Wheel Cleaner HD 25l

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

1.1. Product identifier

Trade name/designation:

Wheel Cleaner HD 25l

Article No.:
T495025

UFI:
KFE1-ENV1-43MR-HM1H

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

Use of the substance/mixture:
Cleaning agent
Acid cleaner for truckwash, carwash and industrial tank cleaning, metal cleaning

* 1.3. Details of the supplier of the safety data sheet

Supplier:

KANDO Service GmbH
Hartleitnerstraße 3
4653 Eberstalzell
Austria
Telephone: +43 (0) 7241 213 79
E-mail: msds@kando.eu

* 1.4. Emergency telephone number

Vergiftungsinformationszentrale (VIZ), Stubenring 6, 1010 Wien, 24h: 01 406 43 43, Montag - Freitag: 8 bis 16 Uhr, Tel.: 01 406 68 98 (keine medizinische Auskunft) (Only available during office hours.)

SECTION 2: Hazards identification

* 2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Corrosive to metals *(Met. Corr. 1)*	H290: May be corrosive to metals.	On basis of test data.
Acute toxicity (oral) *(Acute Tox. 4)*	H302: Harmful if swallowed.	Calculation method.
Skin corrosion/irritation *(Skin Corr. 1A)*	H314: Causes severe skin burns and eye damage.	Calculation method.
Serious eye damage/eye irritation *(Eye Dam. 1)*	H318: Causes serious eye damage.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.

Additional information:
Corrosive effects on the skin cause irreversible skin damage, i.e. necrosis extending through the epidermis into the dermis.

*
2.2. Label elements

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

Hazard pictograms:



GHS05
Corrosion



GHS07
Exclamation mark

Signal word: Danger

Hazard components for labelling:
hydrogen chloride; Ammonium hydrogen difluoride; Isotridecanol, ethoxylated (>5-20 EO); ammonium fluoride

Hazard statements for physical hazards	
H290	May be corrosive to metals.

Hazard statements for health hazards	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Precautionary statements Prevention	
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing and eye protection/face protection.

Precautionary statements Response	
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
P390	Absorb spillage to prevent material damage.

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

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

*
2.3. Other hazards

Other adverse effects:
Contains no PBT/vPvB substances ≥ 0.1%, assessed according to REACH Annex XIII. Contains no endocrine disruptor (ED) (in a concentration of ≥ 0.1 %)

SECTION 3: Composition/information on ingredients

*
3.2. Mixtures

Description:
Cleaning agent
The product does not contain any (further) ingredients that are classified according to the current knowledge of the supplier and contribute to the classification of the product and therefore need to be specified in this section.

Additional information:
Nonionic surfactants < 5%

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 7647-01-0 EC No.: 231-595-7 REACH No.: 01-2119484862-27	**hydrogen chloride** Eye Dam. 1 (H318), Met. Corr. 1 (H290), STOT SE 3 (H335), Skin Corr. 1A (H314) Danger **Specific concentration limit (SCL)** Skin Corr. 1B; H314: 10% ≤ C < 25% Skin Irrit. 2; H315: 1% ≤ C < 10% STOT SE 3; H335: C ≥ 10% Met. Corr. 1; H290: C ≥ 0.1% Skin Corr. 1A; H314: C ≥ 25% Eye Dam. 1; H318: C ≥ 1% **Acute Toxicity Estimate** ATE (oral) > 700 mg/kg ATE (dermal) > 5,000 mg/kg ATE (inhalation, dust/mist) 1.68 mg/L	10 – < 25 %
CAS No.: 1341-49-7 EC No.: 215-676-4 REACH No.: 01-2119489180-38	**Ammonium hydrogen difluoride** Acute Tox. 3 (H301), Eye Dam. 1 (H318), Skin Corr. 1B (H314) Danger **Specific concentration limit (SCL)** Skin Corr. 1B; H314: C ≥ 1% Skin Irrit. 2; H315: 0.1% ≤ C < 1% Eye Dam. 1; H318: C ≥ 1% Eye Irrit. 2; H319: 0.1% ≤ C < 1% **Acute Toxicity Estimate** ATE (oral) 130 mg/kg	5 – < 10 %
CAS No.: 69011-36-5 EC No.: 500-241-6 REACH No.: 01-2119976362-32	**Isotridecanol, ethoxylated (>5-20 EO)** Acute Tox. 4 (H302), Eye Dam. 1 (H318) Danger **Specific concentration limit (SCL)** Eye Dam. 1; H318: C ≥ 10% Eye Irrit. 2; H319: 1% ≤ C < 10% **Acute Toxicity Estimate** ATE (oral) 300 – 2,000 mg/kg ATE (dermal) > 2,000 mg/kg	2.5 – < 5 %
CAS No.: 12125-01-8 EC No.: 235-185-9	**ammonium fluoride** Acute Tox. 3 (H301, H311, H331) Danger **Acute Toxicity Estimate** ATE (oral) 100 mg/kg ATE (dermal) 300 mg/kg ATE (inhalation, vapour) 3 mg/L ATE (inhalation, dust/mist) 0.5 mg/L	< 1 %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

