

SAFETY DATA SHEET

Fluorspar Powder

SECTION 01 - IDENTIFICATION

Product identifier	Fluospar Powder
Other means of identification	Fluorite; Fluorspar; Calcium Difluoride; Calcium Fluoride TG; Calcium Fluoride AR
Recommended use of chemical	Principal source of fluorine and its compounds by way of hydrogen fluoride, flux in open hearth steel furnaces and in metal smelting, in ceramics, in wood preservatives, optical equipment and laboratory reagent.
Supplier name	Ixom Operations Pty Limited trading as LogiChem
Supplier address	Lot 33 Bulong Road Parkeston-Kalgoorlie, Australia PO Box 878 Kalgoorlie WA 6433 Australia
Supplier phone	1800 033 111 / Int. +61 (0) 3 9663 2130
24 Hour emergency phone	1800 033 111

SECTION 02 - HAZARD(S) IDENTIFICATION

Classification	Specific Target Organ Toxicity (Repeated Exposure) – Category 2
Signal word	Warning
Hazard statements	H350 – May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard). H373 – May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Precautionary statements	Prevention P260 – Do not breathe dust/fume/gas/mist/vapours/spray. Response P314 – Get medical advice/attention if you feel unwell. Disposal P501 – Dispose of contents/container in accordance with local / regional / national / international regulations.



SECTION 03 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Components	Cas No:	Proportion % w/w
Calcium Fluoride	7789-75-5	95.0-100.0%

SECTION 04 - FIRST AID MEASURES

Description of necessary first aid measures	Eye – Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Urgently seek medical attention. Transport to hospital or medical centre. Ingestion – Rinse mouth with water. Give plenty of water to drink. Do NOT induce vomiting. Seek medical attention immediately. Inhalation – If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention. Skin – Immediately wash contaminated skin with plenty of water. Remove contaminated clothing and wash before reuse. Seek medical assistance.
Medical attention / special treatment	Urgent hospital treatment is likely to be needed. Due to the singularity of fluoride burns and poisoning, accident assistance and emergency services at local hospitals should be properly informed of the specific treatment required. Treat symptomatically based on individual reactions of patient and judgement of doctor. NOTE: for advice in an

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	<p>emergency, contact a Poisons Information Centre (Australia 13 11 26 or New Zealand 0800 764 766).</p>
<p>Symptoms caused by exposure</p>	<p>Fluorides are toxic to humans however, calcium fluoride is considered relatively harmless due to its extreme insolubility in water. Fluorides may cause salivation, nausea, vomiting, diarrhea or constipation, and abdominal pain, followed by weakness, tremors, shallow respiration, convulsions and coma. Symptoms of chronic fluoride toxicity include emaciation, dental fluorosis (may cause mottling), skeletal fluorosis (brittle bones, calcified ligaments, joint stiffness, osteosclerosis, permanent bone structure abnormalities), loss of appetite, loss of weight, anorexia, diseases of the blood (may increase blood clotting, anemia) and brain, heart and kidney damage. Other effects include lowered milk production and detrimental effects on the reproductive capacity of animals. Evidence of reproductive effects. Persons with pre-existing eye, skin, respiratory, blood or bone disorders, or impaired pulmonary, or kidney function may be at an increased risk upon exposure to this substance. The absorption of ion fluoride into the blood may reduce calcium and magnesium levels of the serum, causing possible hypocalcaemia and hypomagnesia. Exposure to large concentrations of fluoride dust, vapours or resulting mixtures, can produce nasal hemorrhages. Not listed in IARC Monographs. Fluorides (inorganic, used in drinking water) is evaluated by the IARC Monographs as Group 3: Not classifiable as to carcinogenicity to humans. Silica, crystalline (inhaled in the form of quartz or cristobalite from occupational sources) is evaluated in the IARC Monographs as Group 1: Carcinogenic to humans. Silica, amorphous is evaluated in the IARC Monographs as Group 3: Not classifiable as to carcinogenicity to humans.</p>

