



SAFETY DATA SHEET
HYDROFLUORIC ACID (≥ 25 - $\leq 50\%$)
REVISION 4, DATE 23 MAY 23

1. IDENTIFICATION

Product Name	Hydrofluoric Acid (≥ 25 - $\leq 50\%$)
Other Names	Hydrogen fluoride, aqueous solution
Uses	Chemical intermediate, etching and polishing of glass and pottery, cleaning of metals, mineral extraction.
Chemical Family	No Data Available
Chemical Formula	HF.H ₂ O
Chemical Name	Hydrofluoric acid, aqueous solution
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887




2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Schedule 7



Globally Harmonised System

Hazard Classification		Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories		Corrosive to Metals - Category 1 Acute Toxicity (Oral) - Category 2 Acute Toxicity (Dermal) - Category 1 Acute Toxicity (Inhalation) - Category 2 Skin Corrosion/Irritation - Category 1A Serious Eye Damage/Irritation - Category 1 Specific Target Organ Toxicity (Single Exposure) - Category 1 Specific Target Organ Toxicity (Repeated Exposure) - Category 1
Pictograms		  
Signal Word		Danger
Hazard Statements		H290 May be corrosive to metals. H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. H370 Causes damage to organs. H372 Causes damage to organs through prolonged or repeated exposure.
Precautionary Statements	Prevention	P262 Do not get in eyes, on skin, or on clothing.
		P280 Wear protective gloves/protective clothing/eye protection/face protection.
		P260 Do not breathe mist/vapours.
		P284 Wear respiratory protection.
		P270 Do not eat, drink or smoke when using this product.
		P271 Use only outdoors or in a well-ventilated area.
	Response	P234 Keep only in original packaging.
		P310 Immediately call a POISON CENTER or doctor.
		P304 + P340 IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
		P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
		P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P363 Wash contaminated clothing before reuse.
		P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P390 Absorb spillage to prevent material-damage.
		P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
		P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
	Storage	P405 Store locked up.
	Disposal	P501 Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification

Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Chemical Entity	Formula	CAS Number	Proportion
Hydrofluoric acid	HF	7664-39-3	≥ 25 - ≤ 50 %
Water	H ₂ O	7732-18-5	Balance %

4. FIRST AID MEASURES**Description of necessary measures according to routes of exposure****Swallowed**

IF SWALLOWED: Rinse mouth with water, then drink plenty of water. Immediately call a Poison Centre or doctor/physician for emergency medical advice! Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Rinse mouth of victim thoroughly with water and spit out rinse water. Never give anything by mouth if victim is losing consciousness, is unconscious or convulsing. Transport to hospital by ambulance.

*If victim is conscious, give four 600 mg or five 500 mg effervescent calcium gluconate tablets. Where calcium gluconate tablets are only available in other active strength levels, the total active concentration should be approximately 2,400 - 2,500 mg.

Eye

IF IN EYES: Do not rub affected area! Immediately call a Poison Centre or doctor/physician for emergency medical advice! Immediately flush eyes with running water or copious isotonic saline for several minutes, holding the eyelids open and occasionally lifting the upper and lower lids. Take care not to rinse contaminated water into a non-affected eye. Carefully remove contact lenses if present and easy to do. Continue flushing until advised to stop by a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor, or for at least 15 minutes. Transport to hospital by ambulance; Continue eye irrigation during transport to hospital. An ophthalmologist should always be consulted, as severe corneal damage is possible. Contact with eyes, even for short periods, can cause blindness.

Skin

IF ON SKIN: Immediately call a Poison Centre or doctor/physician for emergency medical advice! Remove and isolate contaminated clothing and shoes. Gently flush contaminated skin with running water for 1- 2 minutes. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes and footwear. For minor skin contact, avoid spreading material on unaffected skin. Isolate contaminated clothing by sealing in a bag or other container. Wearing clean protective gloves, gently massage Calcium gluconate gel into and around the affected area. If gel is not readily available, continue flushing with water. Transport to hospital by ambulance; Continue application of gel during transport to hospital and for at least 15 minutes after the pain has subsided (this treatment may be required for several hours). Wear clean gloves when applying gel.

