

SAFETY DATA SHEET



Issued: 5 Jul 2024
Version: 02

1. IDENTIFICATION

Product Name:	Ammonium Nitrate (UN1942)
Other Names	Nitric Acid, Ammonium Salt
Uses	General Chemical; explosives manufacture; fertilizer
Chemical Family	No Data Available
Chemical Formula	H3N.HNO3
Chemical Name	Ammonium Nitrate
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location
Manufacturer / Supplier	HU-CHEM Ltd 963, Sangam-ro, Yeosu-si, Jeollanam-do, Republic of Korea 59614
New Zealand Contact	Prime Blasting Services Ltd Unit 7 / 17B Minden Road, Te Puna, Tauranga 3147 Phone: 07 577 1275

Emergency Contact Details

For Emergencies only, DO NOT contact these companies for general product advice

Organisation	Location	Telephone
Manufacturer / Supplier	HU-CHEM Ltd, Korea	+82-61-680-4618
New Zealand	Prime Blasting Services Ltd	0800 111 077
	NZ National Poisons Centre	0800 764 766

2. HAZARD IDENTIFICATION

Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories	Oxidising Solids - Category 3 Serious Eye Damage/Irritation - Category 2A

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Pictograms



Signal Word

Warning

Hazard Statements

H272 May intensify fire; oxidizer.
H319 Causes serious eye irritation.

Precautionary Statements

Prevention	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P221	Take any precaution to avoid mixing with combustibles.
	P264	Wash exposed skin thoroughly after handling.
	P280	Wear eye protection/face protection.
Response	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.
Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

Dangerous Goods Classification

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications

Physical Hazards 5.1.1C Oxidising substances that are liquids or solids: low hazard

Health Hazards 6.1E Substances that are acutely toxic –May be harmful, Aspiration hazard

6.4A Substances that are irritating to the eye

Environmental Hazards 9.1D Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ammonium Nitrate	No Data Available	6484-52-2	100.0 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed Rinse mouth with water. Give plenty of water to drink provided victim is conscious. Do NOT induce vomiting. Seek immediate medical attention.

Eye If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

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Skin	If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice. Nitrates can be absorbed through cut, burnt or broken skin. Launder contaminated clothing before reuse.
Inhaled	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. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.
Advice to Doctor	Medical attention and special treatment: Clinical findings: The smooth muscle relaxant effect of nitrate salts may lead to headache, dizziness and marked hypotension. Cyanosis is clinically detectable when approximately 15% of the haemoglobin has been converted to methaemoglobin (ie.ferric iron). Symptoms such as headache, dizziness, weakness and dyspnoea occur when methaemoglobin concentrations are 30% to 40%; at levels of about 60%, stupor, convulsions, coma and respiratory paralysis occur and the blood is a chocolate brown colour. At higher levels death may result. Spectrophotometric analysis can determine the presence and concentration of methaemoglobin in blood. Treatment: 1. Give 100% oxygen. 2. In cases of (a) ingestion: use gastric lavage, (b) contamination of skin (unburnt or burnt): continue washing to remove salts. 3. Observe blood pressure and treat hypotension if necessary.

Medical Conditions Aggravated by Exposure When methaemoglobin concentrations exceed 40% or when symptoms are present, give methylene blue 1-2mg/Kg body weight in a 1% solution by slow intravenous injection. If cyanosis has not resolved within one hour a second dose of 2mg/Kg body weight may be given. The total dose should not exceed 7mg/Kg body weight as unwanted effects such as dyspnoea, chest pain, vomiting, diarrhoea, mental confusion and cyanosis may occur. Without treatment methaemoglobin levels of 20-30% revert to normal within 3 days.
Bed rest is required for methaemoglobin levels in excess of 40%.
Continue to monitor and give oxygen for at least two hours after treatment with methylene blue.
Consider transfer to centre where haemoperfusion can be performed to remove the nitrates from the blood if the condition of the patient is unstable.
Following inhalation of oxides of nitrogen the patient should be observed in hospital for 24 hours for delayed onset of pulmonary oedema.
Further observation for 2-3 weeks may be required to detect the onset of the inflammatory changes of bronchiolitis fibrosa obliterans.

