

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	Calcium Bromide 95%	
Product id	1390	
Revision date	09/12/2013	Revision: 8
Supersedes	28/10/2010	

1. Identification of the substance & the company

Chemical name	Calcium bromide
Chemical formula	CaBr ₂
Chemical family	Inorganic bromide
Molecular weight	199.88
Type of product and use	For use in completion and workover fluids
Supplier	ICL-IP America Inc. 622 Emerson Road - Suite 500 St Louis, Missouri 63141, USA Tel:(314)983-7884 Fax:(314)983-7607 e-mail:msdsinfo@icl-ip.com
Emergency Telephone	Chemtrec: (800) 424-9300 Medical: PROSAR 1-888-875-1685 (24HRS)

2. Hazards identification

GHS classification Eye Damage 1, H318 Causes serious eye damage

Labels and other form of warning

Symbol(s)



Signal Word DANGER

Hazard statements H318 - Causes serious eye damage

Precautionary statements P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician

NFPA Ratings (Scale 0-4) Health = 3, Fire = 0, Reactivity = 0.

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3. Composition / information on ingredients

Components	CAS No.	Weight %
Calcium Bromide	7789-41-5	95

4. First-aid measures

Eye contact Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.

Skin contact Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before reuse. Get medical attention if irritation persists.

Inhalation In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

Ingestion If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink

Most important symptoms and effects, acute or delayed

- Ocular Causes serious eye irritation

- Dermal Mild irritant to intact skin.
Exposure to wet skin may cause severe irritation

- Inhalation Irritant to upper respiratory tract.

- Ingestion Abdominal pain, nausea and vomiting. May cause falling asleep, muscular incoordination and respiratory depression.

Notes to the physician No specific antidote.
Treat symptomatically and supportively.

5. Fire - fighting measures

Suitable extinguishing media Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.

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Unusual fire and explosion hazards CaBr₂ will decompose slowly from ca. 700°C, releasing poisonous and corrosive fumes of hydrogen bromide and bromine.

Fire fighting procedure Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode.

6. Accidental release measures

Personal precautions Wear respirator, chemical safety goggles, rubber gloves and boots

Methods for cleaning up Sweep up, place in a bag and hold for waste disposal or possible reuse Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Environmental precautions Prevent product from entering drains, ditches and rivers.

7. Handling and storage

Handling Avoid bodily contact. Keep containers tightly closed.

Storage Store in a dry, well-ventilated area. away from incompatible materials (see "materials to avoid").

8. Exposure controls / personal protection

Exposure Limits :

Components	ACGIH-TLV Data	OSHA (PEL) Data
Calcium Bromide 7789-41-5	Not determined	Not determined

Ventilation requirements Provide adequate ventilation.

Personal protective equipment:

- **Respiratory protection** Dust respirator
- **Hand protection** Neoprene gloves
- **Eye protection** Chemical safety goggles
- **Skin and body protection** Body covering clothes and boots

Hygiene measures Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

9. Physical and chemical properties

Appearance White free flowing powder, odourless
Odor threshold Not determined
pH Not available
Melting point/range 760°C (decomposes)

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Boiling point/range	810°C
Flash point	None
Evaporation rate (ether=1)	Not applicable under standard conditions
Flammable/Explosion limits	Not flammable
Vapor pressure	Not applicable under standard conditions
Vapor density	Not applicable under standard conditions
- Solubility in water	142 g/100ml at 30°C 312 gr/100ml at 100°C
- Solubility in other solvents	Alcohol Pyridine Acetone
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	> 700°C
Viscosity	Not applicable
Specific gravity	3.35
Explosive properties	Not explosive
Oxidising properties	Not oxidising
Particle size	Not available

10. Stability and reactivity

Reactivity	Hygroscopic CaBr ₂ will decompose slowly from ca.700°C
Stability	Stable under normal conditions Becomes yellow on long exposure to air.
Possibility of hazardous reactions	Not expected to occur
Conditions to avoid	Heating above decomposition temperature.
Materials to avoid	Strong acids.
Hazardous decomposition products	Hydrogen bromide and bromine

11. Toxicological information

Likely Routes of Exposure	Eye contact Skin Inhalation Ingestion
Acute toxicity: - Rat oral LD50	2210 mg/kg

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- Eye irritation (rabbit)	Severe irritant
- Dermal irritation (rabbit)	Moderate irritant
Dermal sensitization	Not a sensitizer
Chronic toxicity	Repeated skin contact may cause dermatitis. Repeated oral intake of bromides (>9 mg/kg body weight/day) may affect the central nervous system. Warning symptoms include mental dullness, slurred speech, weakened memory, apathy, anorexia, constipation, drowsiness and loss of sensitivity to touch and pain.
Mutagenicity	Not mutagenic by the Ames Test.
Carcinogenicity	Not classified by IARC Not included in NTP 13th Report on Carcinogens
Reproductive toxicity	No data available for calcium bromide. Studies in rats fed high doses of sodium bromide showed a reversible reduction in fertility.

12. Ecological information

Aquatic toxicity :

- 48 Hour-EC50, <i>Daphnia magna</i>	>105 mg/l
Persistence and degradability	Biodegradation is not relevant for inorganic salts.
Bioaccumulative potential	Not expected to bioaccumulate
Mobility in soil	Expected to be mobile due to high solubility.

13. Disposal considerations

Waste disposal	Observe all federal, state and local environmental regulations when disposing of this material
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14. Transportation information

DOT	Not regulated
IMDG	Not regulated
ICAO/IATA	Not regulated

15. Regulatory information

USA	Reported in the EPA TSCA Inventory.
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Canada	Listed in DSL
EU	Listed in EINECS, No232-164-6
Japan	ENCS no. 1-1038 ISHL no. 1-1038
Australia	Listed in AICS
New Zealand Inventory	Listed in NZIoC
China - China inventory	Listed in IECSC
Korea	Listed in the Korea Existing Chemicals Inventory (KECI), number 04485
Taiwan	Listed
Philippines	Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in section(s)
8, 10, 11, 12, 14

Health, Safety & Environment Policy

We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation

TO MEET THIS COMMITMENT WE WILL: Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations Implement documented management systems consistent with and for promotion of the Responsible Care ethics

Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations

Educate and train employees, contractors and customers to improve their HSE performance Communicate up-to-date information to enable our workers, customers and other interested parties to handle our products in a safe and environmentally responsible manner Endeavor to work with customers, suppliers, distributors and contractors to foster the safe use, transport and disposal of our chemicals Support Product Stewardship programs in cooperation with customers, distributors and transporters

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In an event of discrepancy between the contents of this SDS and the English version of it, the English version shall prevail.

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End of safety data sheet