# SAFETY DATA SHEET

**Revision date:** 02-Sep-2021

**Revision Number** 7

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product identifier**

| | |
|---|---|
| **Product Name** | AMMONIUM NITRATE |
| **Product Code(s)** | 000032017701 |

**Other means of identification**

| | |
|---|---|
| **UN number** | 1942 |
| **CAS No.** | 6484-52-2 |
| **Synonyms** | Nitric acid ammonium salt; Nitram; Nitropril; CPAN; Chemically Pure Ammonium Nitrate; Security Sensitive Ammonium Nitrate; SSAN. |

**Recommended use of the chemical and restrictions on use**

| | |
|---|---|
| **Recommended use** | General chemical. Explosives manufacture. Fertilizers.<br>This material is classified as a Security Sensitive Ammonium Nitrate (SSAN). Various government controls may apply to this material. |
| **Uses advised against** | No information available. |

**Supplier**
Ixom Operations Pty Ltd
ABN: 51 600 546 512
Level 8, 1 Nicholson Street
Melbourne 3000
Australia

Telephone Number: +61 3 9906 3000

**Emergency telephone number**

Emergency telephone number **1 800 033 111 (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

**GHS Classification**

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

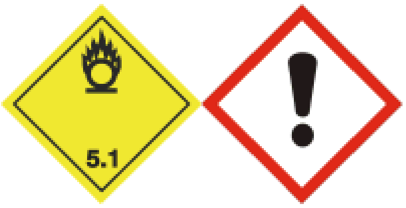
Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

| | |
|---|---|
| **Oxidizing solids** | Category 3 |
| **Serious eye damage/eye irritation** | Category 2 |

**SIGNAL WORD**
Warning

**Label elements**

Flame over circle
Exclamation mark



**Hazard statements**
H272 - May intensify fire; oxidizer
H319 - Causes serious eye irritation

**Precautionary Statements - Prevention**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep away from clothing and other combustible materials
Take any precaution to avoid mixing with combustibles
Wash hands thoroughly after handling
Wear protective gloves / protective clothing / eye protection / face protection
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet for extinction.
**Precautionary Statements - Storage**
No storage statements
**Precautionary Statements - Disposal**
Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification**
AUH031 - Contact with acids liberates toxic gas
AUH044 - Risk of explosion if heated under confinement
**General Hazards**

| | |
|---|---|
| **Poisons Schedule (SUSMP)** | None allocated |

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No. | Weight-% |
|---|---|---|
| Ammonium nitrate | 6484-52-2 | >98% w/w |
| Other minor ingredients | - | <2% w/w |

## 4. FIRST AID MEASURES

**Description of first aid measures**

| | |
|---|---|
| **Emergency telephone number** | Poisons Information Center, Australia: 13 11 26<br>Poisons Information Center, New Zealand: 0800 764 766 |
| **Inhalation** | Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Give artificial respiration if victim is not breathing. Get medical attention immediately if symptoms occur. |

| | |
|---|---|
| **Eye contact** | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| **Skin contact** | Wash off immediately with soap and plenty of water for at least 15 minutes. Nitrates can be absorbed through cut, burnt or broken skin. Call a physician if symptoms occur. |
| **Ingestion** | Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention. |
| **Self-protection of the first aider** | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. Avoid contact with skin, eyes, and clothing. See section 8 for more information. |

**Most important symptoms and effects, both acute and delayed**

| | |
|---|---|
| **Symptoms** | Irritation. |

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians**

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 (ferric iron). Symptoms such as headache, dizziness, weakness and dyspnoea occur when methemoglobin 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 methemoglobin in the 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.
4. When methaemoglobin concentrations exceed 40% or when symptoms are present, give methylene blue 1 or 2 mg/kg body weight in a 1% solution by slow intravenous injection. If cyanosis has not been resolved within one hour a second dose of 2 mg/kg body weight may be given. The total dose should not exceed 7 mg/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.
5. Bed rest is required for methaemoglobin levels in excess of 40%.
6. Continue to monitor and give oxygen for at least two hours after treatment with methylene blue.
7. Consider transfer to centre where haemoperfusion can be performed to remove the nitrates from the blood if the condition of the patient is unstable.
8. 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

**Suitable Extinguishing Media**

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|---|---|
| **Suitable Extinguishing Media** | Water spray. |

| | |
|---|---|
| **Unsuitable extinguishing media** | Carbon dioxide (CO2). Dry chemical. |

