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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name **ECP Limited**
 Address: 39 Woodside Ave, Northcote, Auckland , New Zealand

Emergency Tel: 0800 243 622 or0800 CHE M CA LL	Tel +64 9 480 4386	FAX +64 9 480 4385
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Product	Barium Chloride				Code	1430
CAS#	HSNO#	UN #	DG Class/es	Packing group #	Tracking?	Handlers Certificate?
10326-27-9	NA	1564	6.1	III	No	6.1 C

Recommended use: Laboratory Investigations

2. Hazards identification

2.1 GHS Classification

- Acute toxicity, Oral (Category C)
- Acute toxicity, Inhalation (Category D)
- Aquatic toxicity (Acute or Chronic) (Category D)

2.2 GHS Label elements, including precautionary statements



Pictogram Signal word **Danger**

Hazard statement(s)

- H301 Toxic if swallowed.
- H332 Harmful if inhaled.
- H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.

Response

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.

Storage

- P405 Store locked up.

Disposal

- P501 Dispose of contents/container to an approved waste disposal plant.

2.3 Other hazards

None

3. Composition/information on ingredients

Substance/Mixture:

Substance

3.1 Substances

Hazardous components

Component	Classification	Concentration
Barium Chloride	6.1 C; 6.1 D; 9.1 D; H301, H332, H402	<=100%

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Vomiting.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic.

7.3 Specific end use(s)

No data available

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No	Value	Control parameters	Basis
Barium chloride	10361-37-2	WES-TWA	0.5 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance

Form: Beads

Colour: white

- b) Odour
Odourless
- c) Odour Threshold
No data available
- d) pH
No data available
- e) Melting point/freezing point
Melting point/range: 963 °C - lit.
- f) Initial boiling point and boiling range
1,560 °C at ca.1,013.25 hPa
- g) Flash point
Not applicable
- h) Evaporation rate
No data available
- i) Flammability (solid, gas)
No data available
- j) Upper/lower flammability or explosive limits
No data available
- k) Vapour pressure
No data available
- l) Vapour density
No data available
- m) Relative density
3.856 g/mL at 25 °C
- n) Water solubility
370 g/l at 25 °C - soluble
- o) Partition coefficient: n-octanol/water
No data available
- p) Auto-ignition temperature
No data available
- q) Decomposition temperature
No data available
- r) Viscosity
No data available

10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Barium oxide

Other decomposition products - No data available

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 100 - 300 mg/kg

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Genotoxicity in vitro - Ames test - *S. typhimurium* - with and without metabolic activation - negative

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Reproductive toxicity - Rat - Intratesticular

Paternal Effects: Testes, epididymis, sperm duct.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation

Harmful if inhaled. May cause respiratory tract irritation.

Ingestion

Toxic if swallowed.

Skin

May be harmful if absorbed through skin. May cause skin irritation.

Eyes

Causes serious eye irritation.

Signs and Symptoms of Exposure

Vomiting.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 209 mg/kg

RTECS: CQ8750000

12. Ecological information

12.1 Toxicity

Toxicity to fish static test

LC50 - *Danio rerio* (zebra fish) - > 174 mg/l - 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 14.5 mg/l - 48 h

Toxicity to algae

Growth inhibition

EC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h

Method: OECD Test Guideline 201

Toxicity to bacteria Respiration inhibition

EC50 - Sludge Treatment - > 1,000 mg/l - 3 h

Method: OECD Test Guideline 209

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

13. Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1564	1564	1564
14.2	UN Proper Shipping name	BARIUM COMPOUND, N.O.S. (Barium chloride)	BARIUM COMPOUND, N.O.S. (Barium chloride)	Barium compound, n.o.s. (Barium chloride)
14.3	Transport Hazard Class	6.1	6.1	6.1
14.4	Packaging group	III	III	III
14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	No data available.		

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Approval Code: HSR

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group

Standard 2006

Tracking Required: not required

Approved Handler Cert.: 6.1C

16. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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