SAFETY DATA SHEET
AMMONIUM BIFLUORIDE
REVISION 5, DATE 27 AUG 19

1. IDENTIFICATION

Product Name	**Ammonium Bifluoride**
Other Names	No Data Available
Uses	In manufacture of magnesium and magnesium alloys; in brightening of aluminium; for purifying and cleansing various parts of beer-dispensing apparatus; sterilising food equipment; in glass and porcelain industries; as mordant for aluminium; as a `sour' in laundering cloth; in the laboratory production of hydrogen fluoride.
Chemical Family	No Data Available
Chemical Formula	(NH4)HF2
Chemical Name	Ammonium hydrogen fluoride
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 3

Skin Corrosion/Irritation - Category 1B

Serious Eye Damage/Irritation - Category 1

Pictograms

Signal Word Danger

Hazard Statements		**H290**	May be corrosive to metals.
		H301	Toxic if swallowed.
		H314	Causes severe skin burns and eye damage.
Precautionary Statements	Prevention	**P260**	Do not breathe dusts or mists.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P270	Do not eat, drink or smoke when using this product.
	Response	**P310**	Immediately call a POISON CENTER or doctor.
		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.
		P390	Absorb spillage to prevent material-damage.
		P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P363	Wash contaminated clothing before reuse.
		P304 + P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
	Storage	**P406**	Store in corrosive resistant container with a resistant inner liner.
		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)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards	**6.1C**	Substances that are acutely toxic- Toxic
		8.2C	Substances that are corrosive to dermal tissue UN PGIII

	8.3A	Substances that are corrosive to ocular tissue
Environmental Hazards	**9.3B**	Substances that are ecotoxic to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ammonium bifluoride	(NH4)HF2	1341-49-7	>=98 %
Contains: Ammonium fluoride	(NH4)F	12125-01-8	<=2 %
Contains: Ammonium fluorosilicate	F6H8N2Si	16919-19-0	<=2 %
Water	H2O	7732-18-5	<=2 %
Contains: Hydrogen fluoride	HF	7664-39-3	<=0.01 %
Contains: Sulphate	Unspecified	108321-42-2	0 - 1 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed

IF SWALLOWED: Immediately call a Poison Centre or doctor/physician for advice - Urgent hospital treatment is likely to be needed. Rinse out mouth with water, then provide liquid slowly and as much as casualty can comfortably drink. Do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Never give anything by mouth to an unconscious person, person showing signs of becoming sleepy or with reduced awareness. Transport to hospital or doctor without delay.
*Do NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.

Eye

IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Immediately call a Poison Centre or doctor/physician for advice. Remove contact lenses if present and easy to do. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay.
*Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. Do NOT use neutralising agents or any other additives.

Skin

IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Avoid further contact - For minor skin contact, avoid spreading material on unaffected skin. Flush skin and hair with running water for at least 15 minutes, then (wearing gloves) massage Calcium gluconate gel into affected areas. Immediately call a Poison Centre or doctor/physician for advice. Continue gel application for at least 15 minutes after burning sensation ceases; If pain recurs, repeat application every 20 minutes. If Calcium gluconate gel is not available, continue washing for at least 15 minutes, using plenty of soap and water. If patient is conscious, give six Calcium gluconate or Calcium carbonate tablets in water, by mouth. Transport to hospital, or doctor, urgently.
*Treat chemical burns as thermal burns with non-adherent gauze and wrapping.

Inhaled

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Rinse out mouth with water (but do not drink); Blow nose to ensure clear breathing passages. Immediately call a Poison Centre or doctor/physician for advice. For massive exposures: If patient is conscious, give six Calcium gluconate or Calcium carbonate tablets in water, by mouth. Transport to hospital, or doctor, urgently. Apply resuscitation if victim is not breathing - Do not use direct mouth-to-mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device; Administer oxygen if breathing is difficult.
*Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.

Advice to Doctor

Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.
*Hydrogen fluoride easily penetrates the skin and causes destruction and corrosion of the bone and underlying tissue. Ingestion causes severe pains and burns in the mouth and throat and blood calcium levels are dangerously reduced.

No information available.

Medical Conditions Aggravated by Exposure	

5. FIRE FIGHTING MEASURES

General Measures	Alert Fire Brigade and tell them location and nature of hazard. If safe to do so, move undamaged containers from fire area. Do NOT approach containers suspected to be hot. Cool containers with water spray until well after fire is out. Avoid getting water inside containers. Equipment should be thoroughly decontaminated after use.
Flammability Conditions	Non-combustible; Material itself does not burn.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction - Do not use water jets. Use fire fighting procedures suitable for surrounding area.
Fire and Explosion Hazard	Not considered to be a significant fire risk. Containers may explode when heated. Contact with metals may evolve flammable hydrogen gas.
Hazardous Products of Combustion	Fire or heat will produce irritating, toxic and/or corrosive gases, including Ammonia, Hydrogen fluoride, Nitrogen oxides (NOx).
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may be toxic and/or corrosive and pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for this material.
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. Do not touch or walk through spilled material. Clean up all spills immediately. Avoid generating dusts. Do not breathe dusts or mists and prevent contact with eyes, skin and clothing.
Clean Up Procedures	Collect recoverable product into labelled containers for recycling. Collect solid residues and place in a suitable, labelled container for waste disposal (see SECTION 13). Use dry clean up procedures and avoid generating dust.
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Decontamination	Neutralise/decontaminate residue. Wash area and prevent runoff into drains. After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. *Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses. If contamination of drains or waterways occurs, advise emergency services.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground. Major spills: Alert Fire Brigade and tell them location and nature of hazard; Consider initial downwind evacuation of areas within at least 250 m.
Personal Precautionary Measures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8). Major spills: Wear self-contained breathing apparatus (SCBA) and chemical splash suit.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure

	adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid generating dust. Do not breathe dusts or mists and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). Avoid all sources of ignition - No smoking. Avoid contact with incompatible materials (see SECTION 10). Absorb spillage to prevent material damage (see SECTION 6). *To avoid violent reaction, ALWAYS add material to water and NEVER water to material.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers securely sealed when not in use. Protect containers against physical damage and check regularly for spills and leaks. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep only in the original container or packing as recommended by manufacturer, i.e. Lined metal can; lined metal pail/can; Plastic pail; Polyliner drum. Check all containers are clearly labelled and free from leaks. Do NOT use aluminium or galvanised containers; Do NOT use unlined steel containers. Material is corrosive to most metals, glass and other siliceous materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For Fluorides (as F): - Safe Work Australia Exposure Standard: TWA = 2.5 mg/m3. - New Zealand Workplace Exposure Standard [Next review: 2023]: TWA = 2.5 mg/m3; Exposure can also be estimated by biological monitoring (bio). IMPURITY: Hydrogen fluoride (CAS No. 7664-39-3): - Safe Work Australia Exposure Standard (as F): TWA = 3 ppm (2.6 mg/m3) Peak limitation. - New Zealand Workplace Exposure Standard [Next review: 2023]: TWA = 3 ppm (2.6 mg/m3).
Exposure Limits	No Data Available
Biological Limits	WorkSafe NZ BEI values for Fluorides [Year adopted: 2018]: - Fluorides in urine (Prior to shift): 2 mg/litre - Fluorides in urine (End of shift): 3 mg/litre *The BEI is not applicable to nonmetal fluorides and organic fluoride containing compounds. As dietary and environmental factors can vary the fluoride body concentrations, repeated measurements are necessary. Biological levels of fluorides are indicators of the potential risk of systemic toxicity and cannot be used for the evaluation of irritative effects.
Engineering Measures	Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction. *Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Personal Protection Equipment	- Respiratory protection: Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures. Recommended: Inorganic vapour/particulate respirator (Filter type B-P) of sufficient capacity (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles; Full face-shield may be required for supplementary protection of eyes (refer to AS/NZS 1336). - Hand protection: Wear protective gloves. Recommended: Chemical-protective gloves, e.g. PVC. - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Overalls; PVC Apron; PVC protective suit may be required if exposure is severe; Wear safety footwear or safety gumboots, e.g. Rubber.
Special Hazards Precaustions	Do NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal (see SECTION 13).
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystals or flakes

Odour	Odourless
Colour	White
pH	3.5 (5% aqueous)
Vapour Pressure	Negligible (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	239 °C
Melting Point	125 °C
Freezing Point	No Data Available
Solubility	Freely soluble in water
Specific Gravity	1.5 (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	57.06 g/mol
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	Negligible
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
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	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material itself does not burn.
Reactions That Release Gases or Vapours	Fire, or when heated to decomposition, will produce irritating, toxic and/or corrosive gases, including Ammonia, Hydrogen fluoride, Nitrogen oxides (NOx).
Release of Invisible Flammable Vapours and Gases	Contact with metals may evolve flammable hydrogen gas.

10. STABILITY AND REACTIVITY

General Information	Dissolves in water to form a weak solution of Hydrofluoric acid. Reacts violently with bases releasing ammonia gas. In the presence of moisture, highly corrosive to glass, other siliceous materials and most metals. Contact with metals may