*For large or severe burns, give four 600 mg or five 500 mg effervescent calcium gluconate tablets by mouth. Where calcium gluconate tablets are only available in other active strength levels, the total active concentration should be approximately 2,400 - 2,500 mg.

Inhaled

IF INHALED: Immediately call a Poison Centre or doctor/physician for emergency medical advice! Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Transport to hospital by ambulance; Continue observation for at least 48 hours due to the danger of pulmonary edema.

*If victim is conscious, give four 600 mg or five 500 mg effervescent calcium gluconate tablets. Where calcium gluconate tablets are only available in other active strength levels, the total active concentration should be approximately 2,400 -

2,500 mg.

Advice to Doctor

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. This SDS should accompany the affected person to hospital. Hydrofluoric acid penetrates rapidly and deeply below fat layers binding and depleting tissue calcium. Failure to commence the correct medical treatment promptly may be fatal. Intensive care unit facilities are likely to be needed. Keep victim calm and warm. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

*Most important symptoms and effects, both acute and delayed: Delayed pulmonary oedema is likely with burns to the face or neck. A skin burn involving more than 1 % of body area with 50 % or more concentration of Hydrofluoric acid, or more than 5 % of body area with any lesser concentrations, may be associated with systemic effects. Skin burns may become necrotic and gangrenous and damaged area may spread. Treatment with intravenous Calcium gluconate should commence immediately. Inhalation may lead to chemical pneumonitis, haemorrhagic pulmonary oedema or laryngeal oedema and may be fatal. Be prepared to intubate or perform tracheotomy.

Medical Conditions Aggravated by Exposure No information available.

5. FIRE FIGHTING MEASURES**General Measures**

If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers. Dike fire-control water for later disposal; do not scatter the material. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire.

Flammability Conditions

Non-combustible; substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Extinguishing Media

Use dry chemical, Carbon dioxide (CO₂), dry sand or alcohol-resistant foam or water spray (fog) for extinction - Do not use water jets.

*Large fire: Flood fire area with large quantities of water while knocking down vapours with water fog - If insufficient water supply, knock down vapours only.

Fire and Explosion Hazard

Contact with metals may evolve flammable hydrogen gas. Reaction with water may generate heat which will increase the concentration of fumes in the air and present risk of splashing. Containers may explode when heated or contaminated with water. Vapours may accumulate in confined areas. Inhalation, ingestion or contact with substance may cause severe injury or death.

Hazardous Products of Combustion

Fire will produce irritating, corrosive and/or toxic gases, including Hydrogen fluoride.

Special Fire Fighting Instructions

Contain runoff from fire control or dilution water - Runoff may be corrosive and/or toxic and cause pollution.

Personal Protective Equipment

Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing - It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Flash Point

No Data Available

Lower Explosion Limit

No Data Available

Upper Explosion Limit

No Data Available

Auto Ignition Temperature

No Data Available

Hazchem Code

2X

6. ACCIDENTAL RELEASE MEASURES**General Response Procedure**

Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Do not breathe vapours and prevent contact with eyes, skin and clothing - Inhalation, ingestion or contact with substance may cause severe injury or death!

Clean Up Procedures

Take up with liquid-absorbent and neutralising material and transfer to a suitable container for disposal (see SECTION 13).

Containment

Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.

*Vapour-suppressing foam may be used to control vapours. Water spray may be used to knock down or divert vapour clouds.

Decontamination

Neutralise HF with calcium hydroxide or lime or HF absorbent (e.g. Chemisorb HF). Contaminated clothing should be washed with bicarbonate of soda solution. Contaminated equipment or surfaces can be neutralised with calcium hydroxide or slaked lime, before being washed with water.

Environmental Precautionary Measures

Spillages and decontamination runoff should be prevented from entering drains and watercourses.

Evacuation Criteria

Spill or leak area should be isolated immediately. Evacuate personnel to safe areas. Keep unauthorised personnel away. Keep upwind and to higher ground.

