
· **1.4 Emergency telephone number:**
Phone: +49 (0) 700-24112112 (CAL)
Phone: +1 872 5888271(CAL)

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.

GHS09 environment

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

GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Additional information:**
The full text of the classification and labelling elements mentioned is given in Section 16.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**

GHS05 GHS07 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
2,2'-Dihydroxydiethylether
potassium hydroxide
N-(2-(N-Ethyl-(4-Amino-3-methylphenyl)-amino)-ethyl)-methansulfonamidsesquisulfat (CD 3)

· **Hazard statements**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P260	Do not breathe mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves / eye protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
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.
P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

· **2.3 Other hazards**
No special hazards known if the regulations/instructions for storage and handling are observed.
Where applicable, this section provides information on other hazards that do not result in classification but may contribute to the overall hazards of the substance or mixture.
The product does not contain any substance above legal limits that fulfils the criteria for PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative). The product does not contain any substance above the legal limits that has been included in the list drawn up in accordance with Article 59(1) of Regulation (EC) No 1907/2006 due to endocrine disrupting properties or that has endocrine disrupting or endocrine disrupting properties in accordance with Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 111-46-6 EINECS: 203-872-2 Index number: 603-140-00-6 REACH Reg. no.: 01-2119457857-21-xxxx	2,2'-Dihydroxydiethylether Acute Tox. 4, H302	50 - 75%
CAS: 584-08-7 EINECS: 209-529-3 REACH Reg. no.: 01-2119532646-36-xxxx	potassium carbonate Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10 - 15%

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CAS: 24567-76-8 EINECS: 224-361-0 REACH Reg. no.: 01-2120794432-50-xxxx	N-(2-(N-Ethyl-(4-Amino-3-methylphenyl)-amino)-ethyl)-methansulfonamidsesquisulfat (CD 3) Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Skin Sens. 1, H317	≥ 2.5 - < 5%
CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8 REACH Reg. no.: 01-2119487136-33-xxxx	potassium hydroxide Met. Corr.1, H290; Skin Corr. 1A, H314 Acute Tox. 4, H302	≥ 2 - < 5%
CAS: 3710-84-7 EINECS: 223-055-4 REACH Reg. no.: 01-2119962470-39-xxxx	N,N-diethylhydroxylamine Flam. Liq. 3, H226 Aquatic Chronic 2, H411 Acute Tox. 4, H312; Acute Tox. 4, H332; STOT SE 3, H335	≥ 2 - < 2.5%
CAS: 60-00-4 EINECS: 200-449-4 Index number: 607-429-00-8 REACH Reg. no.: 01-2119486399-18-xxxx	edetic acid STOT RE 2, H373 Acute Tox. 4, H332; Eye Irrit. 2, H319	0.5 - 2%

· **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**
Instantly remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 24 hours after the accident.
Personal protection for the First Aider.

· **After inhalation**
Take affected persons into the open air and position comfortably
In case of unconsciousness bring patient into stable side position for transport.

· **After skin contact**
If skin irritation continues, consult a doctor.
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 (at least 15 minutes).
Remove contact lenses, if present and easy to do.
Protect uninjured eye.
Call a doctor immediately.

· **After swallowing**
Rinse out mouth and then drink plenty of water.
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**
Basic relief, decontamination, symptomatic treatment.

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents**
No strong water jet (to avoid material dispersion).
· **5.2 Special hazards arising from the substance or mixture**
Can be released in case of fire
Sulphur oxides (SOx)
Nitrogen oxides (NOx)
Carbon monoxide
Formation of poisonous gases during heating or in fires.
· **5.3 Advice for firefighters**

· **Protective equipment:**
Wear self-contained breathing apparatus.
Do not inhale explosion gases or combustion gases.
Put on breathing apparatus.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Put on breathing apparatus.
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Inform respective authorities in case product reaches water or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **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**
Use only in well ventilated areas.
Do not inhale gases / fumes / aerosols.
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:**
Store only in the original container.
Keep container tightly closed in a cool, well-ventilated place.
· **Information about storage in one common storage facility:**
Keep away from foodstuffs, beverages and food.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in a cool place.

