# SAFETY DATA SHEET

## LIMESTONE POWDER

**CAS No.: 471-34-1**

*This Safety Data Sheet is issued by Suraj Chemicals as the distributor/supplier of record, based on manufacturer and published GHS / regulatory reference data for this substance. Users should also consult the specific manufacturer's SDS where available.*

## 1. IDENTIFICATION

**GHS Product identifier**

LIMESTONE POWDER
Calcium Carbonate; Ground Calcium Carbonate (GCC); $CaCO_3$
**CAS:** 471-34-1

**Other means of identification**

Not relevant

**Recommended use of the chemical and restrictions on use**

Relevant uses: Filler/extender for plastics, paints, paper and rubber; construction and cement raw material; agricultural soil conditioner (aglime); flue-gas desulphurisation reagent; animal feed calcium source. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3.

**Supplier's details**

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## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**GHS:**
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), based on well-established public data for Limestone Powder (CAS 471-34-1). Based on available data, this substance does not meet the criteria for classification as hazardous under GHS.

**Not classified as hazardous.**

**GHS label elements, including precautionary statements**

**GHS: No signal word required**

**Hazard statements**

None required under GHS classification criteria.

**Precautionary statements**

P264: Wash exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear eye protection/face protection when handling dust.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501: Dispose of contents/container in accordance with local/regional/national regulations.

**Other hazards which do not result in classification**

Chemically inert under normal conditions; reacts with acids releasing carbon dioxide gas. Fine airborne dust of ground limestone may cause nuisance-dust irritation of the eyes and respiratory tract; product supplied by Suraj Chemicals is not represented as containing respirable crystalline silica above trace geological background levels, and a certificate of analysis is available on request for silica content if required by the buyer. Not a PBT/vPvB substance.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substances**

**Chemical description:** Limestone Powder

In accordance with Annex 4.3.3 of the GHS, the product contains:

| Identification | Chemical Name / Classification | Concentration |
|---|---|---|
| CAS: 471-34-1 | Limestone Powder – Not classified | ≥95% (technical/commercial grade) |

*Exact assay confirmed on the product Certificate of Analysis. To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.*

**Mixtures**

Non-applicable (technical/commercial-grade single substance with minor process residuals)

## 4. FIRST AID MEASURES

**Description of necessary first-aid measures**

Request medical assistance if symptoms are severe or persist, showing the SDS of this product.

**By inhalation**

Dust may cause mechanical irritation to the respiratory tract. Remove person to fresh air.

**By skin contact**

Brush off excess solid. Wash skin with plenty of water.

**By eye contact**

Rinse eyes thoroughly with water for at least 15 minutes, holding eyelids open. Seek medical attention if irritation persists.

**By ingestion/aspiration**

Rinse mouth. Give water to drink if the person is conscious. Seek medical attention if discomfort occurs.

**Most important symptoms/effects, acute and delayed**

Mechanical/nuisance-dust irritation of eyes and respiratory tract is the principal effect expected from dust exposure. No specific systemic effects anticipated at normal occupational exposure levels.

**Indication of immediate medical attention and special treatment needed, if necessary**

Treat symptomatically. No specific antidote required.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

**Suitable:** Use extinguishing media appropriate to the surrounding fire (water spray, foam, dry chemical, $CO_2$).
**Unsuitable:** None known.

**Specific hazards arising from the chemical**

Non-combustible, non-flammable. Not classified as an oxidiser. No unusual fire or explosion hazard.

**Special protective actions for fire-fighters**

No special measures required beyond standard fire-fighting practice. Wear self-contained breathing apparatus in enclosed or poorly ventilated areas.

**Additional provisions**

Cool fire-exposed containers with water spray if safe to do so.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**

Avoid dust generation. Use PPE described in section 8.

**For emergency responders**

Wear appropriate protective equipment (see section 8).

**Environmental precautions**

Avoid large releases to soil, drains or watercourses. Contain if possible.

**Methods and materials for containment and cleaning up**

Sweep up or vacuum dry material and place in a suitable, labelled container for reuse or disposal. Avoid generating dust.

