Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No.2015/830

SAFETY DATA SHEET

DOMESTOS Zero Limescale Professional

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

1.1 Product identifier

Product name	:	DOMESTOS Zero Limescale Professional
Product code	:	8314328
Product description	:	Disinfectant Limescale Remover for Toilets
Product type	:	gel
Other means of identification	:	Not available.

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

Identified uses
Professional and consumer uses

1.3 Details of the supplier of the safety data sheet

Unilever UK Limited
Springfield Drive
KT22 7GR
Surrey, Leatherhead
UNITED KINGDOM

e-mail address of person responsible for this SDS	:	unileversds@unileverconsumerlink.co.uk

National contact

Not available.

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number	:	Not applicable in United Kingdom and Ireland

Supplier

Telephone number	:	0800 776646/Eire 1850 388 399
Hours of operation	:	-
Information limitations	:	Not available.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Met. Corr. 1 H290
Skin Corr./Irrit. 1 H314
Aquatic Chronic 3 H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity	:	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 0 %
Ingredients of unknown ecotoxicity	:	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 0 %

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Danger
Hazard statements : May be corrosive to metals.
Causes severe skin burns and eye damage.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : P102 Keep out of reach of children.

Prevention : P234 Keep only in original container.
P273 Avoid release to the environment.

Response : P303 IF ON SKIN (or hair):
P361 Remove/Take off immediately all contaminated clothing.
P353 Rinse skin with water/shower.
P305 IF IN EYES:
P351 Rinse cautiously with water for several minutes.
P338 Remove contact lenses, if present and easy to do. Continue rinsing.
P301 IF SWALLOWED:
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P310 Immediately call a POISON CENTER or doctor/physician.

Storage : P405 Store locked up.

Disposal : Dispose of used up container in accordance with local regulations.

Hazardous ingredients : Hydrochloric acid
Sulfamic Acid
PEG-2 Oleamine

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Yes, applicable.

Tactile warning of danger : Yes, applicable.

2.3 Other hazards

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII : Not applicable.

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : Not applicable.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification		Type
				Regulation (EC) No. 1272/2008 [CLP]	
Hydrochloric acid	RRN : 01-2119484862-27 EC:231-595-7 CAS : 7647-01-0 Index:017-002-01-X	>=5 - <10		Skin Corr./Irrit. 1B, H314 STOT SE 3, H335	[1][2]
Sulfamic Acid	RRN : 01-2119846728-23 EC:226-218-8 CAS : 5329-14-6	>=5 - <10		Skin Corr./Irrit. 2, H315 Eye Dam./Irrit. 2, H319 Aquatic Chronic 3,	[1]

	Index:016-026-00-0			H412	
PEG-2 Oleamine	EC: CAS : 26635-93-8 Index:	>=1 - <3		Acute Tox. 4, H302 Skin Corr./Irrit. 1B, H314 AquaticAcute 1, H400 M: 1 Aquatic Chronic 1, H410 M: 1	[1]
Cetrimonium Chloride	RRN : 01-2119970558-23 EC:203-928-6 CAS : 112-02-7 Index:	>=0.1 - <1		Skin Corr./Irrit. 1C, H314 AquaticAcute 1, H400 M: 10 Acute Tox. 4, H302 Eye Dam./Irrit. 1, H318 Acute Tox. 3, H311 Aquatic Chronic 1, H410 M: 1	[1]

Type
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

See Section 16 for the full text of the H statements declared above.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8. For confidentiality reasons, the levels of components listed in Section 3 are given in percentage bands. The bandings do not reflect potential variation in composition of this formulation, but are used simply to mask the exact component levels, which we consider to be proprietary information. The classification given in Section 2 and 15 reflects the exact composition of this mixture.
* exempted according to REACH Art. 2(7) and Annex V; Each starting material of the ionic mixture is registered, if required

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove person to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still

present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove person to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes severe burns.
Ingestion : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion	:	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	:	In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	:	No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Additional information	:	Not available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the

product has caused environmental pollution (sewers, waterways, soil or air).Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Small spill	:	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows.Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.
6.4 Reference to other sections	:	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store

locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Seveso III Directive - Reporting thresholds

Named substances

Name	Notification and MAPP threshold	Safety report threshold
Hydrochloric acid	25 t	250 t

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
C9i: Very toxic for the environment	100 t	200 t

