

**ITALCALCE SRL****MICRONIZED CALCIUM OXIDE**Revision n. 4
Dated 28/12/2022
Printed on 28/12/2022
Page n. 1/11
Replaced revision:3 (Dated 07/09/2020) **EN**

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:	MICRON
Product name	MICRONIZED CALCIUM OXIDE
Chemical name and synonym	Calcium oxide - CaO
EC number	215-138-9
CAS number	1305-78-8
Registration Number	01-2119475325-36-0176

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

Intended use	Calcium oxide in fine powder
--------------	------------------------------

Identified Uses	Industrial	Professional	Consumer
CALCIUM OXIDE	✓	✓	-

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, environmental protection (treatment of: exhaust gases, fumes, waste water, sludge), building materials, civil engineering, paper industry, paint industry.

1.3. Details of the supplier of the safety data sheet

Name	ITALCALCE SRL
Full address	Via Salisano, 1
District and Country	04019 Terracina (LT) Italy
	tel. +39 0773 703024
	fax +39 0773 700468

e-mail address of the competent person responsible for the Safety Data Sheet	info@italcalce.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.

MICRONIZED CALCIUM OXIDE
SECTION 2. Hazards identification

Hazard pictograms:


 Signal words: **Danger**

Hazard statements:

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

Precautionary statements:

P280 Wear protective gloves/face protection.
P310 Immediately call a POISON CENTER / doctor / . . .
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P261 Avoid breathing dust.
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.

 Contains: **CALCIUM OXIDE**

Nr. EC: 215-138-9

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	Conc. %	Classification 1272/2008 (CLP)
CALCIUM OXYDE		
CAS	1305-78-8 100	Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335
CE	215-138-9	
INDEX		
Nr. Reg.	01-2119475325-36-0176	

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 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SECTION 4. First aid measures

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Calcium oxide does not cause acute toxicity if ingested, inhaled or 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).

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
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth edition 2020)
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)
EU	OEL EU	Direttiva (UE) 2022/431; Direttiva (UE) 2019/1831; Direttiva (UE) 2019/130; Direttiva (UE) 2019/983; Direttiva (UE) 2017/2398; Direttiva (UE) 2017/164; Direttiva 2009/161/UE; Direttiva 2006/15/CE; Direttiva 2004/37/CE; Direttiva 2000/39/CE; Direttiva 98/24/CE; Direttiva 91/322/CEE.
	TLV-ACGIH	ACGIH 2021

CALCIUM OXYDE

Threshold limit value

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

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,37	mg/l
Normal value in marine water	0,24	mg/l
Normal value for water, intermittent release	0,37	mg/l
Normal value of STP microorganisms	2,27	mg/l
Normal value for the terrestrial compartment	817,4	mg/kg

Health – Derived no effect level - DNEL / DMEL

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

MICRONIZED CALCIUM OXIDE
SECTION 8. Exposure controls/personal protection
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:1337,6 mg/l
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	900-1000 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.

Calcium oxide reacts exothermically with water, forming calcium dihydroxyde.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The powders are potentially explosive when mixed with air.

Calcium oxide reacts exothermically with acids, forming calcium salts.

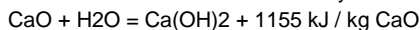
10.4. Conditions to avoid

Avoid environmental dust build-up.

The substance degrades when exposed to air and moisture.

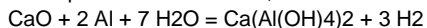
10.5. Incompatible materials

Calcium oxide reacts exothermically in contact with water, forming calcium dihydroxyde:



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

In the presence of moisture, calcium oxide reacts in contact with aluminium and brass, thus forming hydrogen:



10.6. Hazardous decomposition products

None. Calcium oxide absorbs moisture and carbon dioxide from the air, forming calcium carbonate, one widespread substance in nature: $\text{CaO} + \text{CO}_2 = \text{CaCO}_3 + \text{H}_2\text{O}$

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

CALCIUM OXYDE

LD50 (Oral)

LD50 (Dermal)

> 2000 mg/kg RATTO

> 2500 mg/kg CONIGLIO

SKIN CORROSION / IRRITATION

Causes skin irritation

SECTION 11. Toxicological informationSERIOUS 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

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

CALCIUM OXIDE	
LC50 - for Fish	50,6 mg/l/96h
EC50 - for Crustacea	49,1 mg/l/48h
EC50 - for Algae / Aquatic Plants	184,57 mg/l/72h
EC10 for Algae / Aquatic Plants	48 mg/l/72h
Chronic NOEC for Crustacea	32 mg/l/14d

12.2. Persistence and degradability

Information not available

12.3. Bioaccumulative potential

Information not available

MICRONIZED CALCIUM OXIDE**SECTION 12. Ecological information****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.

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: ADR EXEMPT
IMDG: IMDG CODE EXEMPT
IATA: 1910

14.2. UN proper shipping name

ADR / RID: ADR EXEMPT
IMDG: IMDG CODE EXEMPT
IATA: CALCIUM OXIDE

14.3. Transport hazard class(es)

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

**14.4. Packing group**

ADR / RID: ADR EXEMPT
IMDG: IMDG CODE EXEMPT
IATA: III

14.5. Environmental hazards

ADR / RID: ADR EXEMPT
IMDG: IMDG CODE EXEMPT
IATA: NO

**ITALCALCE SRL****MICRONIZED CALCIUM OXIDE**Revision n. 4
Dated 28/12/2022
Printed on 28/12/2022
Page n. 9/11
Replaced revision:3 (Dated 07/09/2020)

EN

SECTION 14. Transport information**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: - Special Provision: -	Limited Quantities: -	Tunnel restriction code: -
IMDG:	EMS: -	Limited Quantities: -	
IATA:	Cargo: Pass.: Special Instructions:	Maximum quantity: 100 Kg Maximum quantity: 25 Kg A803	Packaging instructions: 864 Packaging instructions: 860

Avoid the emission of dust during transport, using sealed tank cars.

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/EC: NoneRestrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
NoneRegulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicableSubstances in Candidate List (Art. 59 REACH)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 (EC) Reg. 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.

SECTION 16. Other information**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



ITALCALCE SRL

MICRONIZED CALCIUM OXIDE

Revision n. 4
Dated 28/12/2022
Printed on 28/12/2022
Page n. 11/11
Replaced revision:3 (Dated 07/09/2020)

EN

SECTION 16. Other information

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