

## Safety Data Sheet

Compliant with Annex II of REACH - Regulation 2015/830

### SECTION 1. Identification of the substance/mixture and company/firm

#### 1.1. Product identifier

Code: ZARA\_F1  
 Name: CAL FREE  
 Chemical name and synonyms: DESCALER

#### 1.2. Identified uses related to the substance or mixture and recommended uses

Identified Uses	Industrial	Professional	Consumption
Descaling	-	✓	-

#### 1.3. Information about the supplier of the safety data sheet

Company name: ALI Group S.r.l.  
 Address: VIA SCHIAPARELLI 15  
 City and country: 31029 VITTORIO VENETO (TV)  
 ITALY  
 tel. +39 0438 9110  
 fax -

email address of the contact person,

In charge of the safety data sheet: lainox@lainox.com  
 Head of market release: ALI Group S.r.l.

#### 1.4. Emergency telephone number

For urgent information, please contact

Poison Control Centre Bambino Gesù Children's Hospital, Piazza Sant'Onofrio, 4 00165 Rome Tel.: +39 0668593726  
 Univ. Hosp. of Foggia, V.le Luigi Pinto, 1 71122 Foggia Tel.: +39 0881732326  
 Hosp. of A. Cardarelli, Via A. Cardarelli, 9 80131 Naples Tel.: +39 0817472870  
 Umberto I Polyclinic Poison Control Centre, V.le del Policlinico, 155 00161 Rome Tel.: +39 0649978000  
 A. Gemelli Polyclinic Poison Control Centre, Largo Agostino Gemelli, 8 00168 Rome Tel.: +39 063054343  
 Univ. Hosp. of Careggi Medical Toxicology, Largo Brambilla, 3 50134 Florence Tel.: +39 0557947819  
 National Poison Control Centre for Toxicology Information, Via Salvatore Maugeri, 10 27100 Pavia Tel.: +39 038224444  
 Hosp. of Niguarda Ca' Granda, Piazza Ospedale Maggiore, 3 20162 Milan Tel.: +39 0266101029  
 Papa Giovanni XXII Hospital, Piazza OMS, 1 24127 Bergamo Tel.: +39 800883300

### SECTION 2. Hazard identification

#### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions under Regulation (EC) 1272/2008 (CLP) (and successive amendments and repeals). The product, therefore, requires a safety data sheet that complies with the provisions of Regulation (EU) 2015/830. Any additional information regarding the risks for health and/or the environment are outlined in sections 11 and 12 of this data sheet.

Hazard classification and indications:

Eye irritation, category 2

H319

Causes serious eye irritation.

**2.2. Label elements**

Hazard labelling pursuant to Regulation (EC) 1272/2008 (CLP) and successive amendments and repeals.

Hazard pictograms:



Cautions:

Warning

Hazard indications:

**H319**

Causes serious eye irritation.

Precautionary statements:

**P280**

Wear eye/face protection.

**P337+P313**

If eye irritation persists, seek medical advice.

REGULATION 648/2004:

Preservation agents: 2-methyl-2H-isothiazolin-3-one - 1,2-benzisotiazol-3(2H)-one

**2.3. Other hazards**

Based on the available data, the product does not contain PBT or vPvB substances in percentages over 0.1%.

**SECTION 3. Composition/information about the ingredients****3.1. Substances**

Information not applicable

**3.2. Mixtures**

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
<b>CITRIC ACID MONOHYDRATE</b>		
CAS 5949-29-1	16.5 ≤ x < 18	Eye Irrit. 2 H319
EC 201-069-1		
INDEX -		
Reg. No. 01-2119457026-42		

The complete test of the hazard indications (H) is outlined in section 16 of the data sheet.

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

**EYES:** Remove any contact lenses. Rinse immediately with plenty of water for at least 15 minutes, while holding the eyelids apart. If the problem persists, seek medical advice.

**SKIN:** Remove any contaminated clothing. Wash immediately with plenty of water. If the irritation persists, seek medical advice. Wash contaminated clothing before re-using.