7.3 Specific end use(s)

Recommendations : Not available.
Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Hydrochloric acid	**EU. Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC.(2000-06-01)** Time Weighted Average (TWA) 8 mg/m3 , 5 ppm **EU. Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC.(2000-06-01)** Short Term Exposure Limit value for a 15-minute reference period expressed in parts per million or in mg/m3. 15 mg/m3 , 10 ppm **UK. Health and Safety Commission, EH 40, Workplace exposure limits(1997-01-01)** Short Term Exposure Limit value for a 15-minute reference period expressed in parts per million or in mg/m3. 8 mg/m3 , 5 ppmForm: Gas and aerosol mists **UK. Health and Safety Commission, EH 40, Workplace exposure limits(1997-01-01)** Time Weighted Average (TWA) 2 mg/m3 , 1 ppmForm: Gas and aerosol mists

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following:European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by

inhalation to chemical agents for comparison with limit values and measurement strategy)European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNEL/DMEL Summary : Not available.

PNEC Summary : Not available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation.Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.Respirator selection must be based on known or

anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Form	:	liquid [gel]
Color	:	Green.
Odor	:	Characteristic.
Odor threshold	:	Not available.
pH	:	< 1 [Conc. (% w/w): 1,000 g/l]
Melting point/freezing point	:	Not available.
Initial boiling point and boiling range	:	Not available.
Flash point	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Density	:	Not available
Bulk density	:	Not available
Burning time	:	Not available.
Burning rate	:	Not available.
Upper/lower flammability or explosive limits	:	**Lower:** Not available. **Upper:** Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	1.072
Solubility(ies)	:	Not available.
Solubility in water	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	**Dynamic:** 770.000 mPa.s **Kinematic:** Not available.
Explosive properties	:	Not available.
Oxidizing properties	:	Not available.

9.2 Other information

SADT	:	Not available

Aerosol product

Type of aerosol	:	Not available
Heat of combustion	:	Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
Reactive or incompatible with the following materials:
alkalis
metals

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hydrochloric acid				
	LC50 Inhalation	Rat	3,124 ppm	1 h
	LC50 Inhalation	Rat	3,700 ppm	0.50 h
	LC50 Inhalation	Rat	7.004 mg/l	0.50 h
	LC50 Inhalation	Rat	60.938 mg/l	0.08 h
	LC50 Inhalation	Rat	8.3 mg/l	0.50 h
	LC50 Inhalation	Rat	45 mg/l	0.08 h
Sulfamic Acid				
	LD50 Oral	Rat	3,160 mg/kg	-
PEG-2 Oleamine				
Cetrimonium Chloride				
	LD50 Oral	Rat - Female	450 mg/kg	-

Conclusion/Summary : Very low toxicity to humans or animals.

Acute toxicity estimates

Route	ATE value
Oral	21600 mg/kg

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hydrochloric acid	Not relevant	Not relevant	0		-
Sulfamic Acid	Eyes - Severe irritant	Rabbit		24 hrs	-

	Skin - Mild irritant	Human		120 hrs	-
	Skin - Severe irritant	Rabbit		24 hrs	-
	Eyes - Moderate irritant	Rabbit			-

Conclusion/Summary

Skin : Causes severe skin burns and eye damage.
Eyes : Causes serious eye damage.
Respiratory : Non-irritating to the respiratory system.

Sensitization

Product/ingredient name	Route of exposure	Species	Result

Conclusion/Summary

Skin : Not sensitizing
Respiratory : Not sensitizing

Mutagenicity

Conclusion/Summary : Not applicable.

Carcinogenicity

Conclusion/Summary : No additional remark.

Reproductive toxicity

Conclusion/Summary : Not applicable.

Teratogenicity

Conclusion/Summary : Not applicable.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes severe burns.
Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain

watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Very low toxicity to humans or animals.

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Hydrochloric acid			
	Acute LC50 282 mg/l Fresh water	Fish - Western mosquitofish	96 h
Sulfamic Acid			
	Acute LC50 14,200 µg/l Fresh water	Fish - Fathead minnow	96 h
	Acute LC50 70,300 µg/l Fresh water	Fish - Fathead minnow	96 h
PEG-2 Oleamine			
	Acute LC50 < 0.1 mg/l Fresh water	Fish - Fish	96 h
Cetrimonium Chloride			
	Acute LC50 0.01 mg/l	Fish - Fish	48 h
	Acute LC50 10 µg/l Fresh water	Aquatic invertebrates. Water flea	48 h

