1. Product and Company Description

1.1 Product description:

Identification on the label/Trade name:
Kerne CB

Other designations:
Cold-Box bound moulding

Note:
The product is exempt from registration in accordance with the REACH Regulation, Article 2(7).

1.2 Use of the substance/mixture/product:

1.2.1 Relevant identified uses:
The product is intended for professional users.
Auxiliary for the casting industry, use in the forming of finished products

1.2.2 Uses advised against:
Uses beyond the identified uses.
No private applications.

1.3 Company description:

Supplier (manufacturer/distributor):
For Germany/EU inland:

GTP Schäfer GmbH
Benzstraße 15
41515 Grevenbroich
Germany

Email (expert):
info@gtp-schaefer.de

Contact for information:
GTP Schäfer GmbH
Benzstraße 15
41515 Grevenbroich
Germany

Telephone: +49 2181 233 94-0

Fax: +49 2181 233 94-55

Email: info@gtp-schaefer.de

National contact:
GTP Schäfer GmbH
Benzstraße 15
41515 Grevenbroich
Germany

Telephone: +49 2181 233 94-0

Fax: +49 2181 233 94-55

Email: info@gtp-schaefer.de

1.4 Emergency telephone number:

GTP Schäfer GmbH
Benzstraße 15
41515 Grevenbroich

Telephone: +49 2181 233 94-0 (This number is only staffed during office hours.)

Mobile: +49 172 2026764

2. Possible hazards

2.1 Classification:

This product contains hazardous substances or mixtures (see Section 3.2), but that are not intended to be released under normal or reasonably foreseeable conditions of use.
The product is not classified as hazardous within the meaning of Regulation (EC) No. 1272/2008 and is not subject to labelling laws in accordance with this regulation; there is insufficient data for a classification.

2.2 Additional hazard information for humans and the environment:

The product may, however, release hazardous substances when thermally decomposed as intended.
During the casting process alone or when in contact with acids or alkalis, depending on the reaction conditions, carbon monoxide/dioxide, soot, nitrous gasses (nitrogen oxides), hydrogen cyanide (hydrocyanic acid), hydrocarbons, formaldehyde, phenol or ammonia, and other gasses, may develop.
During intended use, release into the environment in excess of the emission thresholds must be avoided.
May have harmful effects if ingested, inhaled or in contact with the skin.

3. Composition/information on ingredients:

3.1 Product details:

Description:
Cold-Box bound moulding (product) made of quartz sand and organic binders.

3.2 Hazardous ingredients:

Chemical designation	CAS No.:	EC No.:	INDEX No.:	REACH-Reg. No.:	Content (%)	Classification in accordance with Reg. (EC) 1272/2008		Designation	Safety instructions	Comment
						Signal words	Hazard instructions H-rates	Pictogram	P-rates	
CB Binder Part 1 (resin)	/	/	/	/	≤ 1	Risk	H302 H314 H341	GHS05 GHS07 GHS08	201,280, 301+330+331, 303+361+353, 304+340, 305+351+338, 310	Available in bound form
CB Binder Part 2 (binder)	/	/	/	/	≤ 1	Risk	H315, H317 H319 H332, H334 H335 H351, H373	GHS07 GHS08	201,260,280, 284, 304+340, 312.362	Available in bound form

/ = No information

Non-hazardous ingredients:

Chemical designation	CAS No.:	EC No.:	INDEX No.:	REACH-Reg. No.:	Content (%)	Classification in accordance with Reg. (EC) 1272/2008		Designation	Safety instructions	Comment
						Signal words	Hazard instructions H-rates	Pictogram	P-rates	
Silicon dioxide (quartz sand)	14808-60-7	238-878-4	/	/	≤ 100	/	/	/	260,270, 314	

/ = No information

3.3 Comment: The classifications not fully set out in this Section are listed in Section 16, as are the safety instructions on the components used.