5. FIRE FIGHTING MEASURES

Flammability Conditions	Ammonium nitrate is a powerful oxidising agent. Contact with material may cause a fire. Contact with combustible or organic materials may cause fire.
Extinguishing Media	Oxidizing material :In case of fire, Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials. Do NOT use Dry agent (carbon dioxide, dry chemical powder). Fires should be fought from a protected location. Keep containers and adjacent areas cool with water spray.
Fire and Explosion Hazard	It is an oxidizing agent and can self-ignite/detonate when in contact with powdered metals and some organic materials such as Urea and Acetic Acid.
Hazardous Products of Combustion	Oxidizing substance. Increases intensity of a fire. Nitrate salts on their own are not combustible, however they will support the combustion of other materials. Decomposes on heating emitting irritating white fumes. Brown fumes indicate the presence of toxic oxides of nitrogen. A major fire may involve a risk of explosion. An adjacent detonation may also involve the risk of explosion. Thermal decomposition may result in flammable and toxic gases such as Oxides of nitrogen, ammonia and Ammonium nitrate fumes. May explode when subject to fire or shock, especially when referring to large quantities.

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Personal Protective Equipment	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) or chemical splash suit. Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. On detection of fire the compartment(s) should be opened up to provide maximum ventilation. Fires should be fought from a protected location. Keep containers and adjacent areas cool with water spray. If safe to do so, remove containers from path of fire. A major fire may involve a risk of explosion. An adjacent detonation may also involve the risk of explosion. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment. Do NOT fight fire in advanced stages. Evacuate to a safe distance. Fight fire only in its initial stages.
Flash Point	>93.3 °C CLOSED CUP
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data
Available	
Auto Ignition Temperature	300 °C
Hazchem Code	1Y

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Personnel involved in the clean up should wear full protective clothing as listed in section 8. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. Do NOT contaminate. Avoid breathing in dust.
Clean Up Procedures	Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers, bags or drums for disposal or re-use. (Loose fitting lids). DO NOT return spilled material to original container. Ensure that contaminated material (clothing, pallets) is thoroughly washed. Contain - prevent run off into drains and waterways. Product will promote algae growth which may degrade water quality and taste. This material is classified as Security Sensitive Ammonium Nitrate (SSAN). Spillage recovery needs to be appropriately documented and material accurately accounted for.
Containment	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Environmental Precautionary Measures	Do not allow to enter sewers/ surface or ground water.
Evacuation Criteria	Evacuate all unnecessary personnel.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Do not smoke. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Remove contaminated clothing and wash before reuse. Avoid handling which leads to dust formation. Keep away from incompatible material such as reducing agents, or combustible materials. Keep out of reach of children. Ensure ammonium nitrate is stored securely and in accordance with regulations/controls issued by relevant authority.
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The secure storage of ammonium nitrate within Australia includes but is not limited to the use of site security plans, locking the facility/container with physical restraining items, validation and record keeping of all stock, and where deemed necessary through a risk management approach constant surveillance.

Storage Recommended storage temperature 15 - 25°C. Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Ammonium Nitrate is incompatible with, and must be stored away from, tetranitromethane, dichloroisocyanuric acid, trichloroisocyanuric acid, any bromate, chlorate, chlorite, hypochlorite or chloroisocyanurate or any inorganic nitrite. If using wooden pallets, these must be hardwood and periodically washed down with large amounts of water to remove all traces of the material. Keep containers closed when not in use - check regularly for spills. This product when stored in a confined, unventilated space/hold can give off ammonia or other odour and lead to the depletion of oxygen within this space and other confined spaces. It is therefore essential that ventilation is carried out prior to entry to all ship holds. This product has a UN classification of 1942 and a Dangerous Goods Class 5.1 (Oxidiser) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.

Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. IMPORTANT: Within Australia all persons who have unsupervised access to Security Sensitive Ammonium Nitrate (SSAN), will require security clearances. The issuing of security clearances is controlled and issued through the local Government authorities. The checks include a criminal history check (CHC), and a politically motivated violence check (PMV).

General No exposure standard has been established for this product. However, the exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ (for respirable dust). NOTE: 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. These 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 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.

Exposure Limits No Data Available

Biological Limits No information available on biological limit values for this product.

Engineering Measures 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 Protection Equipment RESPIRATOR: If excessive dust exists, wear dust mask/respirator (AS1715/1716).
EYES: Wear safety glasses (AS1336/1337). HANDS: Wear impervious gloves (AS2161).
CLOTHING: Wear overalls, and safety footwear (AS3765/2210).