Conclusion/Summary : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary : The surfactants used in this mixture are readily biodegradable., The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Hydrochloric acid	0.25	-	low
Sulfamic Acid	0.101	-	low
Cetrimonium Chloride	3.23	-	low

12.4 Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Mobility : Mixture is highly soluble

12.5 Results of PBT and vPvB assessment

PBT : P: Not available.
B: Not available.
T: Not available.

vPvB : vP: Not available.
vB: Not available.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible.Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN3264	UN3264	UN3264	UN3264
14.2 UN proper shipping name	CORROSIVE LIQUID, ACIDIC INORGANIC N.O.S (Sulphamic acid, Hydrochloric acid)	CORROSIVE LIQUID, ACIDIC INORGANIC N.O.S (Sulphamic acid, Hydrochloric acid)	CORROSIVE LIQUID, ACIDIC INORGANIC N.O.S (Sulphamic acid, Hydrochloric acid)	CORROSIVE LIQUID, ACIDIC INORGANIC N.O.S (Sulphamic acid, Hydrochloric acid)
14.3 Transport hazard class(es)	Class 8: Corrosive substances.	Class 8: Corrosive substances.	Class 8: Corrosive substances.	Class 8: Corrosive substances.
14.4 Packing group	III	III	III	III
14.5. Environmental hazards	No.	No.	No.	No.
Additional information	**Tunnel restriction code: (E)**		**Emergency schedules (EmS):** F-A, S-B	

14.6 Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.'

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization
Annex XIV: None of the components are listed.

Substances of very high concern: None of the components are listed.

Other EU regulations

Europe inventory : Not determined.
Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

Aerosol dispensers : Not applicable.

Seveso III Directive

Named substances

Name
Hydrochloric acid

Danger criteria

Category
C9i: Very toxic for the environment

National regulations

Remark : No additional remark.

International regulations

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Abbreviations and acronyms :
ATE = Acute Toxicity Estimate
AISE = Association Internationale de la Savonnerie, de la Détergence et des Produits d'Entretien, International Association for Soaps, Detergents and Maintenance Products'
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Key literature references and sources for data : Evaluation method used for mixture classification: Calculation method.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Met. Corr. 1, H290	On basis of test data
Skin Corr./Irrit. 1, H314	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements	:	H311 Toxic in contact with skin. H302 Harmful if swallowed. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects. H318 Causes serious eye damage. H319 Causes serious eye irritation. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H290 May be corrosive to metals. H335 May cause respiratory irritation.
Full text of classifications [CLP/GHS]	:	**Acute Tox. 3, H311:** ACUTE TOXICITY: SKIN - Category 3 **Acute Tox. 4, H302:** ACUTE TOXICITY: ORAL - Category 4 **Aquatic Acute 1, H400:** AQUATIC HAZARD (ACUTE) - Category 1 **Aquatic Chronic 1, H410:** AQUATIC HAZARD (LONG-TERM) - Category 1 **Aquatic Chronic 3, H412:** AQUATIC HAZARD (LONG-TERM) - Category 3 **Eye Dam./Irrit. 1, H318:** SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 **Eye Dam./Irrit. 2, H319:** SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 **Skin Corr./Irrit. 1, H314:** SKIN CORROSION/IRRITATION - Category 1 **Skin Corr./Irrit. 1B, H314:** SKIN CORROSION/IRRITATION - Category 1B **Skin Corr./Irrit. 2, H315:** SKIN CORROSION/IRRITATION - Category 2 **Met. Corr. 1, H290:** CORROSIVE TO METALS - Category 1 **STOT SE 2, H335:** SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2
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Notice to reader

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ANNEXES TO SAFETY DATA SHEET: EXPOSURE SCENARIOS FOR COMMUNICATION

Exposure Scenario related to HYDROGEN CHLORIDE (7647-01-0)

