

Safety Data Sheet

According to Annex II to REACH - Regulation 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: **1704010176**
Product name: **MICROCALCE CL 90-S**
Chemical name and synonym: **Calcium hydroxide - Ca (OH) 2**
EC number: **215-137-3**
CAS number: **1305-62-0**
Registration Number: **01-2119475151-45-0267**

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

Intended use: **Micronized calcium hydroxide, high purity**

| Identified Uses | Industrial | Professional | Consumer |
|-----------------|------------|--------------|----------|
| HYDRATED LIME | ✓ | ✓ | ✓ |

The identified uses are shown in the attached exposure scenario.

The product is intended for the following, non-exhaustive list of uses:

Iron and steel industry, chemical industry, agriculture, biocide, environmental protection (treatment of: exhaust gases, fumes, wastewater, sludge), building materials, civil engineering, paper industry, paint industry, leather industry, food industry, industry pharmaceuticals.

1.3. Details of the supplier of the safety data sheet

Name: **FORNACI CALCE GRIGOLIN S.p. A.**
Full address: **Via Foscarini, 2**
District and Country: **31040 Nervesa della Battaglia (TV) Italy**
Tel.: **+39 0422 5261**
Fax: **+39 0422 526299**
e-mail address of the competent person responsible for the Safety Data Sheet: **info@fornacigrigolin.it**

1.4. Emergency telephone number

For urgent inquiries refer to: **HEALTH EMERGENCY - 112**

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:

| | | |
|--|------|-----------------------------------|
| Serious eye damage, category 1 | H318 | Causes serious eye damage. |
| Skin irritation, category 2 | H315 | Causes skin irritation. |
| Specific target organ toxicity - single exposure, category 3 | H335 | May cause respiratory irritation. |

2.2. Label elements

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

Hazard pictograms:



SECTION 2. Hazards identification ... / >>

Signal words: Danger

Hazard statements:

H318 Causes serious eye damage.
H315 Causes skin irritation.
H335 May cause respiratory irritation.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER / doctor / . . .
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P261 Avoid breathing dust.
P280 Wear protective gloves / face protection.

Contains: HYDRATED LIME

Nr. EC: 215-137-3

2.3. Other hazards

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

The substance does not have endocrine disrupting properties.

SECTION 3. Composition/information on ingredients**3.1. Substances**

Contains:

| Identification | x = Conc. % | Classification (EC) 1272/2008 (CLP) |
|----------------------|-----------------------|--|
| HYDRATED LIME | | |
| <i>INDEX</i> | $100 \leq x < 100$ | Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335 |
| <i>EC</i> | 215-137-3 | |
| <i>CAS</i> | 1305-62-0 | |
| <i>REACH Reg.</i> | 01-2119475151-45-0267 | |

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

Calcium hydroxide does not cause acute toxicity if ingested, inhaled or if it comes into contact with the skin. It is classified as a skin and respiratory irritant and can cause serious eye damage. There is no fear of systemic adverse effects because the main health hazard is local effects (effect on pH).

SECTION 4. First aid measures ... / >>**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

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. 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.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

| | | |
|-----|----------------|--|
| FRA | France | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS |
| HRV | Hrvatska | Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021) |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits (Fourth Edition 2020) |
| EU | OEL EU | Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC. |
| | TLV-ACGIH | ACGIH 2021 |

HYDRATED LIME

Threshold Limit Value

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| VLEP | FRA | 5 | | | | |
| GVI/KGVI | HRV | 5 | | | | |
| WEL | GBR | 5 | | | | |
| OEL | EU | 5 | | | | |
| TLV-ACGIH | | 5 | | | | |

Predicted no-effect concentration - PNEC

| | | |
|--|------|---------|
| Normal value in fresh water | 0,49 | mg/l |
| Normal value in marine water | 0,32 | mg/l |
| Normal value for water, intermittent release | 0,49 | mg/l |
| Normal value of STP microorganisms | 3 | mg/l |
| Normal value for the terrestrial compartment | 1080 | mg/kg/d |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | Effects on workers | | | | | |
|-------------------|----------------------|----------------|--------------------|------------------|-------------|----------------|---------------|------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation | 4 | | 1 | | 4 | | 1 | |
| | mg/m3 | | mg/m3 | | mg/m3 | | mg/m3 | |

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

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.

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m3; PNOC inhalable fraction: 10 mg/m3). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.