**Reference to other sections**

See sections 8 and 13.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**A. General precautions for safe use**

Avoid contact with eyes. Avoid generating and inhaling dust. Use with adequate ventilation.

**B. Technical recommendations for the prevention of fires and explosions**

Non-combustible; no specific fire/explosion prevention measures required beyond general good practice.

**C. Technical recommendations on general occupational hygiene**

Do not eat, drink or smoke while handling. Wash hands thoroughly after handling.

**D. Technical recommendations to prevent environmental risks**

Prevent uncontrolled discharge to drains or watercourses.

**Conditions for safe storage, including any incompatibilities**

**A. Specific storage requirements**

| | |
|---|---|
| Storage condition | Store in tightly closed containers/bags in a cool, dry, well-ventilated place |
| Incompatible materials | Strong acids (releases $CO_2$ gas), ammonium salts |

**B. General conditions for storage**

Keep dry to prevent caking/clumping. Store away from incompatible materials listed above.

**Specific end use(s)**

Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control parameters**

| Identification | Occupational Exposure Limit Type | Value |
|---|---|---|
| Limestone Powder<br>CAS: 471-34-1 | No substance-specific OEL established (treat as particulate not otherwise classified) | General inert-dust limit: 10 mg/m³ (total dust) / 3 mg/m³ (respirable) |

**Appropriate engineering controls**

Provide local exhaust ventilation where dust is generated to keep airborne concentrations below occupational exposure limits.

**B. Respiratory protection**

Not normally required with adequate ventilation; use a particulate filter respirator (FFP2 type) if dust levels are elevated.

**C. Specific protection for the hands**

Chemical-resistant gloves recommended for prolonged or repeated contact.

**D. Eye and face protection**

Safety glasses with side shields or chemical goggles when handling dust.

**E. Bodily protection**

Standard industrial work clothing.

**F. Additional emergency measures**

Eyewash station and washing facilities should be available in the work area.

**Environmental exposure controls**

Prevent uncontrolled discharge to the environment; see subsection 7.1.D.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Appearance** | |
| Physical state at 20°C | Solid |
| Appearance | White to off-white/grey powder |
| Odor | Odorless |
| Odour threshold | Not applicable |
| **Volatility** | |
| Boiling point | Not applicable (solid, decomposes/melts as below) |
| Melting point | 825°C (decomposes to calcium oxide and $CO_2$ rather than melting) |
| Vapour pressure | Negligible |
| Evaporation rate | Not applicable (solid) |
| **Product Description** | |
| Molecular weight | 100.09 g/mol |
| Density | 2.71 g/cm³ |
| pH (aqueous solution) | 8.0–9.5 (mildly alkaline suspension) |
| Solubility in water at 20°C | ~0.013 g/L (practically insoluble; solubility increases in acidic or $CO_2$-rich water) |
| **Flammability** | |
| Flash Point | Non-applicable (non-combustible solid) |
| Flammability (solid, gas) | Not flammable |
| Autoignition temperature | Not applicable |
| Lower / Upper flammability limit | Not applicable |

**Other information**

| | |
|---|---|
| Explosive properties | Not applicable |
| Oxidising properties | Not classified as an oxidiser |
| Corrosive to metals | Not classified |

## 10. STABILITY AND REACTIVITY

**Reactivity**

No hazardous reactivity expected under normal conditions of storage, handling and use.

**Chemical stability**

Chemically stable under the indicated conditions of storage, handling and use.

**Possibility of hazardous reactions**

Hazardous polymerisation does not occur. Under specified conditions, hazardous reactions leading to excessive temperature or pressure are not expected.

**Conditions to avoid**

| Shock/Friction | Contact with Air | Increase in Temperature | Sunlight | Humidity |
|---|---|---|---|---|
| Not applicable | Not applicable | Not applicable | Not applicable | Keep dry – caking/clumping |

**Incompatible materials**

Strong acids (releases $CO_2$ gas), ammonium salts

**Hazardous decomposition products**

None expected under normal conditions of storage and use.