**INHALATION:** Take the person affected outside. If breathing is laboured, seek medical advice immediately.

**INGESTION:** Seek medical advice immediately. Only induce vomiting if directed by medical personnel. Do not give anything orally without medical authorisation if the patient is unconscious.

### 4.2. Main symptoms and effects both acute and delayed

No specific information is known about the symptoms and effects caused by the product.

### 4.3. Indication of any requirement to immediately seek medical advice and special treatments

Information not available

## SECTION 5. Fire prevention measures

### 5.1. Extinguishing agents

#### SUITABLE EXTINGUISHING AGENTS

The extinguishing agents are the conventional kind: carbon dioxide, foam, powder and nebulised water.

#### UNSUITABLE EXTINGUISHING AGENTS

None in particular.

### 5.2. Special hazards caused by the substance or mixture

#### HAZARDS DUE TO EXPOSURE IN THE EVENT OF FIRE

Avoid breathing in combustion products.

### 5.3. Recommendations for fire fighters

#### GENERAL INFORMATION

Cool the containers with water jets to prevent the decomposition of the product and the development of substances which could be a health hazard. Always wear the full fire prevention protection equipment. Collect the water used to put out the fire which must not be discharged into the drains. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### EQUIPMENT

Normal firefighting clothing, such as an open circuit, compressed air self-contained breathing apparatus (EN 137), firefighting suit (EN469), protective gloves (EN 659) and firefighter boots (HO A29 or A30).

## SECTION 6. Measures in the event of accidental spills

### 6.1. Personal precautions, protection equipment and procedures in the event of an emergency

Stop the leak if there is no hazard.

Wear suitable protective equipment (including the personal protective equipment under section 8 of the safety data sheet) in order to prevent contamination of the skin, eyes and personal clothing. These indications are valid both for processing technicians and for emergency interventions.

### 6.2. Environmental precautions

Prevent the product from entering the sewage systems, water courses and ground water.

### 6.3. Methods and material for containment and cleaning up

Suction the leaked product into a suitable container. Assess the compatibility of the container to use with the product, by checking against section 10. Absorb the remaining product with inert absorbent material.

Ensure adequate ventilation. Disposal of the contaminated material must be carried in compliance with the provisions of point 13.

### 6.4. Reference to other sections

Any information about individual protection and the disposal are outlined in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Handle the product after consulting all the other sections of this safety data sheet. Do not disperse of the product in the environment. Do not drink, eat or smoke when using. Remove contaminated clothing and protective equipment before entering eating areas.

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

Only store in the original container. Keep the containers closed in a well-ventilated place, away from direct sunlight. Keep the containers away from any incompatible material, checking against section 10.

### 7.3. Specific end uses

Information not available

## SECTION 8. Exposure control/personal protection

### 8.1. Control parameters

#### CITRIC ACID MONOHYDRATE

Predicted No Effect Concentration (PNEC)

Reference value in freshwater	0.44	mg/l
Reference value in seawater	0.044	mg/l
Reference value for sediment in freshwater	34.6	mg/kg
Reference value for sediment in seawater	3.46	mg/kg
Reference value for STP microorganisms	1000	mg/l
Reference value for terrestrial compartment	33.1	mg/kg

VND = hazard identified but no DNEL/PNEC available; NEA = no exposure expected ; NPI = no hazard identified.

### 8.2. Exposure control

Considering that the use of adequate technical measures should always take priority over personal protection equipment, ensure good ventilation in the workplace through effective local extraction.

When choosing personal protective equipment, ask your chemical substance suppliers for any advice.

Personal protective equipment must bear the CE marking which indicates compliance with the laws in force.

Provide emergency shower facilities with eye baths.

**HAND PROTECTION**

Protect hands with category III work gloves (ref. standard EN 374).

When choosing the material of the work gloves, you should consider: compatibility, degradation, breakthrough times and permeation rates.

In the case of preparations, resistance of work gloves to chemical agents must be checked before use, as it is unpredictable. Gloves have a deterioration time that depends on the duration and method of use.

**SKIN PROTECTION**

Wear work clothes with long sleeves and safety footwear for professional use, category I (ref. Directive 89/686/EEC and EN ISO 20344 standard). Wash with soap and water after removing protective clothing.

