Safety Data Sheet

Compliant with Annex II of REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Code: **CLF**
Name **CALFREE BOOSTED**

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

Description/Use **Acid descaler**

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

Milan Poison Centre +39 02 66101029 (CAV Niguarda Ca' Granda Hospital - Milan) (H24)
Pavia Poison Centre +39 0382 24444 (CAV IRCCS Maugeri Foundation - Pavia)
Poison Centre Bergamo 800 883300 (CAV Riuniti Hospital - Bergamo)
Florence Poison Centre +39 055 7947819 (CAV Careggi Hospital - Florence)
Rome Poison Centre +39 06 3054343 (CAV Policlinico Gemelli - Rome)
Rome Poison Centre +39 06 49978000 (CAV Policlinico Umberto I - Rome)
Naples Poison Centre +39 081 7472870 (CAV Cardarelli Hospital - Naples)
The list of poison centres (CAV) authorised to access the Archive of Dangerous Preparations can be consulted
via the link https://preparatipericolosi.iss.it/cav.

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) 2020/878.
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:

P264 Wash hands thoroughly after handling.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P280 Wear eye/face protection.
P337+P313 If eye irritation persists, seek medical advice.

Contains: CITRIC ACID

2.3. Other hazards

Based on the data available, the product does not contain PBT or vPvB substances in a percentage ≥ to 0.1%.

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

SECTION 3. Composition/information about the ingredients

3.2. Mixtures

Contains:

Identification	**x = Conc. %**	**Classification 1272/2008 (CLP)**
CITRIC ACID		
CAS 77-92-9	10 – 20	Eye Irrit. 2 H319, STOT SE 3 H335
EC 201-069-1		
INDEX 607-750-00-3		

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 whether it is necessary to immediately consult a doctor or 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 firefighters

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.

6.1.1 For those people who do not intervene directly: Move away from the area surrounding the spill or leak. Do not smoke. Put on a mask, gloves and protective clothing.

6.1.2 For those people who intervene directly: Put on a mask, gloves and protective clothing. Eliminate all naked flames and possible sources of ignition. Do not smoke. Make sure there is adequate ventilation. Evacuate the hazard area and consult an expert, if necessary.

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. Storage class TRGS 510 (Germany): 12.

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 fresh water	0.44 mg/l
Reference value in sea water	0.044 mg/l
Reference value for sediment in fresh water	34.6 mg/kg/d
Reference value for STP microorganisms	>1000 mg/l
Reference value for terrestrial compartment	33.1 mg/kg/d

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

8.2. Exposure controls

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). Nitrile, nitrile rubber.
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 wear time that depends on how long and how they area used.

SKIN PROTECTION
Wear work clothes with long sleeves and safety footwear for professional use, category I (ref. Regulation 2016/425 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
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.

ENVIRONMENTAL EXPOSURE CONTROLS
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

Property	Value	Information
Physical state	liquid	
Colour	colourless	
Odour	no odour	
Flash point	> 60 °C	
pH	2.10 +/- 0.50	
Density and/or relative density	1.05 +/- 0.05	
Particle characteristics	Not applicable	
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

9.2.1. Information on physical hazard class

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU) 0
VOC (volatile carbon) 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 on hazard classes defined in Regulation (EC) no. 1272/2008

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

ATE (Inhalation) of the mixture:
Unclassified (no significant component)
ATE (Oral) of the mixture:
Unclassified (no significant component)
ATE (Skin) of the mixture:
Unclassified (no significant component)

CITRIC ACID

LD50 (Oral) 3000 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

Respiratory sensitisation

Information not available

Skin sensitisation

Information not available

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

Harmful effects of sexual function and fertility

Information not available

Harmful effects of the development of progeny

Information not available

Effects on breastfeeding or through breastfeeding

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

Does not respond to classification criteria for this hazard class

Target organs

Information not available

Exposure routes

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

Does not respond to classification criteria for this hazard class

Target organs

Information not available

Exposure routes

Information not available

ASPIRATION HAZARD

Does not respond to classification criteria for this hazard class

11.2. Information about other hazards

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

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

Information not available

12.2. Persistence and degradability

CITRIC ACID

Solubility in water	> 10000 mg/l

Rapidly degradable

12.3. Bioaccumulation potential

CITRIC ACID

BCF	3.2

12.4. Mobility in soil

The mixture diffuses in water and can permeate into the soil.

12.5. Results of PBT and vPvB assessment

Based on the data available, the product does not contain PBT or vPvB substances in a percentage ≥ to 0.1%.

12.6. Disrupting properties with endocrine system

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

12.7. 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. Do not dispose of in waste water.
CONTAMINATED PACKAGING
Contaminated packaging must be sent for recovery or disposal in compliance with national laws for waste management.

SECTION 14. Transport information

The product is not to be considered dangerous according to the provisions in force on the transport of dangerous goods by road (A.D.R.), by rail (RID), by sea (IMDG Code) and by air (IATA).

14.1. UN NUMBER

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard classes

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for users

Not applicable

14.7. Bulk maritime transport in compliance with the measures of the IMO

Information not applicable

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

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

Not applicable

Substances in Candidate List (Art. 59 REACH)

Based on the data available, the product does not contain SVHC substances in a percentage ≥ to 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.

Classification for water pollution in Germany (AwSV, vom 18. April 2017)

WGK 1: Slightly hazardous to water

15.2. Chemical safety assessment

A chemical safety assessment has not been prepared for the mixture. Exposure scenarios of the substances mentioned in paragraph 3.2 are made available on request, where relevant.

SECTION 16. Other information

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

Eye Dam. 1	Severe 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
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory 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) 2020/878 (Ann. II REACH Regulation)
4. Regulation (EU) 790/2009 of the European Parliament (I Atp. CLP)
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)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated regulation (EU) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated regulation (EU) 2020/217 (XIV Atp. CLP)
19. Delegated regulation (EU) 2020/1182 (XV Atp. CLP)
20. Delegated regulation (EU) 2021/643 (XVI Atp. CLP)
21. Delegated regulation (EU) 2021/849 (XVII 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.
CLASSIFICATION CALCULATION METHODS
physical chemical hazards: The product classification was taken from the criteria laid down by the CLP Regulation Annex I Part 2. The assessment methods of the physical and chemistry are indicated in section 9.
Health hazards: The classification of the product is based on the calculation methods set out in Annex I of CLP Part 3, unless otherwise indicated in section 11.
Environmental hazards: The classification of the product is based on the calculation methods set out in Annex I of CLP Part 4, unless otherwise indicated in section 12.