4. First aid measures:

4.1 General information:
Even if the product is not classified as hazardous, first aid and medical treatment may be required in the event of accidents (e.g. ingestion).

4.2 Following inhalation:
Following inhalation of thermal decomposition products (nitrous gasses, hydrogen cyanide, carbon monoxide/dioxide), bring the affected person to fresh air and place in a resting position.
Seek immediate medical attention if the airways are irritated/in the event of respiratory problems.

4.3 Following skin contact:
Wash carefully with plenty of water and soap.
If a skin irritation, reddening or pain occurs, seek medical attention.

4.4 Following eye contact:
In case of eye contact (dust/products of thermal decomposition), rinse open eyes with running water for 10 to 15 minutes and consult an ophthalmologist.
In case of eye irritation, consult an ophthalmologist.

4.5 Following ingestion:
In case of ingestion or inhalation of large amounts of dust, give plenty of water.
Do not induce vomiting.
After ingestion, rinse the mouth with plenty of water (only if the person is conscious) and seek immediate medical assistance.

4.6 First aider self-protection:
When rescuing from danger area: ensure self-protection!

4.7 Information for the physician:
Symptoms:

Following inhalation of dust:
No acute symptoms are anticipated.

Following inhalation of the products of thermal decomposition:

Nitrous oxides: Narcotic effect to oxygen deficiency symptoms, depending on the concentration. The development of pulmonary inflammation (with or without prior pulmonary oedema) can occur as a long-term effect of acute intoxication after 10-30 days. Harmful effect on the blood count/neurological damage.
Hydrogen cyanide, hydrocyanic acid: Irritation of the mucous membrane, burning sensation on the tongue, scratching metallic taste in the mouth and throat; gradual or sudden systemic effect depending on concentration
Formaldehyde: Irritation of the nasopharyngeal mucosal tissues (burning, sneezing, nasal catarrh) and possibly asthma attacks
Phenol: Nasophayngeal irritation
Ammonia: Cough, respiratory complaints, nausea, gag reflex, delayed respiratory inflammation

Following skin contact:
Hydrogen cyanide, hydrocyanic acid: initially irritation, then reddening
Formaldehyde: Concentration/time-related irritation to burns, allergic skin reactions
Phenol: Reddening/white discolouration of the contact point, delayed necrosis
Ammonia: Irritation to burns

Following eye contact:

Hydrogen cyanide, hydrocyanic acid: Reddening
Formaldehyde: slight, reversible irritation through to permanent corneal ulceration
Phenol: Corneal clouding
Ammonia: Lacrimal irritation, burning/stabbing pain in the eye

Following ingestion:

Hydrogen cyanide, hydrocyanic acid: Irritation of the mucosal membranes
Formaldehyde: concentration-dependent irritation to burns of the mucosal membranes with abdominal pain, gagging, cyanosis
Phenol: Burning and acid burns to the mucosal membranes, stomach ache, nausea, diarrhoea

Hazards:

See symptoms

Treatment:

The following sources of literature can provide information on treatment by a doctor:
BGI 591 nitric acid nitrogen oxide - nitrous gasses 03-1998
BGI 569 hydrogen cyanide (hydrocyanic acid) cyanide 12-1989
IFA Gestis substance database
Kühn / Birett
Treat symptomatically.

5. Firefighting measures

5.1 Suitable extinguishing media:
Water, foam, carbon dioxide or sand
Adapt extinguishing measures to suit the environment.

5.2 Unsuitable extinguishing media for safety reasons:
No unsuitable extinguishing media known.

5.3 Special risk posed by component substances or mixtures/the product itself, its combustion products or resulting gasses:
Thermal decomposition can lead to the release of toxic gasses or vapours.
See also section 2.2

5.4 Special personal protective equipment in firefighting:

Use a suitable respiratory device (filter types P2 or combination filter P2)
If necessary, wear a respiratory device that is independent of ambient air.
Wear suitable personal protective equipment when fighting fires.

