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# Safety Data Sheet (SDS)

Product Name	Barium Sulfate
CAS Number	7727-43-7

## 1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Name	Barium Sulfate
CAS Number	7727-43-7
Relevant Identified Uses	Filler in plastics, pigment extender, reinforcing agent in polymers.
Uses Advised Against	None
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. Hazards Identification

Classification (CLP):	Not classified as hazardous according to Regulation (EC) No 1272/2008.
Classification	Not classified as dangerous.
(67/548/EEC)	
Label Elements (CLP):	No pictograms, signal words or hazard statements.:
Supplemental	EUH210 Safety data sheet available on request.

#### **3. Composition/Information on Ingredients**

Substance	Barium Sulfate
CAS No	7727-43-7
EC No	231-784-4
Purity	≥98%

#### 4. 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.

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#### **5. Firefighting Measures**

Suitable Extinguishing	Water spray, dry chemical, CO <sub>2</sub> , foam.
Media	
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	Prevent entry into drains.
Precautions	
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 <sup>3</sup> (inhalable), ACGIH TWA 5 mg/m <sup>3</sup> (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 to off-white powder
Odour	Odourless
Odour Threshold	Not applicable
pH (suspension in water)	~4–9 (10% suspension)
Melting Point / Freezing Point	> 1580 °C (decomposes)
Initial Boiling Point	Not applicable (inorganic solid)
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid/gas)	Non-flammable
Explosion Limits	Not applicable
Vapour Pressure	Negligible
Vapour Density	Not applicable
Relative Density	~4.2–4.5 (water = 1)
Solubility in Water	Insoluble (< 0.01 g/L at 20 °C)
Partition Coefficient (n-octanol/water)	Not applicable
Auto-ignition Temperature	Not applicable

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Decomposition Temperature	> 1580 °C
Viscosity	Not applicable
Explosive Properties	None
Oxidizing Properties	None

#### **10. Stability and Reactivity**

Stability	Stable under normal conditions
Hazardous Reactions	None under normal use
Incompatible Materials	Strong acids
Decomposition Products	Possibly sulfur oxides, $H_2S$ if impurities present

#### **11. Toxicological Information**

Oral LD <sub>50</sub> (rat)	>2000 mg/kg
Inhalation $LC_{50}$ (rat, 4h)	>5.7 mg/L
Dermal LD <sub>50</sub> (rat)	>2000 mg/kg
Irritation	Not irritating to skin/eyes; dust may cause mechanical irritation

## **12. Ecological Information**

#### **12.1 Toxicity**

Organism	Test Type	Result	Remarks
Fish	LC <sub>50</sub> (96 h)	> 100 mg/L	Oncorhynchus mykiss (Rainbow trout)
Daphnia	EC <sub>50</sub> (48 h)	> 100 mg/L	Daphnia magna
Algae	EC <sub>50</sub> (72 h)	> 100 mg/L	Desmodesmus subspicatus

#### **Conclusion:**

Barium sulfate is not acutely toxic to aquatic organisms at relevant concentrations. Poor water solubility limits bioavailability and ecological impact.

# Section 13: Disposal Considerations 13.1 Waste Treatment Methods

#### **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.

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# 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	Transport Hazard	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**

# 15.1 Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture

Regulation / Inventory	Status
REACH (EU)	Registered as a low-hazard inorganic compound
CLP Regulation (EC) No	Not classified as hazardous
1272/2008	
EU EINECS / ELINCS	Listed (EINECS No. 231-784-4)
US TSCA (Toxic Substances	Listed
Control Act)	
Canada DSL / NDSL	Listed (DSL)
Australia AICS	Listed
Japan ENCS	Listed
China IECSC	Listed
South Korea KECI	Listed
Philippines PICCS	Listed
New Zealand NZIoC	Listed

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## Section 16: Other Information - Barium Sulfate (CAS 7727-43-7)

#### **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 <sub>50</sub> / LC <sub>50</sub>	Median Lethal Dose / Concentration
EC <sub>50</sub>	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 Barium Sulfate 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 Renewal Date : May 2026