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

Use a type P filtering facemask, whose class (1, 2 or 3) and effective need, must be defined according to the outcome of risk assessment (see standard EN 149).

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 | powder | |
| Colour | white | |
| Odour | odourless | |
| Melting point / freezing point | > 450 °C | |
| Initial boiling point | not applicable | |
| Flammability | not available | |
| Lower explosive limit | not available | |
| Upper explosive limit | not available | |
| Flash point | not applicable | |
| Auto-ignition temperature | not available | |
| Decomposition temperature | not available | |
| pH | 12 | |
| Kinematic viscosity | not available | |
| Solubility | partially soluble in water | Method:A.6 UE Remark:experimental result Concentration: 1582 mg/l % |
| Partition coefficient: n-octanol/water | not available | |
| Vapour pressure | not available | |
| Density and/or relative density | 300-350 g/dm ³ | |
| Relative vapour density | not available | |
| Particle characteristics | not available | |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Granulometry < 0.1 mm

SECTION 10. Stability and reactivity

10.1. Reactivity

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

Stable in normal conditions of use and storage.

Ca (OH) 2 dissociates in water (if below the solubility threshold), forming calcium cations and hydroxyl anions.

10.2. Chemical stability

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

Stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The powders are potentially explosive when mixed with air.

Develops hydrogen on contact with: aluminium,brass,moisture.

Reacts with: carbon dioxide.

Calcium hydroxide reacts exothermically with acids, forming calcium salts.

If the temperature exceeds 580 ° C, the hydroxide decomposes, producing CaO and H₂O, which can react with each other and release heat:

SECTION 10. Stability and reactivity ... / >>

$\text{Ca(OH)}_2 = \text{CaO} + \text{H}_2\text{O}$

10.4. Conditions to avoid

Avoid environmental dust build-up.

Decomposes if exposed to: moisture, moist air.

10.5. Incompatible materials

Avoid contact with: acids.

Calcium hydroxide reacts exothermically in contact with acids, forming calcium salts.

In the presence of moisture, calcium hydroxide reacts in contact with aluminum and brass, thus forming hydrogen: $\text{Ca(OH)}_2 + 2 \text{Al} + 6 \text{H}_2\text{O} = \text{Ca(Al(OH)}_4)_2 + 3 \text{H}_2$

10.6. Hazardous decomposition products

Develops hydrogen on contact with: aluminium, brass, moisture.

Calcium hydroxide absorbs moisture and carbon dioxide from the air, forming calcium carbonate, a widespread substance in nature: $\text{Ca(OH)}_2 + \text{CO}_2 = \text{CaCO}_3 + \text{H}_2\text{O}$

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

| | |
|----------------|--------------|
| HYDRATED LIME | |
| LD50 (Dermal): | > 2500 mg/kg |
| LD50 (Oral): | > 2000 mg/kg |

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

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

SECTION 11. Toxicological information ... / >>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

May cause respiratory irritation

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 substance is not listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

HYDRATED LIME

| | |
|---|-------------------|
| LC50 - for Fish | > 160 mg/l/96h |
| EC50 - for Crustacea | > 49,1 mg/l/48h |
| EC50 - for Algae / Aquatic Plants | > 184,57 mg/l/72h |
| Chronic NOEC for Crustacea | 32 mg/l |
| Chronic NOEC for Algae / Aquatic Plants | 48 mg/l |

12.2. Persistence and degradability

HYDRATED LIME

| | |
|--|-------------|
| Solubility in water | 1844,9 mg/l |
| Degradability: information not available | |

12.3. Bioaccumulative potential

Information not available

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

12.6. Endocrine disrupting properties

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

SECTION 15. Regulatory information ... / >>

On the basis of available data, the product does not contain any SVHC in percentage \geq 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.

15.2. Chemical safety assessment

Has not been performed / is not yet available a chemical safety assessment for the substance.

SECTION 16. Other information

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

| | |
|----------------------|--|
| Eye Dam. 1 | Serious eye damage, category 1 |
| Skin Irrit. 2 | Skin irritation, category 2 |
| STOT SE 3 | Specific target organ toxicity - single exposure, category 3 |
| H318 | Causes serious eye damage. |
| H315 | Causes skin irritation. |
| H335 | May cause respiratory irritation. |

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

SECTION 16. Other information ... / >>>

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 / 04 / 05 / 08 / 09 / 11 / 12 / 15 / 16.