5.5 Additional information:

Collect contaminated extinguishing water separately. Do not allow to enter drains, soil or water bodies.

6. Measures in the event of accidental release:

6.1 Personal precautions:

Avoid contact with eyes, inhalation and ingestion of dust; a dust protection mask is recommended.
Avoid dust formation; vacuum dusts without dust turbulence.
Keep away from sources of ignition.

6.2 Environmental precautions:

Do not allow the product or product residues to enter drains, water bodies or soil.
Ensure that waste is collected and stored securely in closed containers.

6.3 Methods for cleaning:

Mechanically collect (avoid dust formation) and place in suitable containers for disposal.
Alternatively, affected areas can be cleaned with a damp cloth.
Treat the collected material in accordance with the section on disposal.

6.4 Additional information:

Reference is made to the protective measures in sections 7, 8 and 13.

7. Handling and storage:

7.1 Handling:

Packaging is removed in layers just before use.
Observe product information/technical datasheet.

7.1.1 Advice on safe handling:

Only intended use, e.g. in metallurgic processing, is permitted.
Avoid dust formation.
Ensure adequate ventilation, especially in closed rooms.
The standard precautions for handling chemicals/hazardous substances must be observed.
Wash hands and face thoroughly before breaks and at the end of work.

Protective measures:

Technical measures:

Measures to prevent aerosol and dust formation:

Handle products so that abrasion and dust formation are avoided (e.g. do not pour).

Environmental protection measures:

Effectively vacuum products of thermal decomposition and use a waste air purification system if necessary.
Treat product residues in accordance with the legal requirements.

Specific requirements or regulations for handling:

Do not eat, drink, smoke or take snuff at the workplace.
Wash your hands and/or face before breaks and at the end of work.
Keep away from food, drink and animal feed.
Do not inhale dusts and products of thermal decomposition.
Only use product in quantities according to operational needs.

7.1.2 Notes on fire and explosion protection:
No special fire protection measures are required.
Avoid dust deposits/regularly remove dust deposits.
Observe standard measures to prevent fires.

7.2 Storage:

7.2.1 Technical measures and storage conditions
Store dry and cool in tightly sealed containers.

7.2.2 Packaging materials:
Only store in original packaging (cardboard trays).

7.2.3 Requirements for storage rooms and vessels:
No special requirements; do not store outside; dry storage.

7.2.4 Information on combined storage

Do not store with:
Food and animal feed
Explosive substances (storage class 1)
Infectious substances (storage class 6.2)
Radioactive substances (storage class 7)
Do not store with strong acids and alkalis. Store separately from oxidising agents and reducing agents.

Observe restrictions and requirements, pursuant to TRGS 509/TRGS 510, for storage together with:
Gasses (storage class 2A)
Flammable liquids (storage class 3)
Other explosive substances (storage class 4.1A)
Pyrophores or self-heating substances (storage class 4.2)
Oxidising agents (storage class 5.1 B)
Ammonium nitrate and preparations containing ammonium (storage class 5.1 C)
Organic peroxides and self-reactive substances (storage class 5.2)

7.2.5 Further information on storage conditions:
Storage temperature (°C): +5 to +30°C

Relative humidity (%):	Store in a dry environment/protect from moisture
Storage stability:	No information
Maximum storage time:	Max. recommended storage time is 1 year. Experience has shown that the product can also be used beyond the defined maximum storage time. A warranty for the assured product properties cannot be accepted after the maximum storage period.
Storage class:	13 – non-combustible solids (according to TRGS 509/TRGS 510) (recommended)

7.2.6 Specific end uses:
Recommendation: Observe product information/technical datasheet

8. Exposure controls/personal protective equipment:

8.1 Exposure thresholds:

8.1.1 Components with workplace thresholds or biological thresholds to be monitored:

8.1.1.1 Workplace thresholds:

Relating to products of thermal decomposition/dust emissions
Air thresholds:

Threshold type (country of origin)	Substance	EC No.	CAS No.	Workplace threshold		Recommended monitoring procedure	Peak threshold	Source
Germany	Dusts	/	/	4 mg/m³ (inhalable aerosol fraction)	0.3 mg/m³ (respirable aerosol fraction)	/	Values do not exceed twice the general dust threshold	DFG

Threshold type (country of origin)	Substance	EC No.	CAS No.	Workplace threshold		Recommended monitoring procedure	Peak threshold	Source
				Long-term	Short-term			
Germany	Nitrous oxide (nitrous gases)	233-032-0	10024-97-2	180 mg/m³	360 mg/m³	/	15 min, max. 4x/ shift, interval 1 h	DFG
Germany	Hydrogen cyanide (hydrocyanic acid)	200-821-6	74-90-8	2.1 mg/m³	4.2 mg/m³	/	15 min, max. 4x/ shift, interval 1 h	DFG
Germany	Formaldehyde	200-001-8	50-00-0	0.37 mg/m³	0.74 mg/m³	/	15 min, max. 4x/ shift, interval 1 h	DFG
Germany	Ammonia	231-635-3	7664-41-7	14 mg/m³	28 mg/m³	/	15 min, max. 4x/ shift, interval 1 h	DFG
Germany	Carbon monoxide	211-128-3	630-08-0	35 mg/m³	70 mg/m³	/	15 min, max. 4x/ shift, interval 1 h	DFG
Germany	Carbon dioxide	204-696-9	124-38-9	9,100 mg/m³	18,200 mg/m³	/	15 min, max. 4x/ shift, interval 1 h	DFG
No sufficient, product-related data available.								

/ = No information

The formation of nitrous gases and hydrocyanic acid cannot be ruled out during the burning of products from cores. Whether or not the workplace threshold is exceeded when using the product off cores very much depends on the conditions. Verification of compliance with workplace exposure thresholds is recommended, at least for the first use.

Biological thresholds:

Threshold type (country of origin)	Agent	EC No.	CAS No.	Parameter	Threshold	Test material	Source	Comment
Germany	Phenol	203-632-7	108-95-2	Phenol (after hydrolysis)	200 mg/l	Urine	DFG	At the end of the shift
Germany	Carbon monoxide	211-128-3	630-08-0	CO-Hb	5%	Blood	DFG	At the end of the shift
No sufficient, product-related data available.								

/ = No information

8.1.1.3 DNEL/DMEL and PNEC values:

No sufficient, product-related data available.

8.2 Limitation and monitoring of exposure:

8.2.1 Limitation and monitoring of exposure in the workplace:

Instructive measures to avoid exposure:
Only intended, identified use is permitted. Safety instructions for handling the individual components are listed in section 16.

Organisational measures to avoid exposure:
Only intended, identified use is permitted. Determine whether workplace thresholds are complied with.

Technical measures to avoid exposure:
See section 7. No further measures are required.
Technical measures and the use of suitable work processes have priority over the use of personal protective equipment.

Personal protective equipment:

Respiratory protection: Normally no personal respiratory protection is required.

Respiratory protection is required:
If technical extraction or ventilation measures are not implementable or are insufficient, respiratory protection must be worn (products thermal decomposition/dust).
Workplace threshold values for the concentration of products of thermal decomposition/dust are exceeded.

Suitable breathing apparatus:
Filter device with filter or power-assisted filter device type:
Filter types P2 or combination filter ABEK-P2
Self-contained breathing apparatus
Use at concentrations over the application threshold for filter devices, at oxygen concentrations of under 17 Vol% or if the conditions are unclear.
Wearing time limits according to the Hazardous Substances Ordinance in association with the rules for the use of respiratory protection devices (BGR 190) must be observed.

Hand protection: Normally, no hand protection is required.
The use of water-insoluble skin protection products is recommended.