SECTION 05 – FIRE FIGHTING MEASURES

<p>Suitable extinguishing media</p>	<p>In case of fire use appropriate extinguishing media most suitable for surrounding fire conditions. Small fire: use dry chemical, carbon dioxide, water spray or foam. Large fire: Use water spray, fog or foam. Cool fire exposed containers with flooding quantities of water until well after the fire is out.</p>
<p>Specific hazards arising from the chemical</p>	<p>Product is a non-flammable solid. Avoid generating dust. Incompatible with oxidizing agents, strong acids, mineral acids, hot concentrated sulphuric acid (formation of hydrogen fluoride), acids and acid fumes, moisture and sources of ignition. When involved in a fire, this product may generate irritating and highly toxic fumes and gases or vapours of hydrogen fluoride (HF) or hydrofluoric acid, fluoride, and calcium oxide.</p>
<p>Special protective equipment & precautions for fire fighters</p>	<p>Fire fighters should wear a positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources.</p>

SECTION 06 – ACCIDENTAL RELEASE MEASURES

<p>Personal precautions, protective equipment and emergency procedures</p>	<p>The presence of any person without personal protective measures should be forbidden. Personnel involved in the cleanup should wear full protective clothing as listed in section 08. Avoid accidents, clean up immediately. Slippery when spilled. Eliminate all sources or ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment.</p>
<p>Environmental precautions</p>	<p>Do NOT contaminate waterways, drains and sewers. If the product does enter a waterway, advise the Environmental Protection Authority or your local waste management.</p>
<p>Methods and materials for containment and cleaning up.</p>	<p>Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to suitable, labelled chemical waste container and dispose of promptly as hazardous waste. Clean up the area with plenty of water. Collect the wash</p>

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water for treatment.

SECTION 07 – HANDLING AND STORAGE

Precautions for safe handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Avoid prolonged or repeated exposure. Minimise dust generation and accumulation. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product dust.
Conditions for Safe Storage (Including Any Incompatibles)	Store in original packaging as approved by manufacturer. Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Store at room temperature. Protect against physical damage. Store away from incompatible materials including strong oxidizing agents, strong acids, mineral acids, hot concentrated sulphuric acid (formation of hydrogen fluoride), acid and acid fumes, moisture and sources of ignition. Protect from direct sunlight, heat, dust build up. This product is hygroscopic.

SECTION 08 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters – exposure standards, biological monitoring	Calcium fluoride: 2.5mg/m ³ (fluorides [as F]) A time weighted average has been established for fluorides (as F) (Safe Work Australia) of 2.5mg/m ³ . The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. Calcium Fluoride TG may contain up to 1.0% silica. A TWA has been established for silica, amorphous (Diatomaceous earth (uncalcined)) [61790-53-2] (Safe Work Australia) of 10mg/m ³ , for fumed silica (respirable dust) [7631-86-9] (Safe Work Australia) of 2mg/m ³ , for silica crystalline [crystobalite][14464-46-1] (Safe Work Australia) of 0.1mg/m ³ , for quartz [silica crystalline][14808-60-7] (Safe Work Australia) of 0.1mg/m ³ , and for silica crystalline [tridymite][15468-32-3] (Safe Work Australia) of 0.1mg/m ³
Appropriate engineering controls	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal protective equipment (PPE)	Clothing – Chemical resistant coveralls (AS3765/2210) Eyes – Face shield or safety glasses with side shields (AS1336/1337). Footwear – Chemical resistant footwear (AS3765/2210). Gloves – Plastic or rubber gloves (AS2161). Other – RESPIRATOR: Wear an approved P3 respirator if dust/vapours are generated and engineering controls are inadequate (AS1715/1716).

SECTION 09 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White or off white, or colourless or transparent, or translucent with a glassy lustre (or coloured by impurities) cubic crystals, crystalline solid or hygroscopic crystalline powder
Odour	Odourless
Odour threshold	Not available
pH	7-8 (In saturated solution)
Melting point/freezing point	1423 °C
Specific gravity (water = 1)	1.5-1.6g/cm ³
Boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	Not available