*Large spill: Immediately contact Police or Fire Brigade; Consider downwind evacuation of areas.

Personal Precautionary Measures

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).

*Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.

7. HANDLING AND STORAGE**Handling**

Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. A supply of Calcium gluconate gel should be kept in an accessible and convenient location. Ensure adequate ventilation - Handle product only in closed system or provide appropriate exhaust ventilation. VERY TOXIC & CORROSIVE: Handle with extreme care and in accordance with good industrial hygiene and safety practice. Avoid generation of mist/vapours/aerosols. Do not breathe mist/vapours/aerosols. Do not get in eyes, on skin or on clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator (see SECTION 8). When diluting, always add the product to water. Never add water to the product. Keep away from heat and sources of ignition - No smoking. Use explosion-proof electrical/ventilating/lighting equipment.

Storage

Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and all sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up. Store in accordance with local regulations.

Container

Store HF in properly labelled original or plastic (polyethylene, polypropylene or PVC) containers only. Do not store in metal (steel, copper, aluminium) or glass containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**General**

COMPONENT: Hydrogen fluoride (CAS No. 7664-39-3):

- Safe Work Australia Exposure Standard: TWA = 3 ppm (2.6 mg/m³) Peak limitation (as F).

- New Zealand Workplace Exposure Standard [Next review 2023]: Ceiling = 3 ppm (2.6 mg/m³), as F.

- NIOSH REL: TWA = 3 ppm (2.5 mg/m³); 6 ppm (5 mg/m³) 15-minute Ceiling.

- OSHA PEL: TWA = 3 ppm.

*Immediately dangerous to life or health (IDLH) concentration: 30 ppm.

Exposure Limits

No Data Available

Biological Limits

No information available.

Engineering Measures

All HF work involving the release of HF should be conducted in a scrubbed fume cupboard. The occupational exposure limit value should not be exceeded during any part of the working exposure.

Personal Protection Equipment

- Respiratory protection: Wear respiratory protection. Recommended: Filter type E-P3 or HF or supplied-air respirator when mist/vapours/aerosols are generated (refer to AS/NZS 1715 & 1716).

- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Tightly fitting safety goggles; Face shield.

- Hand protection: Wear protective gloves. Recommended: Elbow-length impervious gloves.

- Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Acid-resistant protective clothing; Chemical-resistant apron; rubber boots.

Special Hazards Precautions

HF should only be handled by workers who have been adequately trained and assessed as competent in its use. Do not work alone with HF. Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available. Ensure that a first aid kit has the necessary content, is kept up to date and is complete to adequately respond to potential HF exposure. Obtain a supply of calcium gluconate gel.

Work Hygienic Practices

Do not eat, drink or smoke when using this product. Do not get in eyes, on skin or on clothing. Wash hands and face thoroughly after handling. Remove/take off immediately all contaminated clothing. Isolate contaminated clothing by sealing in a bag or other container. Decontaminate and wash contaminated clothing and protective equipment before storage or reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Sharp, pungent
Colour	Colourless
pH	<1
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	20 °C
Melting Point	No Data Available
Freezing Point	-83 °C
Solubility	Miscible with water
Specific Gravity	1.1 - 1.22 (Water = 1)
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	Reaction with water may generate heat which will increase the concentration of fumes in the air and present risk of splashing.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Does not burn; However, many reactions may cause fire or explosion.

Reactions That Release Gases or Vapours	Reacts violently with many compounds producing toxic and corrosive gases, including Hydrogen fluoride.
Release of Invisible Flammable Vapours and Gases	Reacts violently with bases and is corrosive to most common metals forming flammable/explosive Hydrogen gas.