Work Hygienic Practices Wash hands before breaks and at the end of work. Change contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid

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Appearance	Crystalline
Odour	Odourless
Colour	Colourless
pH	4.5 - 6.0 1 % water
Vapour Pressure	Negligible torr (@ 20 °C)
Relative Vapour Density	No Data Available
Boiling Point	210 (Decomposes) °C
Melting Point	169.6
Freezing Point	169.6 °C
Solubility	Easily soluble in cold water, hot water. Soluble in acetone. Partially soluble in methanol. Insolubl 25°C
Specific Gravity	1.725
Flash Point	>93.3 °C CLOSED CUP
Auto Ignition Temp	300 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	210 Deg C (Boiling Point) °C
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	Reactive with reducing agents, combustible materials, organic materials, metals, alkalis.
Potential for Dust Explosion	High dust concentrations may create dust explosion hazard.
Fast or Intensely Burning Characteristics	Increases intensity of a fire. Material will support the combustion of other materials.
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	Increases intensity

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Reactions That Release Gases or Vapours No Data Available

Release of Invisible Flammable Vapours and Gases No Data Available

10. STABILITY AND REACTIVITY

General Information	Non-corrosive in presence of glass. Oxidative, hygroscopic, light sensitive.
Chemical Stability	Ammonium nitrate is a powerful oxidising agent. May explode under confinement and high temperature, but not readily detonated. Hygroscopic: absorbs moisture or water from surrounding air.
Conditions to Avoid	Avoid exposure to heat, sources of ignition, and open flame. Will react with organic materials and reducing agents. Avoid contact with combustible substances. Avoid contact with other chemicals. Avoid dust generation.
Materials to Avoid	Incompatible with finely powdered metals (aluminium, copper, chromium, iron, zinc brass, nickel, lead, manganese, magnesium, antimony), acetic acid, ammonium chloride, phosphorus, sodium perchlorate, sulfur, bismuth, cadmium, chlorides, cobalt, potassium and ammonium sulfate, sodium, sodium hypochlorite, sodium-potassium alloy, organic materials and combustible materials (paper, oil, charcoal, etc.)
Hazardous Decomposition Products	Thermal decomposition may result in flammable and toxic gases such as Oxides of nitrogen, ammonia and Ammonium nitrate fumes.
Hazardous Polymerisation	Hazardous polymerisation will not occur. Oxidising agent. Supports combustion of other materials and increases intensity of a fire. Will react with organic materials, and reducing agents. Reacts with nitrites, chlorides, chlorates, permanganates and metal powders. When mixed with strong acids, and occasionally during blasting, it produces an irritating toxic brown gas, mostly of nitrogen dioxide. When molten may decompose violently due to shock or pressure. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding.

11. TOXICOLOGICAL INFORMATION

General Information	Oral LD50 Rat: 2217mg/Kg Following the ingestion of nitrates in humans and animals methaemoglobinaemia has occurred. Causes damage to the following organs: lungs, mucous membranes. May cause damage to the following organs: blood, gastrointestinal tract. Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant). Carcinogenic effects: At this time, no studies were found on the possible carcinogenicity of Ammonium Nitrate in humans or experimental animals. However nitrates can be reduced to nitrites in the body, and the formed nitrites can subsequently react with amines to form suspect carcinogens N-nitrosamines. Genetic Effects: No genetic data was found for ammonium. However, in general, nitrates and nitrites are genotoxic. Reproductive Effects: There has been some association between consumption of nitrate-contaminated well water and birth defects, especially neural tube defects. However, these studies would not specifically implicate Ammonium Nitrate.
Eyelrritant	Causes eye irritation. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.
Chronic Ingestion	The toxicity of nitrates is due to in vivo conversion to nitrites. Chronic ingestion of more than 5 mg/kg/day is considered unacceptable. Primary overdose effects include orthostatic hypotension and Methemoglobinemia. Orthostatic hypotension, faintness, fatigue, weakness, depression, mental impairment, dizziness, shortness of breath, and reflex tachycardia are common; headache, nausea and vomiting may also

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Inhalation	occur. Chronic ingestion may also cause nephritis. Breathing in dust may result in respiratory irritation. Blasting may produce a toxic brown gas of nitrogen dioxide. Causes respiratory tract (nose, throat), and mucous membrane irritation. Symptoms may include: coughing, severe lung congestion, difficulty breathing. Inhalation of large amounts may cause systemic acidosis, Methemoglobinemia with symptoms similar to acute ingestion. Ingestion: Gastroenteritis with abdominal pain, nausea, vomiting, diarrhea. Exposure to large amounts may affect behavior/central nervous system, and blood and cause Methemoglobinemia, and systemic p. 5 acidosis. Symptoms of Methemoglobinemia include cyanosis (blue lips, eyelids, earlobes, and skin), headache, fatigue, weakness, convulsions, dizziness, loss of coordination, nausea, vomiting, dyspnea, and drowsiness. It may also affect the cardiovascular system and cause increased or decreased heart rate, and hypotension.
Acute	
Skin Irritant	Repeated or prolonged skin contact may lead to irritation. Contact with molten material may cause skin burns. See effects as noted under 'Inhalation'. Can be absorbed through the skin with resultant adverse effects.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Ammonium nitrate was evaluated at 5, 10, 25 and 50 mg (NH ₄ ⁺)/L. The fertility of Daphnia magna was decreased at 50 mg/L. Post embryonic growth of crustacea was impaired at 10, 25 and 50 mg/L.
Persistence/Degradability	When released into the soil, this material is expected to leach into ground water. When released into water, this material is expected to be readily biodegradable. The product itself and its products of degradation are not toxic.
Mobility	When released into the soil, this material is expected to leach into ground water. Soluble in water.
Environmental Fate	Do NOT allow product to enter waterways, drains and sewers.
Bioaccumulation Potential	No information available on bioaccumulation for this product. No data available. Although boron is an essential micronutrient for healthy growth of plants, it can be harmful to boron sensitive plants in higher quantities. Care should be taken to minimise the amount of borate product released to the environment. Product will decompose in the environment to natural borate. Product is soluble in water and is leachable through normal soil.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. Recycle if possible.

