Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: **C100CO**
Product name **LIMESCALE AND DETERGENT REMOVER**

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

Intended use **DESCALER**

Identified Uses	Industrial	Professional	Consumer
Descaler for washing machine/dishwasher	-	-	✔

Uses Advised Against

Do not use for uses other than those indicated

1.3. Details of the supplier of the safety data sheet

Name **AXOR SRL**
Full address **Via dell'Artigianato 8**
District and Country **35020 Pernumia (PD)**
ITALIA

tel. . +39-0429 - 763476

e-mail address of the competent person **axor@axor.net**

responsible for the Safety Data Sheet **AXOR SRL**
Via dell'Artigianato 8
35020 Pernumia (PD)
ITALIA
tel. . +39-0429 - 763476
Supplier: **AXOR SRL**

1.4. Emergency telephone number

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Warning

Hazard statements:

H319 Causes serious eye irritation.

H315 Causes skin irritation.

Precautionary statements:

P337+P313 If eye irritation persists: Get medical advice / attention.

P264 Wash your hands thoroughly after use.

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P501 Dispose of the product / container in accordance with current regulations.

Ingredients according to Regulation (EC) No. 648/2004

Less than 5% Phosphates, Anionic surfactants

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	**x = Conc. %**	**Classification (EC) 1272/2008 (CLP)**
SULPHAMIC ACID		
INDEX 016-026-00-0	15 ≤ x < 16,5	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Aquatic Chronic 3 H412

EC 226-218-8
CAS 5329-14-6
REACH Reg. 01-2119488633-28-

CTRIC ACID

INDEX -	15 ≤ x < 16,5	Eye Irrit. 2 H319, STOT SE 3 H335

EC 201-069-1
CAS 77-92-9
REACH Reg. 01-2119457026-42-0000

SULFURIC ACID, MONO C12-14 -- ALKYL ESTERS, SODIUM SALTS

INDEX -	2 ≤ x < 2,5	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Chronic 3 H412
EC 287-809-4		Eye Dam. 1 H318: ≥ 20%, Eye Irrit. 2 H319: ≥ 10%
CAS 85586-07-8		LD50 Oral: <2000 mg/kg

REACH Reg. 01-2119489463-28-XXXX

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

If there are no contraindications, spray powder with water to prevent the formation of dust.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.
Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany):
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7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

CTRIC ACID

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,44	mg/l
Normal value in marine water	0,044	mg/l
Normal value for fresh water sediment	7,52	mg/kg
Normal value for marine water sediment	0,752	mg/kg
Normal value for the terrestrial compartment	29,2	mg/kg

SULPHAMIC ACID

Predicted no-effect concentration - PNEC		
Normal value in fresh water	1,8	mg/l
Normal value in marine water	0,18	mg/l
Normal value for fresh water sediment	8,36	mg/kg
Normal value for marine water sediment	0,84	mg/kg
Normal value for water, intermittent release	0,48	mg/l
Normal value of STP microorganisms	20	mg/l
Normal value for the terrestrial compartment	5	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				5 mg/kg bw/d				
Inhalation				17,4 mg/m3				70,5 mg/m3
Skin				5 mg/kg bw/d				10 mg/kg bw/d

SULFURIC ACID, MONO C12-14 --ALKYL ESTERS, SODIUM SALTS

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,131	mg/l
Normal value in marine water	0,036	mg/l
Normal value for fresh water sediment	4,61	mg/kg
Normal value for marine water sediment	0,461	mg/kg
Normal value for water, intermittent release	0,013	mg/l
Normal value of STP microorganisms	NPI	
Normal value for the food chain (secondary poisoning)	NPI	
Normal value for the terrestrial compartment	0,171	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				24 mg/kg bw/d				
Inhalation				85 mg/m3				285 mg/m3
Skin				2440 mg/kg bw/d				4060 mg/kg bw/d