**Specific hazards arising from the chemical**

| | |
|---|---|
| **Specific hazards arising from the chemical** | WARNING:<br>Explosion risk in case of fire, especially if contaminated or confined. Molten product may explode from friction, shock or containment. In the case of an intense fire evacuate all personnel to at least 1000 m. Oxidizing substance. Increases intensity of a fire, even in the absence of oxygen. Ammonium nitrate on its own is not combustible, however, it supports the combustion of other materials. Contact with combustible material may cause fire. Decomposes on heating emitting irritating white fumes and/or brown fumes. Brown fumes indicate the presence of toxic oxides of nitrogen. Containers may explode when heated. |

**Special protective actions for fire-fighters**

| | |
|---|---|
| **Special protective equipment for fire-fighters** | WARNING:<br>A major fire may involve a risk of explosion. Evacuate area immediately. Allow fire to burn out. An adjacent detonation may also involve the risk of explosion. Heating can cause decomposition of the material, which can lead to the containers exploding. Confinement of material may result in detonation.<br>In the case of an intense fire evacuate all personnel to a least 1000 metres. Police and emergency personnel should be notified immediately. If possible remove vehicles and further heat and ignition sources from area. Do not return to areas until the site has completely cooled down.<br>Decomposes on heating emitting irritating white fumes and/or brown fumes. Brown fumes indicate the presence of toxic oxides of nitrogen. On detection of fire the compartment(s) should be opened up to provide maximum ventilation. Fire-fighters to wear self-contained breathing apparatus and suitable protective clothing if there is a risk of exposure to products of combustion/decomposition. If safe to do so, remove containers from path of fire. If safe to do so, prevent molten material from being confined in drains, pipes, etc. |
| **Hazchem code** | 1Y |

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

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|---|---|
| **Personal precautions** | Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Use personal protective equipment as required. |
| **Other information** | Keep combustibles (wood, paper, oil, etc) away from spilled material. Ventilate the area. Refer to protective measures listed in Sections 7 and 8. |
| **For emergency responders** | Use personal protection recommended in Section 8. |

**Environmental precautions**

| | |
|---|---|
| **Environmental precautions** | Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. |

**Methods and material for containment and cleaning up**

| | |
|---|---|
| **Methods for containment** | Prevent further leakage or spillage if safe to do so. |

**Methods for cleaning up**

Clean up spillages immediately. Contain - prevent run off into drains and waterways. Wear protective equipment to prevent skin and eye contact and breathing in dust. Sweep up, but avoid generating dust. Collect in properly labelled containers, with loose fitting lids, for disposal. DO NOT return spilled material to original container for re-use. Ensure that contaminated material (clothing, pallets) is thoroughly washed.

This material is classified as a Security Sensitive Ammonium Nitrate (SSAN). Spillage recovery needs to be appropriately documented and material accurately accounted for.

In the case of a transport accident notify the Police, Regulatory Authorities and Ixom Operations Pty Ltd (Telephone:1800 033 111 -- 24 hour service Australia) and/or (Telephone: 0800 734 607 -- 24 hour service New Zealand) or Ixom International Australia (Telephone: +61 3 9663 2130 -- 24 hour service Australia).

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Take off contaminated clothing and wash before reuse. Use personal protection equipment. Wash thoroughly after handling. Keep out of reach of children. Handle with care. Do not mix with other chemicals.

**General hygiene considerations**

Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Wear suitable gloves and eye/face protection.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions**

Store in a cool, dry, well ventilated place. Store away from sources of heat or ignition. Protect from moisture. Ammonium Nitrate is incompatible with, and must be stored away from, tetranitromethane, dichloroisocyanuric acid, trichloroisocyanuric acid, any bromate, chlorate, chlorite, hypochlorite, chloroisocyanurate, or any inorganic nitrite. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

If using wooden pallets, these must be hardwood and periodically washed down with large amounts of water to remove all traces of the material. Concrete floors are recommended for storage. If ammonium nitrate is to be stored in bulk, the surface must be treated so that it is resistant to attack. Bulk ammonium nitrate should not be stored on a bituminous floor. Floors drains, recesses or other areas of possible confinement should be eliminated to prevent entrapment/confinement of molten (flowing) ammonium nitrate during a fire.

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.

Ensure ammonium nitrate is stored securely and in accordance with regulations/controls issued by relevant authority. 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.