**EYE PROTECTION**

It is advisable to wear tightly fitting goggles (ref. standard EN 166).

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) of the substance or one or more substances present in the product are exceeded, it is advisable to wear a mask with a type B filter. The class (1, 2 or 3) must be chosen in relation to the limit of use of the concentration. (ref. standard EN 14387). If gases or vapours and/or gases of vapours with particles (aerosols, fumes, mist, etc.), combined filters must be provided.

The use of measures to protect the airways is required if the technical measures are not sufficient to limit the exposure of workers to the threshold values taken into account. The protection offered by the mask is, however, limited.

If the substance is considered odourless or its odour threshold is above the one for TLV-TWA and in the event of any emergency, wear an open circuit, compressed air self-contained breathing apparatus (ref. standard EN 137) or a fresh air hose breathing apparatus (ref. standard EN 138). For the correction choice of respiratory protection devices, refer to standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROL**

Emissions from production processes, including those from ventilation equipment, should be checked for compliance with environmental protection regulations.

**SECTION 9. Physical and chemical properties****9.1. Information about fundamental physical and chemical properties**

Physical state	liquid
Colour	green
Odour	no odour
Odour threshold	Not available
pH	Not available
Melting or freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability of solids and gases	Not available
Lower flammability limit	Not available
Upper flammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	Not available
Solubility	soluble
partition coefficient: octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
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 oxidising substance

**9.2. Other information**

**VOC: 0**

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are not particular reaction hazards with other substances under normal conditions of use.

### 10.2. Chemical stability

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

### 10.3. Possibility of hazardous reactions

No hazardous reactions are foreseen under normal conditions of use and storage.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

Information not available

### 10.6. Hazardous decomposition products

Information not available

## SECTION 11. Toxicological information

In the absence of experimental toxicological data on the product in question, the possible dangers of the product to the health have been assessed on the basis of the properties of the substances it contains, according to the criteria laid down by the reference legislation for classification. Therefore, consider the concentration of the individual hazardous substances which may be mentioned in section. 3, when assessing the toxicological effects caused by exposure to the product.

### 11.1. Information about the toxicological effects

#### Metabolism, kinetics, mechanism of action and other information

Information not available

#### Information on probable exposure pathways

Information not available

#### Immediate or delayed effects and chronic effects due to short or long-term exposure

Information not available

#### Interactive effects

Information not available

#### ACUTE TOXICITY

LC50 (Inhalation) of the mixture:  
Unclassified (no significant component)  
LD50 (Oral) of the mixture:  
Unclassified (no significant component)  
LD50 (Skinn) of the mixture:  
Unclassified (no significant component)

#### CITRIC ACID MONOHYDRATE

LD50 (Oral) 5400 mg/kg Mouse

LD50 (Skin) > 2000 mg/kg Rat

#### SKIN CORROSION/SKIN IRRITATION

Does not respond to classification criteria for this hazard class

#### SERIOUS EYE DAMAGE/EYE IRRITATION

Causes serious eye irritation

#### RESPIRATORY OR SKIN SENSITISATION

Does not respond to classification criteria for this hazard class

#### GERM CELL MUTAGENICITY

Does not respond to classification criteria for this hazard class

#### CARCINOGENICITY

Does not respond to classification criteria for this hazard class

#### REPRODUCTIVE TOXICITY

Does not respond to classification criteria for this hazard class

#### SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

Does not respond to classification criteria for this hazard class

#### SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

Does not respond to classification criteria for this hazard class

#### ASPIRATION HAZARD

Does not respond to classification criteria for this hazard class

## SECTION 12. Ecological information

Use according to good working practice, avoiding dispersion of the product in the environment. Notify the competent authorities if the product reaches water courses or if it has contaminated the soil or vegetation.