14. TRANSPORT INFORMATION

Land Transport (New Zealand)
NZS5433

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Proper Shipping Name AMMONIUM NITRATE with not more than 0.2% total combustible material, including any organic substance, calculated as carbon to the exclusion of any other added substance

Class 5.1 Oxidising Substances

Subsidiary Risk(s) EPG No Data Available

EPG **50 Ammonium Nitrate**

UN Number 1942

Hazchem 1Y

Pack Group III

Special Provision No Data Available

Sea Transport

IMDG Code

Proper Shipping Name AMMONIUM NITRATE with not more than 0.2% total combustible material, including any organic substance, calculated as carbon to the exclusion of any other added substance

Class 5.1 Oxidising Substances

Subsidiary Risk(s) No Data Available

UN Number 1942

Hazchem 1Y

Pack Group III

Special Provision No Data Available

EMS FH,SQ

Marine Pollutant No

Air Transport

IATA DGR

Proper Shipping Name AMMONIUM NITRATE with not more than 0.2% total combustible material, including any organic substance, calculated as carbon to the exclusion of any other added substance

Class 5.1 Oxidising Substances

Subsidiary Risk(s) No Data Available

UN Number 1942

Hazchem 1Y

Pack Group III

Special Provision No Data Available

15. REGULATORY INFORMATION

General Information No Data Available

Poisons Schedule (Aust) Not scheduled

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

Approval Code HSR001310

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	229-347-8
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 AMNITB1000, AMNITR0500, AMNITR0501, AMNITR1000, AMNITR1001, AMNITR1002, AMNITR1003, AMNITR1004, AMNITR1005, AMNITR1006, AMNITR1007, AMNITR1008, AMNITR1009, AMNITR1010, AMNITR1011, AMNITR1012, AMNITR1013, AMNITR1014, AMNITR1015, AMNITR1016, AMNITR1017, AMNITR1018, AMNITR1019, AMNITR1020, AMNITR1021, AMNITR1022, AMNITR1023, AMNITR1024, AMNITR1025, AMNITR1026, AMNITR1027, AMNITR1028, AMNITR1029, AMNITR1030, AMNITR1100, AMNITR1200, AMNITR1300, AMNITR1400, AMNITR1500, AMNITR1600, AMNITR1700, AMNITR1800, AMNITR1805, AMNITR1810, AMNITR1900, AMNITR2000, AMNITR2001, AMNITR2002, AMNITR2100, AMNITR2200, AMNITR2300, AMNITR2400, AMNITR2500, AMNITR2700, AMNITR2800, AMNITR3000, AMNITR3001, AMNITR3100, AMNITR3500, AMNITR3600, AMNITR3700, AMNITR3800, AMNITR3900, AMNITR4000, AMNITR4500, AMNITR5000, AMNITR5500, AMNITR6000, AMNITR6500, AMNITR7000, AMNITR7300, AMNITR7400, AMNITR7500, AMNITR7600, AMNITR7700, AMNITR7800, AMNITR7900, AMNITR7901, AMNITR8000, AMNITR8100, AMNITR8200, AMNITR8300, AMNITR8301, AMNITR8302, AMNITR8400, AMNITR8401, AMNITR8500, AMNITR8501, AMNITR8502, AMNITR8700, AMNITR8800, AMNITR8900, AMNITR8901, AMNITR9000, AMNITR9001, AMNITR9503, AMNITR9504, AMNITR9514, AMNITR9600

Revision **Revision Date** **Reason for Issue** **Key/Legend**

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11 OCT 2019

update sds

< 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 Farenheit

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

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Hours **UN** United Nations
wt Weight