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).

**Incompatible materials**

Ammonium nitrate is incompatible with, and must be stored away from, tetranitromethane, dichloroisocyanuric acid, trichloroisocyanuric acid, bromates, chlorates, chlorites, hypochlorites, perchlorates, chloroisocyanurates, nitrites, powdered metals, strong acids, reducing agents, permanganates, combustible materials, brass, bronze, copper, zinc.

**Poisons Schedule (SUSMP)** None allocated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Limits** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for dusts and decomposition product(s):

Dusts not otherwise classified: 8hr TWA = 10 $mg/m^3$
Nitrogen dioxide: 8hr TWA = 5.6 $mg/m^3$ (3 ppm), 15 min STEL = 9.4 $mg/m^3$ (5 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

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

**Engineering controls** Apply technical measures to comply with the occupational exposure limits.

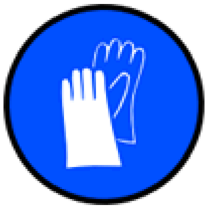
If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented 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

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.





**Eye/face protection** Goggles.

| | |
|---|---|
| **Skin and body protection** | Wear fire/flame resistant/retardant clothing. Long sleeved clothing. Wear suitable protective clothing. Boots. Overalls. |
| **Hand protection** | Impervious gloves. |
| **Respiratory protection** | 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. |
| **Environmental exposure controls** | No information available. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Solid |
| **Appearance** | Granules or Prills |
| **Color** | White to Off-white |
| **Odor** | Negligible |
| **Odor threshold** | No information available. |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **pH** | 4.5-5.2 (10% solution, 20°C) | |
| **pH (as aqueous solution)** | No data available | None known |
| **Melting point / freezing point** | 160-169°C | |
| **Boiling point / boiling range** | Decomposes | None known |
| **Flash point** | Not applicable | |
| **Evaporation rate** | No data available | None known |
| **Flammability (solid, gas)** | No data available | None known |
| **Flammability Limit in Air** | | None known |
| **Upper flammability or explosive limits** | Not applicable | |
| **Lower flammability or explosive limits** | Not applicable | |
| **Vapor pressure** | Negligible | None known |
| **Vapor density** | No data available | None known |
| **Relative density** | 0.72-0.78 g/cm³ (bulk density) | |
| **Water solubility** | Soluble in water | |
| **Solubility(ies)** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | ca. 210°C | |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic viscosity** | No data available | None known |

**Other information**

## 10. STABILITY AND REACTIVITY

**Reactivity**

| | |
|---|---|
| **Reactivity** | Powerful oxidizing agent. Oxidizing agents may cause vigorous reactions. Contact with acids liberates toxic gas. Hygroscopic: absorbs moisture or water from surrounding air. |

**Chemical stability**

| | |
|---|---|
| **Stability** | Stable under normal ambient and anticipated storage and handling conditions when free of contaminates including inorganic and organic materials. May explode under confinement and high temperature, but not readily detonated. May explode due to nearby detonations. |

**Explosion data**

| | |
|---|---|
| **Sensitivity to mechanical impact** | None. |
| **Sensitivity to static discharge** | None. |

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** Oxidizing 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, metal powders. When mixed with strong acids, and occasionally during blasting, it produces an irritating toxic brown gas, mostly of nitrogen dioxide. When molten (such as in a fire situation) may decompose violently due to shock or pressure.

Contamination with chlorine bleaches, pool chlorine, hypochlorites may result in the formation of explosive nitrogen trichloride. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding.

**Conditions to avoid**

**Conditions to avoid** Heat, flames and sparks. Dust formation. Moisture. Incompatible materials.

**Incompatible materials**

**Incompatible materials** Ammonium nitrate is incompatible with, and must be stored away from, tetranitromethane, dichloroisocyanuric acid, trichloroisocyanuric acid, bromates, chlorates, chlorites, hypochlorites, perchlorates, chloroisocyanurates, nitrites, powdered metals, strong acids, reducing agents, permanganates, combustible materials, brass, bronze, copper, zinc.

