

Safety Data Sheet

#11839289 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Calcium oxide	1305-78-8	CaO	10	14 Aug 2026

SECTION 1

Identification

Product name	Calcium oxide
CAS number	1305-78-8
Chemical formula	CaO
Molecular weight	56.08
SMILES	O=[Ca]
EC / EINECS number	215-138-9
Recommended use & restrictions	For research purposes only. Not suitable for human consumption or veterinary purposes.
Emergency telephone	0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

**DANGER**

CODE	HAZARD STATEMENT
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation
CODE	PRECAUTIONARY STATEMENT
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P280	Wear protective gloves/protective clothing/eye protection/face protection
P305+351+338	IF IN EYES: Rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
P501	Dispose of contents/container to an approved waste disposal plant
Other hazards (e.g. PBT / vPvB, not classified)	This substance is not classified as PBT or vPvB according to current UK criteria.

SECTION 3

Composition / information on ingredients

Purity / concentration	~100%
Impurities / stabilising additives	<i>Not applicable</i>

SECTION 4

First-aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest. Loosen tight clothing. Administer oxygen if breathing is difficult. Get medical attention.
Skin contact	Rinse with water.
Eye contact	Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses if present. Get medical attention.
Ingestion	Rinse mouth thoroughly with water. Give small glasses of water or milk to drink. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.
Symptoms / effects & medical attention	Treat symptomatically

SECTION 5

Fire-fighting measures

Suitable extinguishing media	Alcohol-resistant foam, carbon dioxide, dry powder, or water fog.
Unsuitable extinguishing media	Water jet (spreads fire).
Special hazards	Harmful gases or vapours, including oxides of calcium, may form during thermal decomposition or combustion.
Advice for firefighters	Avoid breathing fire gases. Use positive-pressure self-contained breathing apparatus (SCBA) and protective clothing. Cool containers with water spray. Control run-off water to prevent pollution.

SECTION 6

Accidental release measures

Personal precautions & PPE	Wear protective clothing. Avoid inhalation of dust. Use respiratory protection if ventilation is inadequate.
Environmental precautions	Avoid discharge into drains, watercourses, or ground.
Containment & clean-up methods	Clear spills immediately. Collect with a shovel and broom, place in sealed waste containers. Flush contaminated areas with water. Wash thoroughly after cleanup.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature	Ambient
Precautions for safe handling	Wear protective clothing. Keep away from food, drink, and animal feeding stuffs. Avoid broken packages. Do not reuse empty containers.
Conditions for safe storage (incompatibilities)	Store locked up, tightly closed, in a cool, well-ventilated place. Keep containers upright. Protect from damage.

SECTION 8

Exposure controls / personal protection

Occupational exposure limits (OEL / WEL)	WEL 2 mg/m ³ (8-hour TWA), 1 mg/m ³ respirable fraction (8-hour TWA), 4 mg/m ³ respirable fraction (15-minute).
DNEC/PNEC data	DNEL = 4mg/m ³ Provide adequate general and local exhaust ventilation. Maintain and test ventilation systems.
Eye / face protection	Chemical splash goggles Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	Gloves: Nitrile Rubber, 0.11mm (480 mins).
Respiratory protection	Dust mask (FFP2/FFP3) Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

SECTION 9

Physical & chemical properties

Density (g/mL)	3.31 g/mL DERIVED FROM: LITERATURE
Flash point	<i>Not applicable</i>
Acidity	Base DERIVED FROM: LITERATURE
Appearance / physical state	Solid DERIVED FROM: LITERATURE
Colour	White to grayish DERIVED FROM: LITERATURE
Odour	Odourless DERIVED FROM: LITERATURE
Melting / freezing point	2570°C DERIVED FROM: LITERATURE
Boiling point	2850°C DERIVED FROM: LITERATURE
Solubility (water)	Reacts readily with water to form calcium hydroxide. DERIVED FROM: LITERATURE
pH	12.6 DERIVED FROM: LITERATURE
Vapour pressure	No data available DERIVED FROM: LITERATURE
Partition coefficient (log Pow)	No data available DERIVED FROM: LITERATURE
Auto-ignition / decomposition temp	No data available DERIVED FROM: LITERATURE

SECTION 10

Stability & reactivity

Chemical stability / reactivity	Reacts readily with water to form calcium hydroxide. Has a strong affinity for water.
Conditions to avoid	Avoid moisture
Incompatible materials	Acids. Strong oxidizing agents. Halogens. Fluorine. Hydrogen fluoride. Carbon dioxide(CO2). Alcohols. Water.
Hazardous decomposition products	Harmful gases or vapours, including oxides of calcium.

SECTION 11

Toxicological information

Acute toxicity (LD50 / LC50)	LD50 Oral >2000 mg/kg (female Rat)
Skin corrosion / irritation	Causes skin irritation (H315).
Eye corrosion / irritation	Causes serious eye damage (H318).
Respiratory / skin sensitisation	Not specified
Carcinogenicity	Not specified
Mutagenicity	Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative (Literature)
Reproductive toxicity	<i>No data available</i>
STOT (single / repeated exposure)	May cause respiratory irritation (H335).
Aspiration hazard	<i>No data available</i>
Endocrine disruptors	This product does not contain any known or suspected endocrine disruptors.

SECTION 12

Ecological information

Aquatic toxicity	<i>Not applicable</i>
Persistence & degradability	<i>Not applicable</i>
Bioaccumulative potential	<i>Not applicable</i>
Mobility in soil	<i>Not applicable</i>
PBT / vPvB assessment	<i>Not applicable</i>

SECTION 13

Disposal considerations**Waste treatment / disposal methods**

Dispose of contents/container in accordance with national regulations.

SECTION 14

Transport information

UN number	UN1910
Proper shipping name	Calcium oxide
Class	8
Packing group	III
Transport category	Not subject to ADR
Tunnel code	-
Packing instruction (ADR)	Not subject to ADR
Packing instruction (IMDG)	Not subject to IMDG
Environmental hazards	Not specified
Special precautions for user	Not specified



SECTION 15

Regulatory information

REACH code	Y110
UFI code	<i>Not applicable</i>
ECHA notification	<i>Not applicable</i>
Chemical safety assessment carried out?	Not required

SECTION 16

Other information

Revision notes / other information	<i>Not applicable</i>
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