10. STABILITY AND REACTIVITY

General Information	The substance is a weak acid. Reacts violently with many compounds, generating fire and explosion hazard. It reacts violently with bases and is corrosive to most common metals. Attacks glass, some forms of plastic, rubber and coatings.
Chemical Stability	Material is stable under normal conditions of temperature and pressure.
Conditions to Avoid	Avoid generation of mist/vapours/aerosols. Keep away from heat and all sources of ignition.
Materials to Avoid	Incompatible/reactive with alkali metals, fluorine, organic substances, vinyl acetate; potassium permanganate, alkali hydroxides, strong alkalis, fluorides, potassium, metals, sodium, methanesulfonic acid; nitric acid, with, glycerol; acetic anhydride, ammonia, ammonium hydroxide, sodium hydroxide, fuming sulfuric acid, oxides of phosphorus, silicon compounds, sulphuric acid, bismuth acid, ethanolamine.
Hazardous Decomposition Products	Reacts violently with many compounds. producing toxic and corrosive gases, including Hydrogen gas, Hydrogen fluoride.
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on toxicological effects:</p> <ul style="list-style-type: none"> - Acute toxicity: Fatal if swallowed, in contact with skin and if inhaled. - Skin corrosion/irritation: Causes severe skin burns and eye damage. - Eye damage/irritation: Causes serious eye damage. - Respiratory/skin sensitisation: No information available. - Germ cell mutagenicity: No information available. - Carcinogenicity: Fluorides (inorganic) are Classified by the IARC Monographs as "Not classifiable as to its carcinogenicity to humans" (Group 3). - Reproductive toxicity: No information available. - STOT (single exposure): Causes damage to organs (respiratory system). Corrosive to the respiratory tract. - STOT (repeated exposure): Causes damage to organs through prolonged or repeated exposure (nervous system; respiratory system; teeth; bone). In humans, skeletal fluorosis is a known effect of prolonged intake of fluoride, by both oral and inhalation routes. - Aspiration toxicity: No information available. <p>Information on likely routes of exposure:</p> <ul style="list-style-type: none"> - Ingestion: Fatal if swallowed! May cause burns in mouth and throat, burning sensation, cough, laboured breathing, shortness of breath, abdominal pain, vomiting, shock or collapse. Symptoms may be delayed. - Eye contact: Corrosive! Causes serious eye damage, redness, pain, severe burns. - Skin contact: Fatal in contact with skin! Corrosive! Causes severe skin burns, redness, pain, blisters. Hydrofluoric acid penetrates rapidly and deeply below fat layers binding and depleting tissue calcium. - Inhalation: Fatal if inhaled! May cause burns in mouth and throat, burning sensation, cough, laboured breathing, shortness of breath, abdominal pain, vomiting, shock or collapse. Symptoms may be delayed. <p>Chronic effects: Chronic low dose exposure by inhalation can lead to ulceration and perforation of the nasal septum. Chronic exposure to excessive quantities of gaseous or particulate fluoride results in nausea, vomiting, loss of appetite and diarrhoea or constipation. Fluorosis or other chronic effects may result from significant acute exposures.</p>
Acute	
Inhalation	<p>Acute toxicity (Inhalation):</p> <ul style="list-style-type: none"> - LC50, Rat = 996 ppm (1 h) [Supplier's SDS]. - LC50, Mice = 280 mg/m3 (1 h) [NICNAS]. - LC50, Rats = 792 - 1,909 mg/m3 (1 h) [NICNAS].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - EC50, Crustacea (Gammaridea): 73.3 mg/L (96 h) [Calculated from test data of NaF (EC50 = 38.28 mg-F/L/96 hr); Supplier's SDS]. - NOEC, Fish (Atheriniformes): >= 8.6 mg/L (28 d) [Calculated from test data of NaF (NOEC = 9.9 mg/L/28 days); Supplier's SDS].
Persistence/Degradability	Low persistence (water/soil). Low persistence (air).
Mobility	Low mobility in soil (Koc: 14.3).
Environmental Fate	Harmful to aquatic life - Avoid release to the environment.
Bioaccumulation Potential	Low bioaccumulative potential (Log Kow: -1.38).
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Containers may still present chemical hazard when empty.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name	HYDROFLUORIC ACID, with not more than 60% hydrogen fluoride
Class	8 Corrosive Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
EPG	40 Toxic And/Or Corrosive Substances Non-Combustible - Water Reactive
UN Number	1790
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	HYDROFLUORIC ACID, with not more than 60% hydrogen fluoride
Class	8 Corrosive Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
EPG	40 Toxic And/Or Corrosive Substances Non-Combustible - Water Reactive
UN Number	1790
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	HYDROFLUORIC ACID, with not more than 60% hydrogen fluoride
Class	8 Corrosive Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
EPG	40 Toxic And/Or Corrosive Substances Non-Combustible - Water Reactive
UN Number	1790
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	HYDROFLUORIC ACID, with not more than 60% hydrogen fluoride
Class	8 Corrosive Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
ERG	157 Substances - Toxic and/or Corrosive (Non-Combustible / Water-Sensitive)
UN Number	1790
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	HYDROFLUORIC ACID solution, with not more than 60% hydrogen fluoride
Class	8 Corrosive Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
UN Number	1790
Hazchem	2X
Pack Group	II
Special Provision	No Data Available
EMS	F-A, S-B
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	Hydrofluoric acid 60% or less hydrogen fluoride
Class	8 Corrosive Substances
Subsidiary Risk(s)	6.1 Toxic and Infectious Substances - Toxic Substances
UN Number	1790
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