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· **Recommended storage temperature:** 5-25°C
· **Storage class**
(German Technical Rule for Hazardous Substance – TRGS 510)
8 B
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Additional information about design of technical systems:** No further data; see section 7.
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

111-46-6 2,2'-Dihydroxydiethylether	
WEL	Long-term value: 101 mg/m³, 23 ppm
1310-58-3 potassium hydroxide	
WEL	Short-term value: 2 mg/m³

· **DNELs**		
ATE (Acute Toxicity Estimates)		
Inhalative	Systematic effects - long term	85.2 mg/m³

111-46-6 2,2'-Dihydroxydiethylether		
Dermal	Systematic effects - long term	21 mg/kg/day (general population)
		43 mg/kg/day (worker)
Inhalative	Systematic effects - long term	12 mg/m³ (general population)
		44 mg/m³ (worker)
	Local effects - long term	60 mg/m³ (worker)
60-00-4 edetic acid		
Inhalative	Systematic effects - long term	1.5 mg/m³ (ATE)

· **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**
Wash contaminated clothing before reuse.
The usual precautionary measures should be adhered to general rules for handling chemicals.
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while working.

· **Breathing equipment:**
Use breathing protection only when aerosol or mist is formed.
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 protective gloves to be used must comply with the specifications of the (EU) 2016/425 and the resultant standard EN 374.
This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

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Only use chemical-protective gloves with CE-labelling of category III.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Thickness	Breakthrough time
(mm)	(min)
Nitril rubber 0,38	> 480
Neoprene 0,65	> 240
Butyl rubber 0,36	> 480

Avoid natural rubber 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.

· **As protection from splashes gloves made of the following materials are suitable:**
Synthetic gloves
Value for the permeation: Level:
≥ 3 (60 min)

· **Eye protection:** Tightly sealed safety glasses.

· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Light orange
· **Odour:**	Amine-like
· **Odour threshold:**	Not determined
· **pH-value at 20 °C:**	12.5
· **Change in condition**	
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	< 100 °C
· **Flash point:**	Not applicable
· **Inflammability (solid, gaseous)**	Not applicable
· **Decomposition temperature:**	Not determined
· **Self-inflammability:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive.
· **Critical values for explosion:**	
Lower:	Not determined
Upper:	Not determined
· **Oxidising properties**	None
· **Vapour pressure:**	Not determined
· **Density at 20 °C**	1.19 g/cm³
· **Relative density**	Not determined

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· **Vapour density**	Not determined
· **Evaporation rate**	Not determined
· **Solubility in / Miscibility with Water:**	miscible
· **Partition coefficient: n-octanol/water:**	Not determined
· **Viscosity:**	
dynamic:	Not determined
kinematic:	Not determined
· **Solvent content:**	
Organic solvents:	50.1 %
Water:	25.5 %
Solids content:	17.8 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** Protect from heat and direct sunlight.
· **10.3 Possibility of hazardous reactions** Reacts with strong acids
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Oral	LD50	2,422 mg/kg (rat)
Dermal	LD50	60,974 mg/kg

111-46-6 2,2'-Dihydroxydiethylether		
Oral	LD50	12,565 mg/kg (rat)
Dermal	LD50	11,890 mg/kg (rabbit)
584-08-7 potassium carbonate		
Oral	LD50	> 2,000 mg/kg (rat)
24567-76-8 N-(2-(N-Ethyl-(4-Amino-3-methylphenyl)-amino)-ethyl)-methansulfonamidsesquisulfat (CD 3)		
Oral	LD50	100 mg/kg (rat)
1310-58-3 potassium hydroxide		
Oral	LD50	333 mg/kg (rat)
3710-84-7 N,N-diethylhydroxylamine		
Oral	LD50	1,600 mg/kg (rat)
Dermal	LD50	1,300 mg/kg (rab)

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		1,300 mg/kg (rabbit)
Inhalative	LC50/4 h	11.4 mg/l (rat)
60-00-4 edetic acid		
Oral	LD50	4,500 mg/kg (rat)
Dermal	LD50	> 2,000 mg/kg (rabbit)

· **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.
· **Additional toxicological information:**
At present there are no animal experimental data.
This statement was deduced from the properties of the single components.
· **CMR effects (carcinogenity, 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.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
111-46-6 2,2'-Dihydroxydiethylether	
LC50/96 h	75,200 mg/l (Pimephales promelas)
EC50/48 h	> 10,000 mg/l (Daphnia magna)
584-08-7 potassium carbonate	
LC50/96 h	310 - 750 mg/l (Pimephales promelas)
EC50/48 h	380 - 820 mg/l (Daphnia magna)
24567-76-8 N-(2-(N-Ethyl-(4-Amino-3-methylphenyl)-amino)-ethyl)-methansulfonamidsesquisulfat (CD 3)	
EC50/48 h	0.3 mg/l (fish)
1310-58-3 potassium hydroxide	
LC50/96 h	80 mg/l (Gambusia affinis)
3710-84-7 N,N-diethylhydroxylamine	
LC50/96 h	> 134 mg/l (minnow)
	150 mg/l (Poecilia reticulata)
EC50/48 h	8.2 mg/l (daphnia)
	130.1 mg/l (Daphnia magna)

· **12.2 Persistence and degradability** Not determined

· **Behaviour in environmental systems:** Not determined
· **12.3 Bioaccumulative potential** Not determined
· **12.4 Mobility in soil** No further relevant information available.
· **Other information** Not determined

· **Ecotoxical effects:** No further relevant information available.