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Flammability	Not available
Upper/lower flammability or explosive limits	Not available
Vapour pressure (hPa @ 20°C)	10.12mbar (2100°C) mm Hg (1 atmosphere)
Vapour density	Not available
Relative density	Not available
Solubility(ies) (water)	0.016 mg/L (20 °C)
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Specific heat value	Not available
Particle size	Not available
Volatile organic compounds content	Not available
% volatile	Not available
Saturated vapour concentration	Not available
Release of invisible flammable vapours and gases	Not available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity	Not available
Chemical stability	Product is stable under normal conditions of use, storage and temperature. Product is hygroscopic.
Conditions to avoid	Avoid excessive heat, dusty conditions, static discharges, exposure to light, moisture and high temperatures.
Incompatible materials	Incompatible with oxidising agents, strong acids, mineral acids, hot concentrated sulphuric acid (formation of hydrogen fluoride), acids and acid fumes, moisture and sources of ignition.
Hazardous decomposition products	When involved in a fire, this product may generate irritating and highly toxic fumes and gases or vapours of hydrogen fluoride (HF) or hydrofluoric acid, fluoride, and calcium oxide.

SECTION 11– TOXICOLOGICAL INFORMATION

Information on routes of exposure	<p>Eyes – Irritating to eyes. Product may cause irritation through mechanical action.</p> <p>Ingestion - Harmful by ingestion. Toxicity low because of the relative insolubility of the compound. In large amounts may cause vomiting, abdominal pain and diarrhoea. Product may cause irritation of the digestive apparatus and possible poisoning by fluorides. Moderately toxic: oral lethal does (human) 0.5-5.0 g/kg.</p> <p>Inhalation – Harmful by inhalation. Inhalation of dusts may irritate the respiratory system. Symptoms may include coughing and shortness of breath. May cause heart disturbances, possibly leading to cardiac arrest and death. May cause hyperactive reflexes and muscular spasms. May cause respiratory arrest. Prolonged or repeated inhalation may cause lung damage, bronchitis, asthma, silicosis, increase in respiratory infections and pulmonary lesions.</p> <p>Skin – Irritating to skin. May cause slight irritation resulting in redness and itching. Prolonged or repeated skin contact may cause dermatitis.</p>
Symptoms related to exposure	Not available
Numerical measures of toxicity	Oral LD50 (rat) 4250 mg/kg Oral LD10 (g. pig) >5000 mg/kg
Immediate, delayed and chronic health effects from exposure	Not available
Exposure levels	Not available



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Interactive effects	Not available
Data limitations	Not available

SECTION 12- ECOLOGICAL INFORMATION

Ecotoxicity	No ecological problems are to be expected when the product is handled and used with due care and attention. Fluorspar is a naturally occurring mineral. Quantitative data on the ecological effect of this product are not available. Tinca Vulgaris - 30,000ppm - lethal - fresh water. According to German waters law: WGK-0, it is not dangerous to water.
Persistence and degradability	This product will persist indefinitely in the ground.
Bioaccumulative potential	Not available.
Mobility in soil	Placed in water, the product will sink and sediment. Because the product is virtually insoluble in water, a separation occurs in each filtering and sedimentation process.
Other adverse effects	Not available

SECTION 13 - DISPOSAL CONSIDERATIONS

Safe handling and disposal methods	Dispose of in accordance with all Local, State and Federal regulations.
Disposal of any contaminated packaging	All empty packaging should be disposed of in accordance with Local, State and Federal regulations or recycled/reconditioned at an approved facility.
Environmental regulations	Dispose of in accordance with all Local, State and Federal regulations.

SECTION 14 - TRANSPORT INFORMATION

UN number	Not applicable
Proper shipping name	Fluorspar Powder
Transport hazard class(es)	Not applicable
Subsidiary risk	Not applicable
Packaging group	Not applicable
Environmental hazards	Not available
Special precautions during transport	Not available
Hazchem code	Not applicable

SECTION 15 - REGULATORY INFORMATION

AICS name	Calcium fluoride (CaF ₂)
Poisons Schedule number	Not applicable

SECTION 16 - OTHER INFORMATION

SDS creations date	09 March 2012
Most recent revision date	01 February 2018
Revision number	005 THIS ISSUE NUMBER REPLACES ALL ISSUES
Reason for revision	Annual Update
Contact person	Ixom 1800 033 111

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

END OF SDS