* **4.1. Description of first aid measures**

General information:

Do not leave affected person unattended. Remove victim out of the danger area. If unconscious, position and transport in stable lateral position. Never give anything by mouth to an unconscious person or a person with cramps. Take off contaminated clothing. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours. If in doubt, or if you experience any symptoms, contact a doctor.

Following inhalation:

Provide fresh air. In the event of irregular breathing or respiratory arrest, seek medical assistance immediately and initiate first aid measures. Call a POISON CENTER or doctor/physician if you feel unwell.

In case of skin contact:
Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
Immediately call a POISON CENTER or doctor/physician.

After eye contact:
Rinse opened eye immediately with plenty of water for at least 15 minutes. Remove contact lenses. If symptoms persist, consult a doctor.

Following ingestion:
If swallowed, rinse mouth with water (only if the victim is conscious). Make the victim drink plenty of water in small sips (dilution effect). Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed
Dyspnoea, Headache, Dizziness, Cough

* ### 4.3. Indication of any immediate medical attention and special treatment needed
For advice from a specialist, doctors should contact the Poison Control Centre.

SECTION 5: Firefighting measures

* ### 5.1. Extinguishing media
Suitable extinguishing media:
Spray water, alcohol resistant foam;
Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media:
Water in full jet

* ### 5.2. Special hazards arising from the substance or mixture
Corrosive to metals

Hazardous combustion products:
In case of fire: Toxic vapours can be released. (Hydrogen chloride (HCl), Hydrogen fluoride)

* ### 5.3. Advice for firefighters
Do not inhale explosion and combustion gases. Co-ordinate fire-fighting measures to the fire surroundings. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fight fire with normal precautions from a reasonable distance.
Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

* ### 6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Personal precautions:
Remove persons to safety. Ventilate affected area. Special danger of slipping by leaking/spilling product. If necessary, observe the risk of slipping.

6.1.2. For emergency responders
Personal protection equipment:
Use respiratory protection when exposed to vapours/dust/aerosol. Use personal protective equipment as required.

* ### 6.2. Environmental precautions
Do not allow to enter drains/surface water/ground water. Retain contaminated washing water and dispose it. In case of spillage into water or sewage system, inform the competent authorities.

* ### 6.3. Methods and material for containment and cleaning up
For cleaning up:
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Apply neutralizing agent. Wipe up with absorbent material (eg. cloth, fleece).

Other information:
Provide adequate ventilation. Cover drains. Dispose of contaminated material as waste according to section 13.

* **6.4. Reference to other sections**

Section 5: Fire-Fighting Measures, Section 8: Exposure Controls/Personal Protection , Section 10: Stability and Reactivity, Section 13: Disposal Considerations (non-mandatory)

SECTION 7: Handling and storage

* **7.1. Precautions for safe handling**

Protective measures

Fire prevent measures:

The product is not flammable.
Have breathing apparatus ready.

Measures to prevent aerosol and dust generation:

Ensure good ventilation/extraction at the workplace. Use only in well-ventilated areas.

Advices on general occupational hygiene

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering areas where food will be served. Store separately from food. Keep away from food, drink and animal feed. When diluting/dissolving, always have the water ready first, then slowly stir in the product. Do not use for products which come into contact with the food stuffs.

* **7.2. Conditions for safe storage, including any incompatibilities**

Technical measures and storage conditions:

Store in a corrosion resistant container with a resistant inner liner. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store away from heat, weather, moisture and frost. Store in a well-ventilated place. Keep container tightly closed.

Requirements for storage rooms and vessels:

Keep/Store only in original container.

Hints on storage assembly:

Do not store together with: alkalines

Storage class (TRGS 510, Germany): 8A – Combustible corrosive substances

Further information on storage conditions:

Keep locked up. Store in a well-ventilated place. Keep container tightly closed. Protect from frost.