#### 12.1. Toxicity

CITRIC ACID MONOHYDRATE

LC50 - Fish > 100 mg/l/96h

EC50 - Crustaceans > 50 mg/l/48h

NOEC Chronic toxicity to algae/aquatic plants 425 mg/l

#### 12.2. Persistence and degradability

CITRIC ACID MONOHYDRATE

Rapidly degradable

#### 12.3. Bioaccumulation potential

CITRIC ACID MONOHYDRATE

BCF 3.2

#### 12.4. Mobility in soil

Information not available

#### 12.5. Results of PBT and vPvB assessment

Based on the available data, the product does not contain PBT or vPvB substances in percentages over 0.1%.

#### 12.6. Other adverse effects

Information not available

### SECTION 13. Advice for disposal

#### 13.1. Waste treatment methods

Re-use, if possible. Product residue should be treated as special hazardous waste. The hazardous properties of waste that partly contain this product must be assessed according to the laws in force.

Disposal must be carried out by a company authorised for waste management, in compliance with the national and local legislation.

CONTAMINATED PACKAGING

Contaminated packaging must be sent for recovery or disposal in compliance with national laws for waste management.

### SECTION 14. Transport information

### SECTION 15. Information on regulation

#### 15.1. Legislative and regulatory provisions on health, safety and the environment specific to the substance or mixture



Seveso category - Directive 2012/18/EC: None

Restrictions on the product or substances contained in it according to Annex XVII Regulation (EC) 1907/2006

Product

Point 3

Substances in Candidate List (Art. 59 REACH)

Based on the available data, the product does not contain SVHC substances in percentages over 0.1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to export notification obligation Reg. (EC) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Health checks

Workers exposed to this chemical agent which is hazardous to the health must undergo health monitoring carried out according to the provisions of art. 41 of Italian Leg. Decree 81 of 9 April 2008 unless the risk for the health and safety of the worker has been deemed irrelevant, according to the provisions of art. 224 paragraph 2.

## 15.2. Chemical safety assessment

A chemical safety assessment has not been produced for the mixture and the substances contained in it.

## SECTION 16. Other information

Text of the hazard indications (H) quoted in sections 2-3 of the data sheet:

**Eye Irrit. 2** Eye irritation, category 2  
**H319** Causes serious eye irritation.

KEY:

- ADR: European agreement for the transport of hazardous goods by road
- CAS NUMBER: Chemical Abstract Service Number
- EC50: Concentration that affects 50% of the population subjected to tests
- EC NUMBER: Identification number in ESIS (European archive of existing substances)
- CLP: Regulation EC 1272/2008
- DNEL: Derived No-Effect Level
- EmS: Emergency Schedule
- GHS: Global harmonised system for the classification and labelling of chemical products

- IATA DGR: Regulation for the transportation of hazardous goods of the international association of air transport
- IC50: Immobilisation concentration of 50% of the population subjected to tests
- IMDG: International maritime code for the transportation of hazardous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identification number of Annex VI of the CLP
- LC50: Lethal concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational exposure limit
- PBT: Persistent, bioaccumulative and toxic according to REACH
- PEC: Predicted environmental concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation EC 1907/2006
- RID: Regulation for international transportation of hazardous goods by train
- TLV: Threshold limit value
- TLV CEILING: Concentration which must not be exceeded at any time during working exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average
- VOC: Volatile organic compound
- vPvB: Very persistent and very bioaccumulative according to REACH
- WGK: Water hazard classes (Germany).

**GENERAL BIBLIOGRAPHY:**

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
  2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
  3. Regulation (EU) 790/2009 of the European Parliament (I Atp. CLP)
  4. Regulation (EU) 2015/830 of the European Parliament
  5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
  6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
  7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
  8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
  9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
  10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
  11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X 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 Agency website
  - Database of SDS models for chemical substances - Ministry of Health and Higher Health Institute

**Note for user:**

The information contained in this data sheet is based on the knowledge available to us on the data of the latest version. The user must check the suitability and completeness of the information in relation to the specific product use.

This document should not be interpreted as a guarantee of any specific property of the product.

Since the use of the product does not fall directly under our control, the user is obliged to observe the laws and provisions, under his own responsibility, in force concerning safety and hygiene. No responsibility is assumed for improper use.

Provide adequate training for staff in charge of using chemical products.

Changes with respect to the previous revision

Changes have been made to the following sections:

02 / 03 / 04 / 11 / 12.