



OCI Company Ltd.

Material Safety Data Sheet

MSDS

Barium Carbonate

Section 1 - Chemical Product and Company Identification

TRADE NAMES : Barium Carbonate

Recommended use : Not available

Restriction of use : Not available

Company Identification

Company : OCI Company Ltd.

Address : 230, Dokbae-ro, Nam-gu, Incheon, KOREA

Tel No. : Quality Management Team 032) 860 - 6261

Section 2 - Hazards Identification

- 1) Hazard Classification Acute toxicity (oral) : 3
Reproductive toxicity : 2
Specific target organ toxicity following single exposure : 1

2) Warning signal

Symbol



Signal word

Danger

Hazard statement

H301 Toxic if swallowed

H361 Suspected of damaging fertility or the unborn child

H370 Causes damage to organs

Prevention precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapours/spray

P264 Wash thoroughly after handling

P270 Do not eat, drink or smoke when using this product

P281 Use personal protective equipment as required.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment.

P330 Rinse mouth
P405 Store locked up.
P501 Dispose of contents/container to the related laws.

3) NFPA

Health Rating	2
Flammability Rating	0
Reactivity Rating	0

Section 3 - Composition, Information on Ingredients

COMPONENT: Barium Carbonate

CAS No.: 513-77-9

PERCENTAGE: 100

Section 4 - First Aid Measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration.

Skin contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

Most important symptoms/effects, acute and delayed Symptoms: Toxic if swallowed.

Indication of immediate medical attention and special treatment needed Treatment: Treat symptomatically. Symptoms may be delayed.

Section 5 - Fire Fighting Measures

General fire hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA..

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Environmental precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7 - Handling and Storage

Precautions for safe handling: Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities: Do not store in metal containers. Keep in a cool, well-ventilated place. Store in a dry place.

Section 8 - Exposure Controls, Personal Protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
BARIUM CARBONATE - as Ba	TWA	0.5 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	REL	0.5 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	0.5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	0.5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate engineering controls: No data available.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection: Chemical resistant gloves

Other: Wear suitable protective clothing.

Respiratory protection: In case of inadequate ventilation use suitable respirator.

Hygiene measures: Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using the product. Wash contaminated clothing before reuse.

Section 9 - Physical and Chemical Properties

Appearance

Physical state: Solid

Form: Solid

Color: White

Odor: Odorless

Odor threshold: No data available.

pH: No data available.

Melting point/freezing point: >1300 °C

Initial boiling point and boiling range: No data available.

Flash Point: No data available.

Evaporation rate: No data available.

Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): No data available.

Flammability limit - lower (%): No data available.

Explosive limit - upper (%): No data available.

Explosive limit - lower (%): No data available.

Vapor pressure: 0.00000356 mmHg (25°C (estimated figure))

Vapor density: No data available.

Relative density: 4.43

Solubility(ies)

Solubility in water: 0.002 g/100ml (20°C)

Solubility (other): No data available.

Partition coefficient (n-octanol/water): -1.32

Auto-ignition temperature: No data available.

Decomposition temperature: No data available.

Viscosity: No data available.

Molecular Weight: 197.3

Section 10 - Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Material is stable under normal conditions.

Possibility of hazardous reactions: Hazardous polymerization does not occur.

Conditions to avoid: Excessive heat. Contact with incompatible materials.

Incompatible materials: Strong oxidizing agents. Acids.

Hazardous decomposition products: Thermal decomposition may release oxides of carbon.

Section 11 - Toxicological Information

Information on likely routes of exposure

Ingestion: Toxic if swallowed.

Inhalation: Mist or vapors may cause irritation.

Skin contact: May cause irritation.

Eye contact: May cause irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product: LD 50 (Rat): 418 mg/kg

Dermal Product: No data available.

Inhalation Product: No data available.

Repeated dose toxicity Product: No data available.

Skin corrosion/irritation Product: May cause skin irritation.

Serious eye damage/eye irritation Product: May irritate eyes.

Respiratory or skin sensitization Product: Not a skin sensitizer.

Carcinogenicity Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ cell mutagenicity

In vitro Product: No mutagenic components identified

In vivo Product: No mutagenic components identified

Reproductive toxicity Product: No components toxic to reproduction

Specific target organ toxicity - single exposure Product: No data available.

Specific target organ toxicity - repeated exposure Product: No data available.

Aspiration hazard Product: Not classified

Other effects: None known.

Section 12 - Ecological Information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish Product: No data available.

Specified substance(s): BARIUM CARBONATE LC 50 (Western mosquitofish (*Gambusia affinis*),
96 h): 6,950 mg/l Mortality

Aquatic invertebrates Product: No data available.

Chronic hazards to the aquatic environment:

Fish Product: No data available.

Aquatic invertebrates Product: No data available.

Toxicity to Aquatic Plants Product: No data available.

Persistence and degradability

Biodegradation Product: There are no data on the degradability of this product.

BOD/COD ratio Product: No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product: No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow) Product: No data available.

Mobility in soil: No data available.

Other adverse effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Section 13 - Disposal Considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport Information

DOT

UN number: UN 1564
UN proper shipping name: Barium compounds, n.o.s.(BARIUM CARBONATE)
Transport hazard class(es)
Class(es): 6.1
Label(s): 6.1
Packing group: II
Marine Pollutant: No

IMDG

UN number: UN 1564
UN proper shipping name: BARIUM COMPOUND, N.O.S.(BARIUM CARBONATE)
Transport hazard class(es)
Class(es): 6.1
Label(s): 6.1
EmS No.: F-A, S-A
Packing group: II
Marine Pollutant: No

IATA

UN number: UN 1564
Proper Shipping Name: Barium compound, n.o.s.(BARIUM CARBONATE)
Transport hazard class(es):
Class(es): 6.1
Label(s): 6.1
Marine Pollutant: No
Packing group: II

Section 15 - Regulatory Information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

BARIUM CARBONATE Reportable quantity: 1000 lbs..

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

X Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	RQ
BARIUM CARBONATE	1000 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
BARIUM CARBONATE	500 lbs

SARA 313 (TRI Reporting)

Chemical identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
BARIUM CARBONATE	10000 lbs	25000 lbs.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

BARIUM CARBONATE Listed

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

BARIUM CARBONATE Listed

Inventory Status:

Australia AICS: On or in compliance with the inventory
Canada DSL Inventory List: On or in compliance with the inventory
EINECS, ELINCS or NLP: On or in compliance with the inventory
Japan (ENCS) List: On or in compliance with the inventory
China Inv. Existing Chemical Substances: Not in compliance with the inventory
Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory
Canada NDSL Inventory: Not in compliance with the inventory.
Philippines PICCS: On or in compliance with the inventory
US TSCA Inventory: On or in compliance with the inventory
New Zealand Inventory of Chemicals: On or in compliance with the inventory

Japan ISHL Listing: On or in compliance with the inventory
Japan Pharmacopoeia Listing: Not in compliance with the inventory.

Section 16 - Other Information

Sources : KOSHA, National Emergency Management Agency

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