	evolve flammable hydrogen gas.
Chemical Stability	Product is considered stable; Unstable in the presence of incompatible materials.
Conditions to Avoid	Avoid dust formation. Protect from moisture/water. Avoid heating to decomposition. Keep away from all sources of ignition.
Materials to Avoid	Incompatible/reactive with boron, bromine pentafluoride, bromine trifluoride, calcium disilicide, calcium hydride, oxygen difluoride, platinum, potassium; In aqueous solutions, sulfuric acid, alkalis, ammonia, aliphatic amines, alkanolamines, alkylene oxides, amides, epichlorohydrin, isocyanates, nitromethane, organic anhydrides, vinyl acetate.
Hazardous Decomposition Products	Fire, or when heated to decomposition, will produce irritating, toxic and/or corrosive gases, including Ammonia, Hydrogen fluoride, Nitrogen oxides (NOx).
Hazardous Polymerisation	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Toxic if swallowed. Ingestion may result in dehydration, thirst, nausea, vomiting, diarrhoea, abdominal pain, headache and convulsions. The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. Immediate pain and difficulties in swallowing and speaking may be evident. Fluoride causes severe loss of calcium in the blood, with symptoms appearing several hours later including painful and rigid muscle contractions of the limbs. Cardiovascular collapse can occur and may cause death with increased heart rate and other heart rhythm irregularities.
- Skin corrosion/irritation: Causes severe skin burns. The material can produce chemical burns following direct contact with the skin; systemic effects may result following absorption. Fluorides are easily absorbed through the skin and cause death of soft tissue and erode bone. Healing is delayed and death of tissue may continue to spread beneath skin. Solution of material in moisture on the skin, or perspiration, may markedly increase skin corrosion and accelerate tissue destruction.
- Eye damage/irritation: Causes serious eye damage. The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.
- Respiratory/skin sensitisation: No information available.
- Germ cell mutagenicity: Not considered to be genotoxic.
- Carcinogenicity: Not considered to be carcinogenic.
- Reproductive toxicity: No information available.
- STOT (single exposure): Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness. Acute effects of fluoride inhalation include irritation of nose and throat, coughing and chest discomfort. Symptoms of inhalation (of dust, solution mists or of liberated hydrogen fluoride gases), can produce symptoms such as spasm, inflammation and oedema of the larynx and bronchii, chemical pneumonitis and pulmonary oedema.
- STOT (repeated exposure): Extended exposure to inorganic fluorides causes fluorosis, which includes signs of joint pain and stiffness, tooth discolouration, nausea and vomiting, loss of appetite, diarrhoea or constipation, weight loss, anaemia, weakness.
- Aspiration toxicity: No information available.

Acute

Ingestion

Acute toxicity (Oral):
COMPONENT: Ammonium bifluoride:
- LD50, Rat: 130 mg/kg bw. [OECD TG 401].

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic toxicity:
COMPONENT: Ammonium bifluoride (CAS No. 1341-49-7):
- LC50, Fish: 0.068 mg/L (96 h).
- EC50, Crustacea: 97 mg/L (48 h).
- EC50, Algae/other aquatic plants: 43 mg/L (96 h).
- NOEC, Crustacea: 0.79 mg/L (96 h).

Persistence/Degradability No information available.

Mobility	No information available.
Environmental Fate	Prevent, by any means available, spillage from entering drains or water courses.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. Recycle wherever possible, or treat and neutralise at an approved treatment plant and in accordance with local/regional/national regulations. Treatment should involve: Mixing or slurrying in water; Neutralisation with soda-lime or soda-ash; followed by burial in a landfill specifically licensed to accept chemical and/or pharmaceutical wastes, or incineration in a licensed apparatus (after admixture with suitable combustible material).
Special Precautions for Land Fill	Containers may still present a chemical hazard/danger when empty. If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the product. Decontaminate empty containers with 5% aqueous sodium hydroxide or soda ash, followed by water. Observe all label safeguards until containers are cleaned and destroyed.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	AMMONIUM HYDROGENDIFLUORIDE, SOLID
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	1727
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	AMMONIUM HYDROGENDIFLUORIDE, SOLID
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	1727
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	AMMONIUM HYDROGENDIFLUORIDE, SOLID
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	1727
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	AMMONIUM HYDROGENDIFLUORIDE, SOLID
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
ERG	154 Substances - Toxic and/or Corrosive (Non-Combustible)
UN Number	1727
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG Code

Proper Shipping Name	AMMONIUM HYDROGENDIFLUORIDE, SOLID
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	1727
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	AMMONIUM HYDROGENDIFLUORIDE, SOLID
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	1727
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)

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	BIFLUORIDES (including ammonium, potassium and sodium salts) are listed in Schedule 7 of the SUSMP.
Poisons Schedule (Aust)	Schedule 7

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR003970

National/Regional Inventories

Australia (AIIC)	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	AMBIFL0704, AMBIFL1000, AMBIFL1001, AMBIFL1002, AMBIFL1003, AMBIFL1004, AMBIFL1005, AMBIFL1006, AMBIFL1007, AMBIFL1008, AMBIFL1009, AMBIFL1010, AMBIFL1011, AMBIFL1012, AMBIFL1013, AMBIFL1014, AMBIFL1100, AMBIFL1110, AMBIFL1200, AMBIFL1300, AMBIFL1800, AMBIFL1801, AMBIFL1802, AMBIFL2000, AMBIFL2001, AMBIFL2002, AMBIFL2500, AMBIFL2600, AMBIFL3000, AMBIFL3500, AMBIFL3501, AMBIFL4000, AMBIFL5000, AMBIFL5800, AMBIFL5801, AMBIFL5802, AMBIFL5803, AMBIFL5804, AMBIFL5805, AMBIFL5806, AMBIFL5807, AMBIFL5808, AMBIFL5809, AMBIFL5810, AMBIFL5811, AMBIFL5812, AMBIFL6000, AMBIFL6500, AMBIFL7000
Revision	5
Revision Date	27 Aug 2019

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm^2 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 Farenheit
g Grams
g/cm^3 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/m^3 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
m^3 Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m^3 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 Heath 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