For frequent hand contact:
Wear gloves to protect from mechanical hazards in accordance with DIN EN 388
Wearing time limits according to Hazardous Substances Ordinance in association with the rules for the use of protective gloves (BGR 195) must be observed.

Eye protection: For dust: Wear dust safety glasses with side protection (in accordance with EN 166).

Body protection: Not required. Normal long-sleeve work clothing is sufficient.

Hygiene: After handling the mixture, wash hands, underarms and face, especially before breaks or at the end of the work activities.

8.2.2 Limitation and monitoring of environmental exposure:

Product-related technical measures to avoid exposure:
No special measures are required.

Instructive measures to avoid exposure:
Only handle the product in the scope of the intended use.

Organisational measures to avoid exposure:
Low-dust handling.
Only use product in the necessary quantities.

Technical measures to avoid exposure:
Effective extraction of the products of thermal decomposition at the source.

9. Physical and chemical properties

9.1 Basic information

Appearance: Product defined form

Aggregate state: solid Colour: sand colour Odour: odourless

9.2 Important information on health and environment protection and safety:

With intended use the product releases harmful, thermal decomposition products (e.g. CO, CO_2, NO_x, soot).

9.3 Safety-relevant basic data:

	Value	Method	Comment
pH value (20°C):	approx. 7	DIN 19260	Measurement in aqueous suspension
Melting point/range (°C):	Not applicable		Not applicable, due to decomposition
Boiling point/range (°C):	Not applicable		
Flash point (°C):	Not applicable		
Ignition temperature (°C):	Not applicable	DIN 51794	Product is not self-igniting
Steam pressure	Not applicable		Not applicable, as composed of non-volatile anorganic and high molecular organic solids
Density (g/cm³):	1,400–1,500	DIN 51757	
Bulk density (kg/m³):	Not determined		
Water solubility (20°C in g/l):	practically insoluble		Solubility of anorganic components to be expected
Distribution coefficient n-octanol/water (log Pow):	Not applicable		
Viscosity, dynamic (mPa*s):	Not applicable		Not applicable, as solid
Dust explosion capacity:	Product is not dust explosive		
Explosion thresholds	Not applicable		
Lower:			
Upper:			

10. Stability and reactivity

10.1 Conditions to be avoided:

No special restrictions known

10.2 Substances to be avoided:

Acids and oxidising agents
See also section 7.2 .4.

10.3 Hazardous decomposition products:

Carbon monoxide/dioxide
Soot
Nitrous gasses (nitric oxide)
Hydrogen cyanide (hydrocyanic acid)
Phenol
Formaldehyde
Ammonia

Exposure thresholds for individual substances are listed in section 8.

11. Toxicological information

11.1 Toxicokinetics, metabolism and distribution:

Human-toxicological data:

	Effect dose	Species	Method	Comment
No sufficient, product-related, classification-relevant data available.				

11.2 Acute effects (toxicological effects):

	Effect dose	Species	Method	Comment
Acute oral toxicity	LD_{50}: 1,909 mg/kg	/	Calculation method	CB Binder Part 1 (resin)
Acute dermal toxicity	LD_{50}: >2,000 mg/kg	/	Calculation method	CB Binder Part 1 (resin)
Acute inhalation toxicity	LC_{50}: >20 g/m^3	/	Calculation method	CB Binder Part 1 (resin)
Acute inhalation toxicity	LC_{50}/4h: 12.59mg/m^3	/	Calculation method	CB Binder Part 2 (binder)
No sufficient, product-related data available.				

/ = No information

Specific target organ toxicity (STOT):

No sufficient, product-related data available.

Specific symptoms in animal test:
No sufficient, product-related data available.

Skin corrosion/irritation

	Exposure time	Species	Evaluation	Method	Comment
No sufficient, product-related data available.					

CB Binder Part 1 (resin) causes caustic effects on the skin.
CB Binder Part 2 (Binder) prolonged contact may irritate the mucosal membranes and skin and/or cause dermatitis.

