

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **SODIUM FLUORIDE**

Other name(s): Fluorosafe

Recommended Use of the Chemical and Restrictions on Use Water fluoridation, steel degassing, wood and adhesive preservative, electroplating, glass manufacture, disinfectant.

Supplier: Ixom Operations Pty Ltd (Incorporated in Australia)

NZBN: 9429041465226

Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700

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Emergency Telephone: **0 800 734 607 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land;
DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

SIGNAL WORD: DANGER

Subclasses:

Subclass 6.1 Category C - Substances which are acutely toxic.

Subclass 6.3 Category A - Substances that are irritating to the skin.

Subclass 6.4 Category A - Substances that are irritating to the eye.

Subclass 6.6 Category B - Substances that are suspected human mutagens.

Subclass 6.8 Category B - Substances that are suspected human reproductive or developmental toxicants.

Subclass 6.9 Category A - Substances that are toxic to human target organs or systems.

Subclass 9.1 Category D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action.

Subclass 9.3 Category B - Substances that are ecotoxic to terrestrial vertebrates.

Approval Number: HSR003112



Hazard Statement(s):

H301+H311 Toxic if swallowed or in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H341 Suspected of causing genetic defects.

H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H432 Toxic to terrestrial vertebrates.

Product Name: SODIUM FLUORIDE

Substance No: 000031020001

Issued: 14/02/2020

Version: 7

Safety Data Sheet



Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.

Response:

P314 Get medical advice/attention if you feel unwell.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P321 Specific treatment (see First Aid Measures on the Safety Data Sheet).
P361 Remove/Take off immediately all contaminated clothing.
P362 Take off contaminated clothing before re-use.
P363 Wash contaminated clothing before re-use.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 In case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

Other Hazards:

Contact with acids liberates very toxic gas.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Sodium fluoride	7681-49-4	>=95%	H301 H319 H315

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once. Urgent hospital treatment is likely to be needed.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Safety Data Sheet



Skin Contact:

If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye Contact:

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically. For large exposures, systemic effects (hypocalcemia and hypomagnesia) may occur.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder). Sand.

Hazchem or Emergency Action Code: 2Z

Specific hazards arising from the chemical:

Non-combustible material. Toxic substance.

Special protective equipment and precautions for fire-fighters:

Decomposes on heating emitting toxic fumes, including those of hydrogen fluoride, and sodium oxide. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Wear protective equipment to prevent skin and eye contact. Avoid breathing in dust. Work up wind or increase ventilation. Collect and seal in properly labelled containers or drums for disposal. DO NOT allow material to get wet.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation. Keep out of reach of children. When using do not eat, drink or smoke. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place. Protect from moisture. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Safety Data Sheet



Workplace Exposure Standards: No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituent(s):

Fluorides, as F: WES-TWA 2.5 mg/m³, bio
Fluorides - Biological Exposure Index (prior to shift): 2 mg/L; (end of shift) 3 mg/L

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The average airborne concentration of a substance calculated over an eight-hour working day.

'bio' - Biological Exposure Index.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Crystalline Powder
Colour:	White
Odour:	Odourless
Molecular Formula:	NaF
Specific Gravity:	2.76 @20°C

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Substance No: 000031020001

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Version: 7

Safety Data Sheet



Relative Vapour Density (air=1):	1.45
Vapour Pressure (20 °C):	Not available; 1 mm Hg @ 1077°C.
Flash Point (°C):	Not applicable
Flammability Limits (%):	Not applicable
Autoignition Temperature (°C):	Not applicable
Solubility in water (g/L):	35 @20°C
Melting Point/Range (°C):	996
Boiling Point/Range (°C):	1695
pH:	8-10.5 (1% solution)

10. STABILITY AND REACTIVITY

Reactivity:	Reacts with acids.
Chemical stability:	Stable under normal conditions of use.
Possibility of hazardous reactions:	Hazardous polymerisation will not occur.
Conditions to avoid:	Avoid dust generation. Avoid exposure to moisture. Avoid exposure to heat.
Incompatible materials:	Incompatible with acids.
Hazardous decomposition products:	Hydrogen fluoride. Sodium oxide.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing may result in nausea, vomiting, and abdominal pain. Swallowing large amounts may cause muscle spasms, coma and death from respiratory failure.
Eye contact:	An eye irritant.
Skin contact:	Contact with skin will result in irritation.
Inhalation:	Breathing in dust may result in respiratory irritation. Effects can include those described for 'INGESTION'.
Acute toxicity:	
Oral LD50 (rat):	31 mg/kg.
Oral LD50 (mice):	44 mg/kg.
Respiratory or skin sensitisation:	Not a skin sensitiser (guinea pig).

Chronic effects: Chronic fluorine poisoning is possible. Intake of more than 1.5 mg/L of fluoride can cause dental fluorosis with amounts of greater than 4 mg/L possibly causing skeletal fluorosis. Symptoms include weight loss, brittle bones, anaemia, weakness, and stiffness of joints. Chronic exposure may result in adverse effects on the heart, central nervous system, circulatory system, kidneys, and skeleton.

Mutagenicity:	Not classified. Non-mutagenic in AMES test.
Carcinogenicity:	Not classified.
Reproductive toxicity:	Not classified.

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Safety Data Sheet



Specific Target Organ Toxicity (STOT) - single exposure: Not classified.
Specific Target Organ Toxicity (STOT) - repeated exposure: Not classified.
Aspiration hazard: Not classified.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.
Persistence/degradability: Biodegradation is not an applicable endpoint since the product is an inorganic chemical.
Bioaccumulative potential: No information available.
Mobility in soil: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to local government authority for disposal recommendations. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land; DANGEROUS GOODS.



UN No: 1690
Transport Hazard Class: 6.1 Toxic
Packing Group: III
Proper Shipping Name or Technical Name: SODIUM FLUORIDE, SOLID
Hazchem or Emergency Action Code: 2Z

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 1690
Transport Hazard Class: 6.1 Toxic
Packing Group: III
Proper Shipping Name or Technical Name: SODIUM FLUORIDE, SOLID

IMDG EMS Fire: F-A
IMDG EMS Spill: S-A

Safety Data Sheet



Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 1690
Transport Hazard Class: 6.1 Toxic
Packing Group: III
Proper Shipping Name or Technical Name: SODIUM FLUORIDE, SOLID

15. REGULATORY INFORMATION

Classification:

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

Subclasses:

Subclass 6.1 Category C - Substances which are acutely toxic.
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Subclass 6.8 Category B - Substances that are suspected human reproductive or developmental toxicants.
Subclass 6.9 Category A - Substances that are toxic to human target organs or systems.
Subclass 9.1 Category D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action.
Subclass 9.3 Category B - Substances that are ecotoxic to terrestrial vertebrates.

Approval Number: HSR003112

Hazard Statement(s):

H301+H311 Toxic if swallowed or in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H432 Toxic to terrestrial vertebrates.

16. OTHER INFORMATION

Supplier Safety Data Sheet; 02/ 2016.

'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2019.

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

Reason(s) for Issue:

5 Yearly Revised Primary SDS

Safety Data Sheet



This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.