* **7.3. Specific end use(s)**

No data available

SECTION 8: Exposure controls/personal protection

* **8.1. Control parameters**

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	**Substance name**	**① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark**
MAK (AT)	**hydrogen chloride** CAS No.: 7647-01-0 EC No.: 231-595-7	② 10 ppm (15 mg/m³) ⑤ (Chlorwasserstoff; max. 8x5 min./Schicht, Momentanwert) 5(Mow); 8x
MAK (AT)	**hydrogen chloride** CAS No.: 7647-01-0 EC No.: 231-595-7	① 5 ppm (8 mg/m³) ⑤ (Chlorwasserstoff)
IOELV (EU) from 2 Jan 1900	**hydrogen chloride** CAS No.: 7647-01-0 EC No.: 231-595-7	① 5 ppm (8 mg/m³) ② 10 ppm (15 mg/m³)
MAK (AT)	**Ammonium hydrogen difluoride** CAS No.: 1341-49-7 EC No.: 215-676-4	① 2.5 mg/m³ ⑤ (Fluoride, berechnet als F; einatembare Fraktion)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
MAK (AT) from 2 Sept 2020	**Ammonium hydrogen difluoride** CAS No.: 1341-49-7 EC No.: 215-676-4	② 12.5 mg/m³ ⑤ (max. 2x30 min./Schicht, einatembare Fraktion)
IOELV (EU)	**Ammonium hydrogen difluoride** CAS No.: 1341-49-7 EC No.: 215-676-4	① 2.5 mg/m³ ⑤ (Fluorides, inorganic)

8.1.2. Biological limit values
No data available

8.1.3. DNEL-/PNEC-values
No data available

*
8.2. Exposure controls

8.2.1. Appropriate engineering controls
Ensure good ventilation/extraction at the workplace. Offer eye showers and emergency showers at the workplace.

8.2.2. Personal protection equipment


Eye/face protection:
Safety goggles with side shields (EN 166).

Skin protection:
Hand protection:
Wear protective gloves. Check leak tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Chemical protective gloves (according to European standard EN 374 or equivalent) The selection of a suitable glove depends not only on the material but also on other quality features and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.
Glove material: NBR (Nitrile rubber)
Recommended material thickness: ≥ 0,5 mm
Permeation time (maximum wear duration): >480 min.
Take recovery periods for skin regeneration. Preventive skin protection through the use of skin protectants is recommended. Wash hands thoroughly after handling.

Body protection:
Protective work clothing (EN ISO 13688)

Respiratory protection:
In case of inadequate ventilation wear respiratory protection. Full-/half-/quarter-face masks (EN 136/140).
Filter type: ABEK-P2 (Combination filtering device)

Other protection measures:
General protective and hygienic measures: Keep away from food, drink and animal feed. Immediately remove any contaminated clothing, shoes or stockings. Wash hands before breaks and after work. Avoid contact with eyes and skin.

8.2.3. Environmental exposure controls
Avoid release to the environment. Do not allow to enter drains/surface water/ground water.

SECTION 9: Physical and chemical properties

* 9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid
Form: Liquid
Colour: yellow
Odour: characteristic
flammability: Yes
Odour threshold: not determined

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	1		
Melting point	*No data available*		
Freezing point	*No data available*		
Initial boiling point and boiling range	100 °C		
Flash point	> 65 °C		
Evaporation rate	*No data available*		
Auto-ignition temperature	*No data available*		
Upper/lower flammability or explosive limits	*No data available*		
Vapour pressure	2.3 kPa	20 °C	
Vapour density	*No data available*		
Density	1.09 kg/L		
Bulk density	*not applicable*		
Water solubility	completely miscible		
Dynamic viscosity	< 10 mPa* s		
Kinematic viscosity	9.174 mm²/s		

* 9.2. Other information

No data available

SECTION 10: Stability and reactivity

* 10.1. Reactivity

Corrosive to metals

* 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

* 10.3. Possibility of hazardous reactions

No known hazardous reactions.

* 10.4. Conditions to avoid

In case of inadequate ventilation wear respiratory protection.

* 10.5. Incompatible materials

Bases, Oxidizing agent
Light metal

* 10.6. Hazardous decomposition products

None known

SECTION 11: Toxicological information

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

hydrogen chloride CAS No.: 7647-01-0 EC No.: 231-595-7	
LD_{50} oral: >700 mg/kg (Rat)	
LD_{50} dermal: >5,000 mg/kg (Rabbit)	
LC_{50} Acute inhalation toxicity (dust/mist): 1.68 mg/L 1 h (Rat)	
Ammonium hydrogen difluoride CAS No.: 1341-49-7 EC No.: 215-676-4	
LD_{50} oral: 130 mg/kg (Rat)	
Isotridecanol, ethoxylated (>5-20 EO) CAS No.: 69011-36-5 EC No.: 500-241-6	
LD_{50} oral: 300 – 2,000 mg/kg (Rat)	
LD_{50} dermal: >2,000 mg/kg (Rabbit)	

Acute oral toxicity:
Harmful if swallowed.

