

Safety Data Sheet

Barium Sulfate

Analytical chemical / laboratory reagent

SECTION 1: Identification of the substance and of the company

Product identifier	Barium Sulfate
Chemical name	Barium sulfate / barium sulphate
CAS number	7727-43-7
EC number	231-784-4
Relevant identified uses	Laboratory reagent; analytical and technical applications
Uses advised against	Human/animal consumption; food, supplement, cosmetic, medical, diagnostic or therapeutic use
Supplier	Rexar, Genestetstraat 3, 2394 XK Hazerswoude-Rijndijk, Netherlands
Contact	info@rexar.nl www.rexar.nl

SECTION 2: Hazards identification

Classification: ECHA reports that no hazards are classified from REACH registration data for barium sulfate. PubChem likewise lists the substance as not classified in its Laboratory Chemical Safety Summary.

Label elements: No hazard pictogram, signal word or hazard statement required on that basis.

Other hazards: Airborne dust may cause mechanical irritation. Apply normal laboratory dust-control measures and consult the exact supplier SDS for the supplied grade.

SECTION 3: Composition / information on ingredients

Substance	Barium sulfate
CAS number	7727-43-7
EC number	231-784-4
PubChem CID	24414
Molecular formula	BaSO ₄
Molecular weight	233.39 g/mol
Purity	Lot-specific; refer to supplier documentation / COA

SECTION 4: First-aid measures

Inhalation: Move to fresh air if dust has been inhaled.

Skin: Wash with soap and water.

Eyes: Rinse cautiously with water for several minutes; seek advice if irritation persists.

Ingestion: Rinse mouth and seek medical advice if unwell.

SECTION 5: Fire-fighting measures

Barium sulfate is not combustible. Use extinguishing media appropriate to the surrounding fire. Strong heating/decomposition can produce sulfur oxides and barium-containing residues. Use suitable protective equipment.

SECTION 6: Accidental release measures

Avoid generating airborne dust. Ventilate and collect mechanically into a labelled container. Wear suitable laboratory eye protection and gloves. Prevent uncontrolled dispersal.

SECTION 7: Handling and storage

Handle using good laboratory practice. Avoid breathing dust. Keep tightly closed and dry. Store in a suitable chemical-storage area away from incompatible materials.

SECTION 8: Exposure controls / personal protection

Use adequate ventilation. Wear suitable laboratory gloves and safety glasses. Where significant dust is generated, use appropriate particulate respiratory protection.

SECTION 9: Physical and chemical properties

Appearance	White to yellowish odourless powder or small crystals
Molecular formula	BaSO ₄
Molecular weight	233.39 g/mol
Density	Approximately 4.25-4.5 g/cm ³
Water solubility	Practically insoluble
Melting / decomposition	Approximately 1580 °C, with decomposition
Flammability	Non-combustible

SECTION 10: Stability and reactivity

Stable under recommended storage conditions. Avoid excessive heat and incompatible materials. Strong thermal decomposition may generate sulfur oxides.

SECTION 11: Toxicological information

Barium sulfate is poorly soluble and is not classified as hazardous in the reviewed ECHA REACH registration information. Dust exposure may cause mechanical irritation. Consult the exact supplier SDS for grade-specific toxicological information.

SECTION 12: Ecological information

No environmental hazard classification is reported from the reviewed ECHA REACH registration information. Avoid unnecessary environmental release and follow applicable waste controls.

SECTION 13: Disposal considerations

Dispose of unused material and contaminated packaging through an appropriate chemical-waste route in accordance with applicable local requirements. Avoid uncontrolled discharge.

SECTION 14: Transport information

Barium sulfate is generally not regulated as dangerous goods in standard supplier SDSs. Verify against the exact supplied grade, quantity, route and current carrier requirements before shipment.

SECTION 15: Regulatory information

Barium sulfate is identified by ECHA under CAS 7727-43-7 and EC 231-784-4. ECHA's current substance information states that no hazards have been classified according to notifications provided by companies in REACH registrations.

SECTION 16: Other information

Revision date: 10 September 2026.

Identity reference: PubChem CID 24414; CAS 7727-43-7.

Safety basis: ECHA substance information and PubChem Laboratory Chemical Safety Summary.

This SDS is a general laboratory safety reference and is not a certificate of analysis.