## 11. TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

In case of exposure that is repetitive, prolonged, or at concentrations higher than the recommended occupational exposure limits, adverse health effects may result depending on the means of exposure:

**A. Ingestion (acute effect)**
Low acute oral toxicity. Large doses may cause gastrointestinal discomfort.

**B. Inhalation (acute effect)**
Dust may cause mechanical irritation of the nose, throat and respiratory tract.

**C. Contact with skin and eyes (acute effect)**
Skin: not expected to be irritating under normal handling. Eyes: dust may cause mechanical irritation.

**D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)**
Not listed as a carcinogen by IARC, NTP or OSHA. Classification criteria for mutagenicity/reproductive toxicity are not met based on available data.

**E. Sensitizing effects**
Classification criteria for respiratory or skin sensitisation are not met based on available data.

**F. Specific target organ toxicity (STOT) – single exposure**
Classification criteria are not met based on available data.

**G. Specific target organ toxicity (STOT) – repeated exposure**
Classification criteria are not met based on available data.

**H. Aspiration hazard**
Not applicable (solid).

**Product-specific toxicological information**

| Identification | Acute Toxicity | Genus |
|---|---|---|
| Limestone Powder<br>CAS: 471-34-1 | LD50 oral: >6450 mg/kg (practically non-toxic) | Rat |

## 12. ECOLOGICAL INFORMATION

**Practically non-toxic to aquatic organisms; a naturally occurring mineral and common water-hardness constituent.**

**Toxicity**
Low order of aquatic toxicity as the intact inorganic salt; large discharges may alter local ionic strength/salinity.

**Persistence and degradability**
Inorganic salt; biodegradation is not applicable.

**Bioaccumulative potential**
Not expected to bioaccumulate.

**Mobility in soil**

| Koc | Henry | Dry Soil | Moist Soil |
|---|---|---|---|
| Not applicable | Not applicable | Mobility depends on water solubility (see section 9) | |

**Results of PBT and vPvB assessment**
Not applicable (inorganic substance).

**Other adverse effects**
None expected under normal use.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods**
Not classified as hazardous waste. Dissolve/dilute and dispose of in accordance with local discharge consent, or dispose of via a licensed waste contractor.
Refer to national and local regulations on waste management.

## 14. TRANSPORT INFORMATION

**Transport of dangerous goods by land (ADR/RID)**

| | |
|---|---|
| 14.1 UN number | Not regulated |
| 14.2 UN proper shipping name | Limestone Powder – non-hazardous for transport |
| 14.3 Transport hazard class(es) | N/A |
| 14.4 Packing group | N/A |
| 14.5 Environmental hazard | No |
| 14.6 Special precautions for user | None |
| 14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code) | Not applicable |

**Transport of dangerous goods by sea (IMDG)**

| | |
|---|---|
| 14.1 UN number | Not regulated |
| 14.2 UN proper shipping name | Limestone Powder – non-hazardous for transport |
| 14.3 Transport hazard class(es) | N/A |
| 14.4 Packing group | N/A |
| 14.5 Marine pollutant | No |
| 14.6 Special precautions for user | None |
| 14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code) | Not applicable |

**Transport of dangerous goods by air (IATA/ICAO)**

| | |
|---|---|
| 14.1 UN number | Not regulated |
| 14.2 UN proper shipping name | Limestone Powder – non-hazardous for transport |
| 14.3 Transport hazard class(es) | N/A |
| 14.4 Packing group | N/A |
| 14.5 Environmental hazard | No |
| 14.6 Special precautions for user | None |
| 14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code) | Not applicable |

## 15. REGULATORY INFORMATION

**Safety, health and environmental regulations specific for the product in question**

It is recommended to use the information in this SDS as data for a local risk evaluation for handling, use, storage and disposal.

**Other legislation**

Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)

## 16. OTHER INFORMATION

**Legislation related to safety data sheets**

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

**Texts of the legislative phrases mentioned in sections 2 and 3**

None (not classified as hazardous under GHS).

**Advice related to training**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources**

Publicly available GHS classification and physicochemical reference data for Limestone Powder (CAS 471-34-1).

**Abbreviations and acronyms**

LD50: Lethal Dose 50 | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer | PBT: Persistent, Bioaccumulative and Toxic | vPvB: Very Persistent and Very Bioaccumulative

**Disclaimer:** The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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