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· **Remark:** Toxic for fish

· **Behaviour in sewage processing plants:** Not determined

· **Additional ecological information:**

· **General notes:**
This statement was deduced from the properties of the single components.
The product contains materials that are harmful to the environment.
Water hazard class 3 (German Regulation) (Self-assessment): highly water-endangering.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Do not allow undiluted product or large quantities of it 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.
At present there are no ecotoxicological assessments.
Toxic for aquatic organisms
The product does not contain organically bounded halogens (AOX-free).
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values.
A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· **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.
Must be specially treated under adherence to official regulations.
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

· **Uncleaned packagings:**

· **Recommendation:**
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
EAK-No. 15 01 10
Non contaminated packagings can be used for recycling.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR/RID, IMDG, IATA**	UN1814
· **14.2 UN proper shipping name**	
· **ADR/RID**	POTASSIUM HYDROXIDE SOLUTION, ENVIRONMENTALLY HAZARDOUS
· **IMDG, IATA**	POTASSIUM HYDROXIDE SOLUTION

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· **14.3 Transport hazard class(es)**

· **ADR/RID, IMDG**

· **Class**	8 Corrosive substances.
· **Label**	8

· **IATA**

· **Class**	8 Corrosive substances.
· **Label**	8

· **14.4 Packing group**	
· **ADR/RID, IMDG, IATA**	II
· **14.5 Environmental hazards:**	Product contains environmentally hazardous substances: N-(2-(4-Amino-N-ethyl-m-toluidino) ethyl)methansulfon-amidsesquisulphate, Monohydrate
· **Marine pollutant:**	Yes Symbol (fish and tree)
· **Special marking (ADR/RID):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Kemler Number:**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG18) Alkalis
· **Stowage Category**	A
· **Segregation Code**	SG35 Stow "separated from" SGG1-acids
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable
· **Transport/Additional information:**	
· **ADR/RID**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **Remarks:**	"Limited quantity" according to chapter 3.4 ADR, if carried in combination packagings with not more than 5 litres per inner packaging and not more than 30 kg per package.
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Remarks:**	"Limited quantity" according to chapter 3.4 IMDG, if carried in combination packagings with not more than 5 litres per inner packaging and not more than

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·	30 kg per package.
· **IATA**	
· **Remarks:**	PAX 852, CAO 856
· **UN "Model Regulation":**	UN 1814 POTASSIUM HYDROXIDE SOLUTION, 8, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Poisons Act**

· **Regulated explosives precursors**
None of the ingredients is listed.

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**

1310-58-3	potassium hydroxide	17% of total caustic alkalinity
1310-73-2	sodium hydroxide	12% of total caustic alkalinity

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**

GHS05 GHS07 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
2,2'-Dihydroxydiethylether
potassium hydroxide
N-(2-(N-Ethyl-(4-Amino-3-methylphenyl)-amino)-ethyl)-methansulfonamidsesquisulfat (CD 3)
· **Hazard statements**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
· **Precautionary statements**

P260	Do not breathe mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves / eye protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
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.
P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

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· **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

· **National regulations**
Employment restrictions under the German Youth Employment Protection Act (JArbSchG) must be observed.
Employment restrictions under the German Maternity Protection Act (MuSchG) must be observed.

· **Information about limitation of use:**
Employment restrictions concerning pregnant and lactating women must be observed.

· **Decree to be applied in case of technical fault:**

Class	Share in %
NK	50.1

· **Water hazard class:** Water danger class 3 (Self-assessment): highly water-endangering.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H226 Flammable liquid and vapour.
H290 May be corrosive to metals.
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.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Flam. Liq. 3: Flammable liquids – Category 3
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4

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Skin Corr. 1A: Skin corrosion/irritation – Category 1A
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
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· **Sources**
applicable EEC directives:
- 1907/2006
- 1272/2008
Internal physical tests, MSDS of the ingredients,
Information system on hazardous substances of the German Social Accident Insurance
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