Skin corrosion/irritation:
Causes severe skin burns and eye damage.

Serious eye damage/irritation:
Causes serious eye damage.

Respiratory or skin sensitisation:
It is not classified as an inhalation or skin allergen.

Germ cell mutagenicity:
Is not to be classified as carcinogenic.

Carcinogenicity:
Is not to be classified as carcinogenic.

Reproductive toxicity:
Is not classified as toxic for reproduction.

STOT-single exposure:
May cause respiratory irritation.

STOT-repeated exposure:
Shall not be classified as specific target organ toxicant (repeated exposure).

Aspiration hazard:
Is not to be classified as an aspiration hazard.

Additional information:
If swallowed, strong caustic effect of the oral cavity and pharynx as well as danger of perforation of the oesophagus and stomach.

* **11.2. Information on other hazards**

Endocrine disrupting properties:
Contains no endocrine disruptor (ED) (in a concentration of ≥ 0.1 %)

SECTION 12: Ecological information

* **12.1. Toxicity**

hydrogen chloride CAS No.: 7647-01-0 EC No.: 231-595-7	
LC_{50}: 282 mg/L 4 d (fish)	
Ammonium hydrogen difluoride CAS No.: 1341-49-7 EC No.: 215-676-4	
LC_{50}: 51 mg/L 4 d (fish, Salmo gairdneri)	
EC_{50}: 43 mg/L 4 d (Algae/water plant, Scenedesmus subspicatus)	
Isotridecanol, ethoxylated (>5-20 EO) CAS No.: 69011-36-5 EC No.: 500-241-6	
LC_{50}: 1 – 10 mg/L 4 d (fish)	
EC_{50}: 1 – 10 mg/L 2 d (crustaceans)	
EC_{50}: 1 – 10 mg/L 3 d (Algae/water plant, Scenedesmus subspicatus)	

* 12.2. Persistence and degradability

Biodegradation:

The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

* 12.3. Bioaccumulative potential

No data available

* 12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

hydrogen chloride CAS No.: 7647-01-0 EC No.: 231-595-7	
Results of PBT and vPvB assessment: —	
Ammonium hydrogen difluoride CAS No.: 1341-49-7 EC No.: 215-676-4	
Results of PBT and vPvB assessment: —	
Isotridecanol, ethoxylated (>5-20 EO) CAS No.: 69011-36-5 EC No.: 500-241-6	
Results of PBT and vPvB assessment: —	

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

* 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria. Contains no endocrine disruptor (ED) (in a concentration of ≥ 0.1 %)

* 12.7. Other adverse effects

Drinking water hazard even when small quantities leak into the subsoil.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. into the sewerage system. Flushing away larger quantities into sewers or water bodies can lead to an increase in pH value. A high pH-value damages water organisms. In the dilution of the application concentration, the value is reduced considerably, so that after use of the product the waste water entering the sewage system is only slightly hazardous to water. are only slightly hazardous to water.
Water hazard class 1: slightly hazardous to water

SECTION 13: Disposal considerations

* 13.1. Waste treatment methods

Must not be disposed of together with household waste. Do not allow to enter into surface water or drains.
Avoid release to the environment. This is hazardous waste; only approved packaging (e.g. in accordance with ADR) may be used. Packaging that has been completely emptied may be sent for recycling. Contaminated packaging must be treated in the same way as the substance itself. Waste must be separated in such a way that it can be treated separately by the municipal or national waste disposal facilities. Dispose of the contents / container in accordance with local / regional / national / international regulations.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Directive 2008/98/EC (Waste Framework Directive)

HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 8	Corrosive

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
UN 3264	UN 3264	UN 3264	UN 3264

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
*** 14.2. UN proper shipping name**			
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ammonium hydrogendifluoride, hydrochloric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ammonium hydrogendifluoride, hydrochloric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Ammoniumbifluorid, Hydrochloric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Ammoniumbifluorid, Hydrochloric acid)
*** 14.3. Transport hazard class(es)**			
 8	 8	 8	 8
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
No	No	No	No
*** 14.6. Special precautions for user**			
Special Provisions: 274 **Limited quantity (LQ):** 1 L **Excepted Quantities (EQ):** E2 **Hazard identification number (Kemler No.):** 80 **Classification code:** C1 **Tunnel restriction code:** (E) **Remark:** Transport category 2 The regulations on dangerous goods (ADR) must also be observed within the company premises.	**Special Provisions:** 274 **Limited quantity (LQ):** 1 L **Excepted Quantities (EQ):** E2 **Classification code:** C1	**Special Provisions:** 274 **Limited quantity (LQ):** 1 L **Excepted Quantities (EQ):** E2 **EmS-No.:** F-A, S-B **Remark:** Congestion category B IMDG-Code segregation group 1 - Acids	**Special Provisions:** A3 **Limited quantity (LQ):** 0,5 L **Excepted Quantities (EQ):** E2

