Polymer Add (Thailand) Co.,Ltd.
Office - 106, Chalaremprakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250
Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280
Mobile - Thai : 0804531391, English: 0839415475, **E-mail** – contact@polymeradd.co.th

Safety Data Sheet (SDS)

Product Name	Calcium Carbonate
CAS Number	471-34-1

1.0 Identification of the Substance/Mixture and of the Company/Undertaking

Product Name	Calcium Carbonate
CAS Number	471-34-1
Relevant Identified Uses	Polypropylene (PP), Polyethylene (PE), and PVC compounds Engineering plastics and masterbatches Plastic films, injection-molded items, pipes, and profiles Enhances stiffness, dimensional stability, impact resistance, and cost-efficiency
Supplier	Polymer Add (Thailand) Co., Ltd
Office	106, Chalaremprakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250
Factory	188/3, Moo 8, Sub-District- Bangpu Mai, District-Muang Samut Prakan, Samutprakan Province, Thailand 10280
MobileThai	0804531391
Mobile English	0839415475
E-mail	contact@polymeradd.co.th

2.0 Hazards Identification

Classification (CLP)	Not classified as hazardous under Regulation (EC) No. 1272/2008 (CLP).
Classification (67/548/EEC)	Not classified as hazardous
Label Elements (CLP)	No pictogram, signal word, hazard or precautionary statements required. Substance is not hazardous according to CLP
Supplemental	Dust may cause mechanical irritation to eyes, skin, and respiratory tract at high airborne concentrations. Ensure dust control and use of PPE during handling and processing

3.0 Composition/Information on Ingredients

Substance	Calcium Carbonate
CAS No	471-34-1
EC No	207-439-9
Purity	≥ 98% (typical industrial micronized grade)

4.0 First Aid Measures

General Advice	Remove from exposure. Seek medical attention if symptoms persist.
Inhalation	Move to fresh air. Seek medical attention if discomfort persists.
Skin Contact	Wash with soap and water. Remove contaminated clothing.
Eye Contact	Rinse with water for several minutes. Remove contact lenses.
Ingestion	Rinse mouth. Do not induce vomiting. Seek medical attention if large quantities are ingested.

5. Firefighting Measures

Suitable Extinguishing Media	Water spray, dry chemical, CO_2, foam.
Hazards	Non-combustible. Sulfur oxides may form in a fire.
Advice for firefighters	Use self-contained breathing apparatus and full protective gear.

6. Accidental Release Measures

Personal Precautions	Avoid dust. Use PPE.
Environmental Precautions	Prevent entry into drains.
Clean-up	Sweep or vacuum without raising dust. Dispose in accordance with regulations.

7. Handling and Storage

Handling	Avoid dust generation. Use in a well-ventilated area.
Storage	Store in cool, dry place away from strong acids. Keep containers tightly closed.
Explosion/Fires	Non-flammable. Dust control measures should be in place.

8. Exposure Controls/Personal Protection

OEL	EU TWA 10 mg/m^3 (inhalable), ACGIH TWA 5 mg/m^3 (respirable)
Engineering Controls	Local exhaust ventilation
PPE	Goggles, gloves, dust respirator (P2/P3)
Environmental Controls:	Prevent dispersion into environment

9. Physical and Chemical Properties

Property	Value / Description
Appearance	Fine white odorless powder
Odour	Odourless
Odour Threshold	Not applicable
pH (suspension in water)	~9.0 (10% suspension)
Melting Point / Freezing Point	Decomposes >825 °C
Initial Boiling Point	Not applicable (inorganic solid)
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid/gas)	Non-flammable
Explosion Limits	Not explosive
Vapour Pressure	Not applicable
Vapour Density	Not applicable
Relative Density	~2.7 g/cm^3 (bulk density depends on grade and particle size)
Solubility in Water	~0.0013 g/100 mL at 25°C (very low)
Partition Coefficient (n-octanol/water)	Not applicable (inorganic compound)
Auto-ignition Temperature	Not applicable
Decomposition Temperature	>825 °C (releases CO_2, forms CaO)
Viscosity	Not applicable

Explosive Properties	Not explosive
Oxidizing Properties	Not oxidizing

10. Stability and Reactivity

Stability	Stable under normal storage and handling conditions.
Hazardous Reactions	No hazardous polymerization or reactivity under normal use.
Incompatible Materials	Strong acids (e.g., hydrochloric acid) — may release carbon dioxide (CO_2).
Decomposition Products	At high temperatures (>825 °C), decomposes to form calcium oxide (CaO) and carbon dioxide (CO_2).