**Hazardous decomposition products**

**Hazardous decomposition products** Nitrogen oxides. Ammonia. Nitric acid. Ammonium nitrate fumes.
When heated to decomposition (unconfined) ammonium nitrate produces nitrous oxide, white ammonium nitrate fumes and water. When mixed with strong acids, and occasionally during blasting, it produces an irritating toxic brown gas, mostly nitrogen dioxide. When molten it may decompose violently due to shock or pressure.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Information on likely routes of exposure**

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

**Inhalation** Breathing in dust may result in respiratory irritation. Blasting may produce a toxic brown gas of nitrogen dioxide. Inhalation of the gas may result in chest discomfort, shortness of breath and possible pulmonary oedema, the onset of which may be delayed. Absorption of ammonium nitrate by inhalation, ingestion or through burnt or broken skin may cause dilation of blood vessels by direct smooth muscle relaxation and may also cause methaemoglobinaemia. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

**Eye contact** Causes serious eye irritation.

**Skin contact** May cause irritation. Nitrates can be absorbed through cut, burnt or broken skin.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

**Symptoms** Irritation.

**Numerical measures of toxicity - Product Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Ammonium nitrate | = 2217 mg/kg ( Rat ) | - | > 88.8 mg/L ( Rat ) 4 h |

*See section 16 for terms and abbreviations*

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization** Not classified.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Chronic effects:** NITRATES: Absorption of nitrates by ingestion, inhalation or through burnt or broken skin may cause dilation of the blood vessels by direct smooth muscle relaxation with a subsequent lowering of blood pressure and may also cause breathing difficulties, blueness of the skin (cyanosis) and methaemoglobinaemia. In humans and animals methaemoglobinaemia has occurred under untreated circumstances following the ingestion of nitrates.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ecotoxicity** Keep out of waterways.
Ammonium nitrate is a plant nutrient. Large scale contamination may kill vegetation and cause poisoning in livestock and poultry. Ammonium nitrate was evaluated at 5, 10, 25 and 50 mg (NH4+)/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. Can stimulate weed and algal growth in static surface waters.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| Ammonium nitrate | - | LC50: 65 - 85mg/L (48h, Cyprinus carpio) | - | - |

**Persistence and degradability**

| | |
|---|---|
| **Persistence and degradability** | Biodegradable. |

**Bioaccumulative potential**

| | |
|---|---|
| **Bioaccumulation** | Bioaccumulation is not expected. |

| Chemical name | Partition coefficient |
|---|---|
| Ammonium nitrate | -3.1 |

**Mobility**

| | |
|---|---|
| **Mobility in soil** | No information available. |

**Other adverse effects**

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

| | |
|---|---|
| **Waste from residues/unused products** | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Waste ammonium nitrate may be disposed of as a fertiliser, but this method of disposal must be agreed with the authorities.<br>As this material is classified as a Security Sensitive Ammonium Nitrate (SSAN) disposal of material needs to be appropriately documented and material accurately accounted for. |

## 14. TRANSPORT INFORMATION

**ADG**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

| | |
|---|---|
| **UN number** | 1942 |
| **Proper shipping name** | AMMONIUM NITRATE |
| **Hazard class** | 5.1 |
| **Packing group** | III |
| **Hazchem code** | 1Y |

**IATA**

| | |
|---|---|
| **UN number** | 1942 |
| **UN proper shipping name** | AMMONIUM NITRATE |
| **Transport hazard class(es)** | 5.1 |
| **Packing group** | III |

**IMDG**

| | |
|---|---|
| **UN number** | 1942 |
| **UN proper shipping name** | AMMONIUM NITRATE |
| **Transport hazard class(es)** | 5.1 |
| **Packing group** | III |
| **IMDG EMS Fire** | F-H |
| **IMDG EMS Spill** | S-Q |

## 15. REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National regulations**

**Australia**

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

**Poisons Schedule (SUSMP)** None allocated

**Major hazard (accident/incident planning) regulation**

Verify that license requirements are met

| Hazardous chemical | Threshold quantity (T) |
|---|---|
| Oxidizing material listed in Appendix A to the ADG Code | 50 |

**International Inventories**

| | |
|---|---|
| **AIIC** | All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals. |
| **NZIoC** | All the constituents of this material are listed on the New Zealand Inventory of Chemicals. |

**Legend:**
**- Australian Inventory of Industrial Chemicals**

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## 16. OTHER INFORMATION

**Reason(s) For Issue:** 5 Yearly Revised Primary SDS

**Issuing Date:** 02-Sep-2021

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Revision Note:**
The symbol (*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---|---|---|---|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

**Key literature references and sources for data used to compile the SDS**

EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

**Disclaimer**

**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.**

**End of Safety Data Sheet**