14.7. Maritime transport in bulk according to IMO instruments
not applicable

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Restrictions on use:

Regulation (EC) No 1907/2006 ANNEX XVII: Restriction conditions: 3, 65, 75
Substances of Very High Concern (SVHC) according to REACH, Article 57 None of the ingredients are included.
Seveso category None of the ingredients are included.
Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR) None of the ingredients are included.
Water Framework Directive (WFD) ammonium hydrogendifluoride
Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013 None of the ingredients are included.

Regulation (EC) No. 648/2004 [Detergents regulation]: <5% non-ionic surfactants
Regulation (EC) 2019/1021 [POP Regulation] None of the ingredients are included.

15.1.2. National regulations
No data available

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

SECTION 16: Other information

*
16.1. Indication of changes

1.3.	Details of the supplier of the safety data sheet
1.4.	Emergency telephone number
2.1.	Classification of the substance or mixture
2.2.	Label elements
2.3.	Other hazards
3.2.	Mixtures
4.1.	Description of first aid measures
4.3.	Indication of any immediate medical attention and special treatment needed
5.1.	Extinguishing media
5.2.	Special hazards arising from the substance or mixture
5.3.	Advice for firefighters
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
7.1.	Precautions for safe handling
7.2.	Conditions for safe storage, including any incompatibilities
7.3.	Specific end use(s)
8.1.	Control parameters
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties
9.2.	Other information
10.1.	Reactivity
10.2.	Chemical stability
10.3.	Possibility of hazardous reactions
10.4.	Conditions to avoid
10.5.	Incompatible materials
10.6.	Hazardous decomposition products
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.4.	Mobility in soil
12.6.	Endocrine disrupting properties
12.7.	Other adverse effects
13.1.	Waste treatment methods
14.2.	UN proper shipping name
14.3.	Transport hazard class(es)
14.6.	Special precautions for user
14.8.	Additional information
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
15.3.	Additional information

16.1.	Indication of changes
16.2.	Abbreviations and acronyms
16.4.	Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

*
16.2. Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
AVV	Waste Shipment Ordinance (DE)
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DIN	German Institute for Standardization / German Industrial Standard
DNEL	derived no-effect level
EAK	European Waste Catalogue
EC_{50}	Effective Concentration 50%
EG	European Community
EN	European Standard
ES	Exposure scenario
EU	European Union
EWC	European Waste Catalogue
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
KG	body weight
LC_{50}	Lethal (fatal) Concentration 50%
LD_{50}	Lethal (fatal) Dose 50%
MAK	Maximum concentration in the workplace air (CH)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
OSHA	Occupational Safety & Health Administration
PBT	persistent and bioaccumulative and toxic
PC	Product category
PNEC	Predicted No Effect Concentration
QSAR	Quantitative Structure-Activity Relationship
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
SCL	Specific concentration limit
Tox.	Toxicity
TRGS	Technische Regeln für Gefahrstoffe
UFI	Unique Formula Identifier
UN	United Nations
VOC	Volatile organic compounds
ZNS	central nervous system

16.3. Key literature references and sources for data

No data available

*
16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Corrosive to metals *(Met. Corr. 1)*	H290: May be corrosive to metals.	On basis of test data.
Acute toxicity (oral) *(Acute Tox. 4)*	H302: Harmful if swallowed.	Calculation method.

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation *(Skin Corr. 1A)*	H314: Causes severe skin burns and eye damage.	Calculation method.
Serious eye damage/eye irritation *(Eye Dam. 1)*	H318: Causes serious eye damage.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H335: May cause respiratory irritation.	Calculation method.

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

16.6. Training advice
No data available

16.7. Additional information
To the best of our knowledge, the information contained herein is accurate. However, neither the above-mentioned supplier nor its subsidiaries assume any liability with regard to the correctness or completeness of the information provided. A final determination of the suitability of individual materials is the sole responsibility of the user. All materials may involve unknown risks and should be used with caution. While certain risks are described herein, we cannot guarantee that these are the only possible risks.

* Data changed compared with the previous version.