Exposure Scenario 1: Professional use of Cleaning and Care products		
Use descriptor	**Sectors of use:** SU22: Professional uses	
	Process categories:	
	PROC8a:	Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at non-dedicated facilities
	PROC10:	Roller application or brushing
	PROC11:	Non industrial spraying
	PROC13:	Treatment of articles by dipping and pouring
	Product categories: PC35: Washing and Cleaning Products (including solvent based products)	
	Environmental release categories:	
	ERC8a	Wide dispersive indoor use of processing aids in open systems
1.1. Exposure scenario		
1.2. Contributing scenario controlling environmental exposure		
Amounts used		
Maximum daily site tonnage (kg/day)	No data available	
Frequency and duration of use		
Emission days (days/year)	Continuous exposure	
Other operational conditions affecting environmental exposure		
Release fraction to air from process	No exposure assessment presented for the environment. Substance will disassociate upon contact with water, the only effect is the pH effect, therefore after passing through the STP exposure is considered negligible and with no risk.	
Release fraction to wastewater from process		
Release fraction to soil from process (regional only)		
Organizational measures to prevent/limit release from site		
Ensure all waste water is collected and treated via a WWTP. All contaminated waste water must be processed in an industrial or municipal wastewater treatment plant that incorporates both primary and secondary treatments. Prevent leaks and prevent soil / water pollution caused by leaks.		
1.3. Contributing scenarios controlling worker exposure		
Product characteristics		
Concentration in preparations:	Covers percentage substance in the product up to 40 %	
Frequency and duration of use		
Duration of Exposure:	Covers daily exposures up to 8 hours. PROC11: Avoid carrying out operation for more than 15 minutes (without respiratory protection).	
Operational conditions affecting workers exposure		
Place of Use:	Indoor use	
Technical and organizational measures to prevent/limit releases, dispersion and exposure PROC8a: Clear transfer lines prior to de-coupling.		

PROC8a, PROC11: Provide extraction ventilation at points where emissions occur (Efficiency: 90 %). PROC8a: Handle substance within a predominantly closed system provided with extract ventilation (Efficiency: 90 %). PROC10: Provide a good standard of controlled ventilation (10 to 15 air changes per hour) (Efficiency: 90 %). PROC13: Carry out in a vented booth provided with laminar airflow. Allow time for product to drain from workpiece. Automate activity where possible. PROC13: Provide extract ventilation to material transfer points and other openings (Efficiency: 90 %). Provide basic employee training to prevent/minimize exposures PROC13: Ensure minimization of manual phases.
Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable coveralls to prevent exposure to the skin. Use suitable eye protection. Wear chemically resistant gloves. PROC10, 11, 13: Wear suitable gloves tested to EN374. PROC11: Wear a half face respirator conforming to EN140 Type A filter or better. PROC11: Do not carry out the operation for more than 15 min without respiratory protection. Wear a half face respirator conforming to EN140 Type A filter or better.
Other information related to RMM Risk management measures are based on qualitative risk characterisation.
1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information on the assessment method, see: http://www.ecetoc.org/tra Only properly trained persons shall make use of scaling methods while checking whether the OC and RMM are within the boundaries set by the ES.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
Assumes a good basic standard of occupational hygiene is implemented.

Exposure Scenario related to CETRIMONIUM CHLORIDE (112-02-7)

Exposure Scenario 1: Professional use of Cleaning and Care products		
Use descriptor	**Sectors of use:** SU22: Professional uses	
	Process categories:	
	PROC8a:	Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at non-dedicated facilities
	PROC10:	Roller application or brushing
	PROC11:	Non industrial spraying
	PROC13:	Treatment of articles by dipping and pouring
	Product categories: PC35: Washing and Cleaning Products (including solvent based products)	
	Environmental release categories:	
	ERC8a	Wide dispersive indoor use of processing aids in open systems
1.1. Exposure scenario		
1.2. Contributing scenario controlling environmental exposure		
Amounts used		
Maximum daily site tonnage (kg/day)	No data available	
Frequency and duration of use		
Emission days (days/year)	No data available	
Other operational conditions affecting environmental exposure		
Release fraction to air from process	No data available	
Release fraction to wastewater from process		
Release fraction to soil from process (regional only)		
Organizational measures to prevent/limit release from site		
Dispose of waste product or used containers according to local regulations.		
1.3. Contributing scenarios controlling worker exposure		
Product characteristics		
Concentration in preparations:	PROC 8a: Limit the substance content in the product to 25%. PROC 10, PROC 11, PROC 13: Limit the substance content in the product to 5%.	
Frequency and duration of use		
Duration of Exposure:	Covers daily exposures up to 8 hours.	
Operational conditions affecting workers exposure		
Place of Use:	Indoor use	
Technical and organizational measures to prevent/limit releases, dispersion and exposure Provide a basic standard of general ventilation (1 to 3 air changes per hour). PROC 10: Local exhaust ventilation - efficiency of at least 80%		
Conditions and measures related to personal protection, hygiene and health evaluation Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.		
1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES		
Environment: Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.		