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED =

medium hazard ; HIGH = high hazard.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).
Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION
None required, unless indicated otherwise in the chemical risk assessment.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	solid	
Colour	white	
Odour	odourless	
Melting point / freezing point	205 °C	Substance:SULPHAMIC ACID
Initial boiling point	not applicable	Reason for missing data:Not available
Flammability	not flammable	
Lower explosive limit	not available	Reason for missing data:not classified as explosive, does not contain explosive substances according to CLP, Art. (14 (2))
Upper explosive limit	not available	Reason for missing data:not classified as explosive, does not contain explosive substances according to CLP, Art. (14 (2))
Flash point	not applicable	
Auto-ignition temperature	not available	
Decomposition temperature	209 °C	Substance:SULPHAMIC ACID
pH	not available	Concentration: 1 % Reason for missing data:Un solido
Kinematic viscosity	not available	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	not available	Reason for missing data:Not available
Vapour pressure	0,8 Pa	
Density and/or relative density	2,31	

Relative vapour density	not available
Particle characteristics	not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Corrosive to metals

Compatible/incompatible materials	see section 10.4

9.2.2. Other safety characteristics

Explosive properties	not classified as explosive, does not contain explosive substances according to Reg. CLP Art. (14 (2))
Oxidising properties	the product is not an oxidizing substance

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

SULPHAMIC ACID

Decomposes at 205°C/401°F.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

SULPHAMIC ACID

Risk of explosion on contact with: chlorine.Reacts violently with: nitrates,metal nitrites.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

SULPHAMIC ACID

Incompatible with: chlorine,nitric acid,nitrates,sodium nitrite,potassium nitrites.

10.6. Hazardous decomposition products

SULPHAMIC ACID

May develop: sulphur oxides,nitric oxide.

SECTION 11. Toxicological information

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	Not classified (no significant component)

CTRIC ACID

LD50 (Dermal):	> 2000 mg/kg Linee Guida 402 per il Test dell'OECD (RATT0)
LD50 (Oral):	5400 mg/kg LINEA GIUDA 401 OECD (TOPO)

SULPHAMIC ACID

LD50 (Dermal):	> 2000 mg/kg rat
LD50 (Oral):	2065 mg/kg rat

SULFURIC ACID, MONO C12-14 --ALKYL ESTERS, SODIUM SALTS

LD50 (Oral): < 2000 mg/kg rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

12.1. Toxicity

SULPHAMIC ACID	
LC50 - for Fish	70,3 mg/l/96h
EC50 - for Crustacea	71,6 mg/l/48h
Chronic NOEC for Fish	0,025 mg/l 65d
Chronic NOEC for Crustacea	0,15 mg/l 35d
SULFURIC ACID, MONO C12-14 --ALKYL ESTERS, SODIUM SALTS	
LC50 - for Fish	3,6 mg/l/96h
EC50 - for Crustacea	4,7 mg/l/48h
Chronic NOEC for Fish	1,8 mg/l 96h
Chronic NOEC for Crustacea	0,14 mg/l 21d
CTRIC ACID	
EC50 - for Crustacea	440 mg/l/48h Linee Guida 203 per il Test dell'OECD)
Chronic NOEC for Algae / Aquatic Plants	> 425 mg/l TEMPO DI ESPOSIZIONE 8 D

12.2. Persistence and degradability

SULPHAMIC ACID

Degradability: information not available

SULFURIC ACID, MONO C12-14 --ALKYL ESTERS, SODIUM SALTS
Rapidly degradable
Reg 648/2004
CTRIC ACID

Rapidly degradable

12.3. Bioaccumulative potential

SULFURIC ACID, MONO C12-14 --ALKYL ESTERS, SODIUM SALTS	
Partition coefficient: n-octanol/water	-2,42
CTRIC ACID	
Partition coefficient: n-octanol/water	-18 METODO DI CALCOLO

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 2967

14.2. UN proper shipping name

ADR / RID:	SULPHAMIC ACID MIXTURE
IMDG:	SULPHAMIC ACID MIXTURE
IATA:	SULPHAMIC ACID MIXTURE

14.3. Transport hazard class(es)

ADR / RID:	Class: 8	Label: 8
IMDG:	Class: 8	Label: 8
IATA:	Class: 8	Label: 8

14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 kg	Tunnel restriction code: (E)
	Special provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 kg	
IATA:	Cargo:	Maximum quantity: 100 Kg	Packaging instructions: 864
	Passengers:	Maximum quantity: 25 Kg	Packaging instructions: 860
	Special provision:	A803	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Regulation (EC) No. 648/2004

Ingredients according to Regulation (EC) No. 648/2004

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Acute Tox. 4	Acute toxicity, category 4
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)

- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety

laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
02 / 03 / 11 / 12 / 13 / 14 / 15.