11. Toxicological Information

Information on Toxicological Effects

Endpoint	Result / Classification
Acute Toxicity	Not classified. Oral LD_{50} > 5,000 mg/kg (rat) – low acute toxicity
Skin Corrosion/Irritation	Not irritating to skin under normal use conditions
Serious Eye Damage/Irritation	May cause mild mechanical irritation due to dust particles
Respiratory or Skin Sensitization	Not a sensitizer. No evidence of allergic response
Germ Cell Mutagenicity	No mutagenic effects observed. Not classified
Carcinogenicity	Not classified. IARC, NTP, OSHA do not list Calcium Carbonate as carcinogenic
Reproductive Toxicity	No known effects on reproduction or fertility
STOT – Single Exposure	Dust may cause transient mechanical irritation to respiratory tract
STOT – Repeated Exposure	Not classified. No known chronic toxicity under normal occupational exposure
Aspiration Hazard	Not applicable. Solid, inorganic mineral with no aspiration risk

Additional Information

Calcium carbonate is insoluble and does not release free barium ions, which are responsible for the toxicity of other barium compounds.
Inert mineral, commonly regarded as safe for use in pharmaceuticals, cosmetics, and polymers.

12. Ecological Information

Organism	Test Type	Result	Remarks
Fish	LC_{50} (96 h)	> 56 mg/L (Oncorhynchus mykiss)	No acute toxicity at environmentally relevant concentrations
Daphnia	EC_{50} (48 h)	> 100 mg/L	Poor solubility limits bioavailability; no observed immobilization effects
Algae	EC_{50} (72 h)	> 14 mg/L (Desmodesmus subspicatus)	Slight growth inhibition at very high concentrations

Conclusion:
Calcium Carbonate is not acutely toxic to aquatic organisms under normal environmental conditions. Its low water solubility limits ecological impact.

Section 13: Disposal Considerations

Product / Waste from Residues

Dispose of in accordance with local, regional, national, and international regulations.
Not considered hazardous waste under most regulations (e.g., EU Directive 2008/98/EC).
Can often be reused or recycled in industrial processes, especially in plastics or construction.
If disposal is necessary, landfilling is acceptable due to its inert and non-toxic nature.

Contaminated Packaging

Empty containers should be completely emptied and cleaned before disposal or recycling.
Dispose of as non-hazardous industrial waste, unless contaminated with hazardous substances.

Waste Code (EWC Recommendation – Europe)

06 13 03 – Wastes from inorganic chemical processes: wastes from the manufacture of pigments and other inorganic compounds – other wastes not otherwise specified
(Adapt code to local waste management guidelines based on actual usage.)

14. Transport Information

Regulatory Body	UN Number	Proper Shipping Name	Transport Hazard Class	Packing Group	Environmental Hazards	Remarks
ADR/RID (Europe)	Not regulated	Not classified as dangerous goods	–	–	None	Safe for road/rail transport
IMDG (Sea)	Not regulated	Not classified as dangerous goods	–	–	None	Marine pollutant: No
ICAO/IATA (Air)	Not regulated	Not classified as dangerous goods	–	–	None	Suitable for air transport
DOT (USA)	Not regulated	Not classified as hazardous	–	–	None	Inert, non-toxic mineral powder

Not classified as dangerous for transport (ADR, IMDG, IATA).
UN Number: Not applicable
Marine Pollutant: No

15. Regulatory Information

Regulation / Inventory	Status
REACH (EU)	Registered / Listed
CLP Regulation (EC) No 1272/2008	Not classified as hazardous
EU EINECS / ELINCS	Listed (EC No: 207-439-9)
US TSCA (Toxic Substances Control Act)	Listed
Canada DSL / NDSL	Listed on DSL
Australia AICS	Listed
Japan ENCS	Listed (No. 1-176)

China IECSC	Listed
South Korea KECI	Listed (KE-04081)
Philippines PICCS	Listed
New Zealand NZIoC	Listed

Section 16: Other Information

16.1 SDS Revision Information

Version	1.0 / 2025
Date of Preparation	May 2025
Reason for Issue	Revision for Year 2025.

16.2 Abbreviations and Acronyms

CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging (EU Regulation)
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
TWA	Time Weighted Average
LD_{50} / LC_{50}	Median Lethal Dose / Concentration
EC_{50}	Half Maximal Effective Concentration
PBT / vPvB	Persistent, Bioaccumulative and Toxic / Very Persistent, Very Bioaccumulative
SDS	Safety Data Sheet
EINECS	European Inventory of Existing Commercial Chemical Substances

16.3 Key Literature and References

ECHA Registered Substances Database
OECD SIDS for Calcium Carbonate
GESTIS Substance Database
European Pharmacopoeia and USP Monographs
IARC and NIOSH references (for classification and toxicological summaries)

16.4 Legal Disclaimer

This Safety Data Sheet is based on current knowledge and is intended to describe the product with regard to safety requirements.
It does not represent a guarantee of the properties of the product.
Users are responsible for ensuring the suitability and completeness of this information for their particular use.

Creation Date : May 2025
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