CB Binder Part 1 (resin) causes acute eye irritation/corrosivity.
CB Binder Part 2 (binder) causes severe eye irritation.

Irritation of the respiratory passages:
No sufficient, product-related data available.

Sensitisation:

Following skin contact: No sufficient, product-related data available.

Following inhalation: No sufficient, product-related data available.

CB Binder Part 2 (binder): May cause sensitisation in sensitive individuals following skin contact or inhalation of aerosols or dust.

Toxicity following repeated intake (subacute, subchronic, chronic):

No sufficient, product-related data available.

CB Binder Part 2 (Binder) May cause damage to lungs through prolonged or repeated exposure.

Specific target organ toxicity (STOT):

No sufficient, product-related data available.

CMR effects (carcinogenic, mutagenic and toxic for reproduction):

CB Binder Part 1 (resin)
Germ cell mutagenicity: mutagenic, category 3

CB Binder Part 2 (binder)
Carcinogenicity: carcinogen, category 2: suspected carcinogenic effect (limited animal data). May cause cancer after repeated inhalation of aerosol.

Summary assessment of the CMR properties:

11.3 Experience from practice

Classification-relevant observations: No data concerning product handling is available.
Special observations: No data concerning product handling is available.

11.4 General observations:

No observations/data concerning product handling is available.

12. Ecological information:

12.1 Ecotoxicity

Aquatic toxicity	Effect dose	Exposure time	Species	Method	Evaluation	Comment
No sufficient, product-related data available.						

12.2 Mobility:

Known or predicted distribution to environmental compartments:

Surface tension:

Value	°C	Concentration	Method	Comment
Not applicable				

Adsorption/desorption:

Transport	A/D Coefficient Henry Constant	Log Pow	Volatility rate	Method	Hysteresis	Comment
Soil - water	No sufficient, product-related data available.					
Water - air						
Soil - air						

12.3 Persistence and degradability
No sufficient, product-related data available.

Physicochemical and photochemical elimination:
No sufficient, product-related data available.

Bioaccumulative potential
No sufficient, product-related data available.

12.4 Results of PBT assessment:
The PBT properties of the substances used were not established.

12.5 Other adverse effects:
No further adverse effects are known.

12.6 Additional ecotoxicological information
No special information.

13. Notes on disposal

13.1 Disposal/waste (product):
Unused product:
Contact manufacturer concerning recycling. Check if reuse is possible.
Otherwise dispose of according to the Recycling and Waste Management Act (KrWG): hazardous waste in accordance with Section 3 Waste Index Act (AVV)

Used product:
Dispose of in accordance with the Recycling and Waste Management Act (KrWG):

13.2 Waste codes according to EWC/AVV:
List of proposals for waste codes/waste designations in accordance with AVV:
Unused product:
10 10 05*casting moulds and sands containing hazardous substances prior to casting
10 10 06 casting moulds and sands prior to casting with the exception of those that come under 10 10 05

Used product:
10 10 07* casting moulds and sands containing hazardous substances after casting
10 10 08 casting moulds and sands prior to casting with the exception of those that come under 10 10 07

13.3 Packaging:
Uncontaminated and emptied packaging can be recycled.

14. Transport information

14.1 Land transport (ADR/RID/HGO):

Official designation:	Not classified for this mode of transport.	Hazard label:
Class:		UN No.:
Classification code:		Packaging group:

14.2 Sea transport (IMDG code/OTDGS (GGVSee)):

Official designation:	Not classified for this mode of transport.	Packaging group:
Class:		EmS:
UN No.:		Marine Pollutant:

14.3 Air transport (ICAO-IATA/DGR):

Official designation:	Not classified for this mode of transport.	Packaging group:
Class:		
UN No.:		

15. Regulatory information

15.1 EU regulations

Chemical safety assessment:
No chemical safety assessments have been carried out for substances in this product.