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Health:
Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Exposure Scenario related to PEG-2 OLEAMINE (25307-17-9)

Exposure Scenario 1: Professional use of Cleaning and Care products		
Use descriptor	**Sectors of use:** SU22: Professional uses	
	Process categories:	
	PROC8a:	Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at non-dedicated facilities
	PROC10:	Roller application or brushing
	PROC11:	Non industrial spraying
	PROC13:	Treatment of articles by dipping and pouring
	Product categories: PC35: Washing and Cleaning Products (including solvent based products)	
	Environmental release categories:	
	ERC8a	Wide dispersive indoor use of processing aids in open systems

1.1. Exposure scenario	
1.2. Contributing scenario controlling environmental exposure	
Amounts used	
Maximum daily site tonnage (kg/day)	20 kg/day
Frequency and duration of use	
Emission days (days/year)	No data available
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other operational conditions affecting environmental exposure	
Release fraction to air from process	0%
Release fraction to wastewater from process	100 % (maximum concentration/release value to freshwater < 0.02 µg/l)
Release fraction to soil from process (regional only)	0%
Organizational measures to prevent/limit release from site	
Air : Air emission controls are not applicable as there is no direct release to air. Water : Ensure all waste water is collected and treated via a WWTP. Soil : Soil emission controls are not applicable as there is no direct release to soil. Waste treatment : Do not apply industrial sludge to natural soils. Dispose of waste product or used containers according to local regulations.	
1.3. Contributing scenarios controlling worker exposure	
Product characteristics	
Concentration in preparations:	Covers percentage substance in the product up to 5 %
Frequency and duration of use	
Duration of Exposure:	Covers daily exposures up to 8 hours (unless stated differently).
Operational conditions affecting workers exposure	
Place of Use:	Indoors
Technical and organizational measures to prevent/limit releases, dispersion and exposure Provide adequate information, instruction and training for operators. Provide a basic standard of general ventilation (1 to 3 air changes per hour). Avoid splashing.	

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Assumes a good basic standard of occupational hygiene is implemented. Provide extraction ventilation at points where emissions occur. Supervise workers to make sure that operational conditions are followed and risk management measures properly used. Horizontal or downward spraying. Does not cover spraying under high pressure (air blasting). Maximal spray rate: 3 L/min per operator
Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves (tested to EN374), coverall and eye protection.
1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES
For a given contributing scenario, several risk management measures can be proposed. It is your responsibility to select the configuration that best suits your activity.

Exposure Scenario related to SULFAMIC ACID (5329-14-6)

Exposure Scenario 1: Professional use		
Use descriptor	**Sectors of use:** SU22: Professional uses	
	Process categories:	
	PROC8a:	Transfer of substance or preparation (charging/discharging) from/ to vessels/ large containers at non-dedicated facilities
	PROC10:	Roller application or brushing
	PROC11:	Non industrial spraying
	PROC13:	Treatment of articles by dipping and pouring
	Product categories: PC35: Washing and Cleaning Products (including solvent based products)	
	Environmental release categories:	
	ERC8a	Wide dispersive indoor use of processing aids in open systems

1.1. Exposure scenario	
1.2. Contributing scenario controlling environmental exposure	
Amounts used	
Maximum daily site tonnage (kg/day)	6 kg/day
Frequency and duration of use	
Emission days (days/year)	No data available
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other operational conditions affecting environmental exposure	
STP	Yes, municipal
STP sludge treatment	Controlled application of sewage sludge to agricultural soil
River flow rate	18000 m^3/d
Municipal sewage treatment plant discharge	2000000 L/d
Organizational measures to prevent/limit release from site	
No data available	
1.3. Contributing scenarios controlling worker exposure	
Product characteristics	
Concentration in preparations:	PROC11: Covers percentage of substance in the product up to 5%.
Frequency and duration of use	
Duration of Exposure:	Covers daily exposures < 8 hours
Operational conditions affecting workers exposure	
Place of Use:	Indoors
Technical and organizational measures to prevent/limit releases, dispersion and exposure Open systems Ensure operatives are trained to minimise exposures. Local exhaust ventilation Provide a basic standard of general ventilation (1 to 3 air changes per hour). Inhalation - minimum efficiency of 0 %	

For further specification, refer to section 8 of the SDS.
Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. Dermal - minimum efficiency of 90 % *For further specification, refer to section 8 of the SDS.*
1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES
No data available
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply
Wear suitable coveralls to prevent exposure to the skin. Ensure regular inspection, cleaning and maintenance of equipment and machines. Keep good industrial hygiene.