

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), (EU) 2020/878

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

1.1. Product identifier

Trade name/designation:

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Article No.:

T111005

UFI:

XCUM-VXPV-2WGS-YH0C

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

Use of the substance/mixture:

Descaling products

Process Category [PROC]: 8, 10, 11

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 (<i>Met. Corr. 1</i>)	H290: May be corrosive to metals.	
Skin corrosion/irritation (<i>Skin Corr. 1B</i>)	H314: Causes severe skin burns and eye damage.	
STOT-single exposure (<i>STOT SE 3</i>)	H335: May cause respiratory irritation.	

2.2. Label elements

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

Hazard pictograms:



GHS05

Corrosion



GHS07

Exclamation mark

Signal word: Danger

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Hazard components for labelling:

Hydrochloric acid

Hazard statements for physical hazards	
H290	May be corrosive to metals.
Hazard statements for health hazards	
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Supplemental hazard information: none

Precautionary statements Prevention	
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing and eye protection/face protection.
Precautionary statements Response	
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
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.
P310	Immediately call a POISON CENTER.

2.3. Other hazards

Adverse human health effects and symptoms:

The inhalation of dust/mist or aerosols causes irritation of the respiratory tract.

Adverse environmental effects:

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

SECTION 3: Composition/information on ingredients

* 3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
EC No.: 231-595-7 REACH No.: 01-2119484862-27	Hydrochloric acid STOT SE 3 (H335), Skin Corr. 1B (H314) ⚠️ Danger Specific concentration limit (SCL) Skin Corr. 1B; H314: $25\% \leq C < 100\%$ Skin Irrit. 2; H315: $10\% \leq C < 25\%$ Eye Irrit. 2; H319: $10\% \leq C < 25\%$ STOT SE 3; H335: $10\% \leq C < 100\%$ Acute Toxicity Estimate ATE (oral) > 2,000 mg/kg ATE (dermal) > 2,000 mg/kg ATE (inhalation, gases) 700 ppmV	15 - < 20 Vol-%
CAS No.: 68439-50-9	Alkyl polyethoxilate Acute Tox. 4 (H302), Aquatic Chronic 3 (H412), Eye Dam. 1 (H318) ⚠️ Danger Acute Toxicity Estimate ATE (oral) 500 mg/kg ATE (dermal) > 2,000 mg/kg ATE (inhalation, dust/mist) > 5 mg/L	1 - < 5 Vol-%
	Nonionic surfactants The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	< 5 Vol-%
	Fragrances The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	

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

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Remove contaminated, saturated clothing immediately.

Following inhalation:

Provide fresh air.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.

Take off contaminated clothing and wash it before reuse.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water.

Following ingestion:

Rinse mouth immediately and drink 1 glass of water.

Do NOT induce vomiting.

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray jet, alcohol resistant foam, Carbon dioxide, Extinguishing powder

Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon dioxide, Carbon monoxide

5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Avoid contact with skin, eyes and clothes.

Protective equipment:

Use personal protection equipment.

Emergency procedures:

Ventilate affected area.

6.1.2. For emergency responders

Personal protection equipment:

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

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For cleaning up:

Treat the recovered material as prescribed in the section on waste disposal.

Other information:

Collect in closed and suitable containers for disposal. Ventilate affected area.

6.4. Reference to other sections

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Avoid contact with skin, eyes and clothes.

Do not mix with other chemicals.

Use personal protection equipment.

When using do not eat, drink, smoke, sniff.

Do not breathe gas/fumes/vapour/spray.

Use only in well-ventilated areas.

Fire prevent measures:

No special fire protection measures are necessary.

Advices on general occupational hygiene

Take off contaminated clothing.

Wash hands before breaks and after work.

When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels:

Keep container tightly closed.

Hints on storage assembly:

No special measures are necessary.

Storage class (TRGS 510, Germany): 8B – Non-combustible corrosive substances

Further information on storage conditions:

No further relevant information available.

7.3. Specific end use(s)

Recommendation:

Cleaning agent

GISCODE:

GG 85

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)	Hydrochloric acid EC No.: 231-595-7	② 10 ppm (15 mg/m ³) ⑤ (Chlorwasserstoff; max. 8x5 min./Schicht, Momentanwert)
MAK (AT)	Hydrochloric acid EC No.: 231-595-7	① 5 ppm (8 mg/m ³) ⑤ (Chlorwasserstoff)

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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
IOELV (EU) from 2 Jan 1900	Hydrochloric acid EC No.: 231-595-7	① 5 ppm (8 mg/m ³) ② 10 ppm (15 mg/m ³)

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

No information available.

8.2.2. Personal protection equipment



Eye/face protection:

Wear eye protection/face protection. (EN166)

Skin protection:

Hand protection:

Wear protective gloves. (EN374, Breakthrough time: >10 min)

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material $\geq 0,1$ mm

A list of suitable makes with detailed information on wearing time is available on request.

Diluted application solutions $\leq 1\%$:

Protective gloves may be dispensed with, provided equivalent protective measures are taken, taking into account increased skin exposure due to wet work (e.g. use of suitable skin protection ointments).

Body protection:

Wear suitable work clothing.

Respiratory protection:

Use only in well-ventilated areas.

In case of inadequate ventilation wear respiratory protection. (EN 14387, A1)

Thermal hazards:

No further relevant information available.

Other protection measures:

Wear suitable work clothing.