Labelling:
Hazard pictograms and hazard warnings:

Hazard-determining components of labelling:	Not applicable, as not subject to labelling.
H-rates:	Not applicable, as not subject to labelling.
P-rates:	Not applicable, as not subject to labelling.
Special labelling of specific products:	Not applicable, as not subject to labelling.

Authorisation and/or restrictions on use:
Authorisations:
No information.
Restrictions on use:
No information.

15.2 National regulations (Germany)

Notes on employment restrictions:	National legalisation on protecting young people at work and pregnant women must be observed.
Incident Ordinance (12. BImSchV):	Not subject as a product to the 12. BImSchV
Water hazard class:	1 slightly hazardous to water (self-classification according to AwSV (VwVwS), based on ingredients)
Technical instructions air (TA-air):	The emission threshold must be observed: Total dust, including fine dust:20 mg/m³ Carbon monoxide: 150 mg/m³ Nitrogen oxide 350 mg/m³ (as nitrogen dioxide) Formaldehyde: 20 mg/m³ Hydrogen cyanide: 3 mg/m³ Ammonia: 30 mg/m³ Phenol: 50 mg/m³ (as ammonia) Cyanide: 1 mg/m³ (as CN)
Other regulations, restrictions and prohibition ordinances:	TRGS 900 thresholds in the air at the workplace; DFG

16. Other information

16.1 Wording of the H and P-rates under section 3:

Full working of the H and P-rates of the individual components in the product listed in Section 3 and labelling codes of the individual substances mentioned in Section 2:

Hazard statements:

H302:	Harmful if swallowed
H314:	Causes severe skin burns and eye damage
H315:	Causes skin irritation
H319:	Causes serious eye irritation
H332:	Causes serious eye irritation
H334:	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335:	May cause respiratory irritation
H351:	Suspected of causing cancer.
H373:	May cause damage to organs through prolonged or repeated exposure

Safety instructions

Full wording of the P-rates for the individual components of the product specified in Section 3:

Prevention:

P201	Obtain special instructions before use.
P260	Do not inhale dust/fumes/gas/mist/vapours/spray
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection
P281	Use personal protective equipment
P284	Wear respiratory protection

Reaction:

P301+330+331 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P303+361+353 If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water/shower.
P304+P340 If INHALED: Bring to fresh air and keep calm in a position that facilitates breathing.
P305+351+338 If in eyes: Rinse cautiously with water for several minutes.
Remove any contact lenses if possible. Continue rinsing.

P310	Immediately call a POISON CENTER or doctor
P312	Call a POISON CENTER or doctor if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P362+364	Remove contaminated clothing and wash it before reuse.

16.2 Training advice:

Staff must be regularly instructed according to the legal requirements and the associated hazard.

16.3 Recommended restrictions on use:

No private use.

16.4 Further information:

To the best of our knowledge, the information in this safety data sheet corresponds to our knowledge at the time of printing. The information in this safety data sheet is intended to provide you with information for the safe handling of the product specified in this safety data sheet during storage, processing, transport and disposal. The information is not transferable to other products. If the product specified in this safety data sheet is mixed, mixed or processed with other materials or undergoes processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise.

16.5 Data sources:

1.) Current safety data sheets for the contents:
2.) IFA GESTIS Substance Database, Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (Institute for Occupational Safety and Health of the German Social Accident Insurance)
3.) RIGOLETTO-database "Catalogue of water polluting substances" Umweltbundesamt (UBA); date: 30/11/2012
4.) TA-Air 2002
5.) TRGS 900 Technical rules for hazardous substances – workplace thresholds; date: 2012
6.) DFG (Deutsche Forschungsgemeinschaft) - MAK- and BAT-value list, notifications 52, Wiley-VCH, 2016
7.) TRGS 509 Technical rules for hazardous substances - storage of liquid and solid hazardous substances in stationary containers; date: 30.11.2015
8.) TRGS 510 Technical rules for hazardous substances – storage of hazardous substances in stationary containers; date: 30.11.2015