SAFETY DATA SHEET HYDROFLUORIC ACID (>=25 - <=50%) REVISION 4, DATE 23 MAY 23

Dangerous Goods Classification

Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information

HYDROFLUORIC ACID

Poisons Schedule (Aust)

Schedule 7

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code

HSR001568

National/Regional Inventories

Australia (AIC)

Listed

Canada (DSL)

Not Determined

Canada (NDSL)

Not Determined

China (IECSC)

Not Determined

Europe (EINECS)

Not Determined

Europe (REACH)

Not Determined

Japan (ENCS/METI)

Not Determined

Korea (KECI)

Not Determined

Malaysia (EHS Register)

Not Determined

New Zealand (NZIoC)

Listed

Philippines (PICCS)

Not Determined

Switzerland (Giftliste 1)

Not Determined

Switzerland (Inventory of Notified Substances)

Not Determined

Taiwan (NCSR)

Not Determined

USA (TSCA)

Not Determined

16. OTHER INFORMATION

Related Product Codes

HYFLAC1013, HYFLAC1015, HYFLAC1016, HYFLAC1035, HYFLAC1057, HYFLAC1100, HYFLAC1101, HYFLAC1200, HYFLAC1400, HYFLAC1700, HYFLAC1800, HYFLAC2200, HYFLAC2210, HYFLAC2249, HYFLAC3500, HYFLAC3501, HYFLAC3520, HYFLAC4200, HYFLAC4203, HYFLAC4204, HYFLAC4205, HYFLAC4210, HYFLAC4249, HYFLAC4300, HYFLAC4400, HYFLAC4401, HYFLAC4449, HYFLAC4450, HYFLAC4500, HYFLAC4600, HYFLAC5000, HYFLAC5001, HYFLAC5513, HYFLAC8000, HYFLAC9100

SAFETY DATA SHEET HYDROFLUORIC ACID (>=25 - <=50%) REVISION 4, DATE 23 MAY 23

Revision	4
Revision Date	23 May 2023
Reason for Issue	Updated SDS
Key/Legend	<p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Fahrenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ Milligrams per Cubic Metre Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present. mm Millimetre mmH₂O Millimetres of Water mPa.s Millipascals per Second N/A Not Applicable NIOSH National Institute for Occupational Safety and Health NOHSC National Occupational Health and Safety Commission OECD Organisation for Economic Co-operation and Development Oz Ounce PEL Permissible Exposure Limit Pa Pascal ppb Parts per Billion ppm Parts per Million ppm/2h Parts per Million per 2 Hours ppm/6h Parts per Million per 6 Hours psi Pounds per Square Inch R Rankine RCP Reciprocal Calculation Procedure STEL Short Term Exposure Limit TLV Threshold Limit Value tne Tonne TWA Time Weighted Average ug/24H Micrograms per 24 Hours UN United Nations wt Weight</p>