8.2.3. Environmental exposure controls

Section 6: Accidental Release Measures

SECTION 9: Physical and chemical properties

* 9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Colour: light yellow

Odour: Perfumes, fragrances

flammability: No data available

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	≈ 0	20 °C	
Melting point	≈ 0 °C		

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Parameter	Value	at °C	① Method ② Remark
Freezing point	≈ 0 °C		
Initial boiling point and boiling range	≈ 100 °C		
Decomposition temperature	not applicable		
Flash point	not applicable		
Evaporation rate	No data available		
Auto-ignition temperature	not applicable		
Upper/lower flammability or explosive limits	not applicable		
Vapour pressure	No data available		
Vapour density	No data available		
Density	1.09 g/cm ³	20 °C	
Bulk density	not applicable		
Water solubility	completely miscible	20 °C	
Dynamic viscosity	< 10 mPa·s	25 °C	
Kinematic viscosity	No data available		

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals.

Exothermic reaction with: Alkali (Iye)

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Corrosive to metals.

Exothermic reaction with: Alkali (Iye)

10.4. Conditions to avoid

The product is stable under storage at normal ambient temperatures.

10.5. Incompatible materials

Corrosive to metals.

Alkali (Iye)

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

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

Hydrochloric acid EC No.: 231-595-7
LD₅₀ oral: >2,000 mg/kg (Rat)
LD₅₀ dermal: >2,000 mg/kg (Rat)
LC₅₀ Acute inhalation toxicity (gas): 700 ppmV (Rat)
Alkyl polyethoxilate CAS No.: 68439-50-9
LD₅₀ oral: 500 mg/kg (Rat)
LD₅₀ dermal: >2,000 mg/kg (Rat)
LC₅₀ Acute inhalation toxicity (dust/mist): >5 mg/L (Rat)

Acute oral toxicity:

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

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Acute dermal toxicity:

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

Acute inhalation toxicity:

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

Skin corrosion/irritation:

Causes severe skin burns and eye damage.

Serious eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

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

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:

May cause respiratory irritation. (hydrochloric acid)

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.

11.2. Information on other hazards

Endocrine disrupting properties:

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Hydrochloric acid	EC No.: 231-595-7
LC₅₀: 862 mg/L 4 d (fish, <i>Leuciscus idus</i> (Goldorfe))	
Alkyl polyethoxilate	CAS No.: 68439-50-9
LC₅₀: >1 mg/L 4 d (fish)	
EC₅₀: >1 mg/L 2 d (crustaceans)	
ErC₅₀: >1 mg/L (Algae/water plant)	

12.2. Persistence and degradability

Alkyl polyethoxilate	CAS No.: 68439-50-9
Biodegradation: Yes, rapidly	
Remark: Readily biodegradable (according to OECD criteria).	

Additional information:

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

12.3. Bioaccumulative potential

Accumulation / Evaluation:

No indication of bioaccumulation potential.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

Hydrochloric acid	EC No.: 231-595-7
Results of PBT and vPvB assessment: —	

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Alkyl polyethoxilate CAS No.: 68439-50-9
Results of PBT and vPvB assessment: —
Nonionic surfactants
Results of PBT and vPvB assessment: —
Fragrances
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.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation. Delivery to an approved waste disposal company.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

06 01 02 *	hydrochloric acid
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*: Evidence for disposal must be provided.

Waste code packaging





15 01 02	Plastic packaging
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Waste treatment options

Appropriate disposal / Package:

Non-contaminated packages may be recycled.

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 1789	UN 1789	UN 1789	UN 1789
14.2. UN proper shipping name			
HYDROCHLORIC ACID, SOLUTION	HYDROCHLORIC ACID, SOLUTION	HYDROCHLORIC ACID, SOLUTION	HYDROCHLORIC ACID, SOLUTION
14.3. Transport hazard class(es)			
 8	 8	 8	 8
14.4. Packing group			
III	III	III	III
14.5. Environmental hazards			
No	No	No	No
14.6. Special precautions for user			
Special Provisions: 520 Limited quantity (LQ): 5 L Excepted Quantities (EQ): E1	Special Provisions: 520 Limited quantity (LQ): 5 L Excepted Quantities (EQ): E1	Special Provisions: 223 Limited quantity (LQ): 5 L Excepted Quantities (EQ): E1	Special Provisions: A3 A803 Limited quantity (LQ): Y841 Excepted Quantities (EQ): E1

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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
Hazard identification number (Kemler No.): 80 Classification code: C1 Tunnel restriction code: (E) Remark: Transport category: 3	Classification code: C1	EmS-No.: F-A, S-B	Remark: IATA Packing Instructions - Passenger: 852 IATA Maximum Quantity - Passenger: 5 L IATA- Verpackungsanweisung - Cargo: 856 IATA Maximum Quantity - Cargo: 60 L

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:

Restrictions on use (REACH, Annex XVII) Entry 3, Entry 75

Other regulations (EU):

Regulation (EC) No. 648/2004 [Detergents regulation]

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds:

Volatile organic compounds (VOC) content in percent by weight: 0.1 Vol-%

15.1.2. National regulations

No data available

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

* 16.1. Indication of changes

3.2.	Mixtures
8.1.	Control parameters
9.1.	Information on basic physical and chemical properties
14.3.	Transport hazard class(es)
16.1.	Indication of changes
16.2.	Abbreviations and acronyms

* 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
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DNEL	derived no-effect level
EC ₅₀	Effective Concentration 50%
EN	European Standard
ES	Exposure scenario
EWC	European Waste Catalogue
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
LC ₅₀	Lethal (fatal) Concentration 50%

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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
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
PROC	Process Category
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
SCL	Specific concentration limit
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations
VOC	Volatile organic compounds

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 (<i>Met. Corr. 1</i>)	H290: May be corrosive to metals.	
Skin corrosion/irritation (<i>Skin Corr. 1B</i>)	H314: Causes severe skin burns and eye damage.	
STOT-single exposure (<i>STOT SE 3</i>)	H335: May cause respiratory irritation.	

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

Hazard statements	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

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.