

## 1. IDENTIFICATION

|                            |                                                                         |
|----------------------------|-------------------------------------------------------------------------|
| <b>Product Name</b>        | <b>Sodium nitrate</b>                                                   |
| <b>Other Names</b>         | No Data Available                                                       |
| <b>Uses</b>                | Catalyst; fertiliser; fluxing agent; oxidant; preservative; propellant. |
| <b>Chemical Family</b>     | No Data Available                                                       |
| <b>Chemical Formula</b>    | NaNO <sub>3</sub>                                                       |
| <b>Chemical Name</b>       | Nitric acid, sodium salt                                                |
| <b>Product Description</b> | No Data Available                                                       |

### Contact Details of the Supplier of this Safety Data Sheet

| Organisation            | Location                                                                                                                   | Telephone       |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------|
| Redox Pty Ltd           | 2 Swettenham Road<br>Minto NSW 2566<br>Australia                                                                           | +61-2-97333000  |
| Redox Pty Ltd           | 11 Mayo Road<br>Wiri Auckland 2104<br>New Zealand                                                                          | +64-9-2506222   |
| Redox Inc.              | 3960 Paramount Boulevard<br>Suite 107<br>Lakewood CA 90712<br>USA                                                          | +1-424-675-3200 |
| Redox Chemicals Sdn Bhd | Level 2, No. 8, Jalan Sapir 33/7<br>Seksyen 33, Shah Alam Premier Industrial Park<br>40400 Shah Alam<br>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<br>131126                      |
| Chemcall                   | Australia    | 1800-127406<br>+64-4-9179888               |
| Chemcall                   | Malaysia     | +64-4-9179888                              |
| Chemcall                   | New Zealand  | 0800-243622<br>+64-4-9179888               |
| National Poisons Centre    | New Zealand  | 0800-764766                                |
| CHEMTREC                   | USA & Canada | 1-800-424-9300 CN723420<br>+1-703-527-3887 |

## 2. HAZARD IDENTIFICATION

**Poisons Schedule (Aust)** Not Scheduled

### Globally Harmonised System

|                                 |            |                                                                                                                                                                     |                                                                                                                                  |
|---------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Hazard Classification</b>    |            | Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)                                            |                                                                                                                                  |
| <b>Hazard Categories</b>        |            | Oxidising Solids - Category 3<br>Serious Eye Damage/Irritation - Category 2A                                                                                        |                                                                                                                                  |
| <b>Pictograms</b>               |            |   |                                                                                                                                  |
| <b>Signal Word</b>              |            | Warning                                                                                                                                                             |                                                                                                                                  |
| <b>Hazard Statements</b>        |            | <b>H272</b>                                                                                                                                                         | May intensify fire; oxidizer.                                                                                                    |
|                                 |            | <b>H319</b>                                                                                                                                                         | Causes serious eye irritation.                                                                                                   |
| <b>Precautionary Statements</b> | Prevention | <b>P210</b>                                                                                                                                                         | Keep away from heat.                                                                                                             |
|                                 |            | <b>P221</b>                                                                                                                                                         | Take any precaution to avoid mixing with combustibles/organic material.                                                          |
|                                 |            | <b>P280</b>                                                                                                                                                         | Wear protective gloves/eye protection/face protection.                                                                           |
|                                 | Response   | <b>P370 + P378</b>                                                                                                                                                  | In case of fire: Use water for extinction.                                                                                       |
|                                 |            | <b>P337 + P313</b>                                                                                                                                                  | If eye irritation persists: Get medical advice/attention.                                                                        |
|                                 |            | <b>P305 + P351 + P338</b>                                                                                                                                           | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
|                                 | Disposal   | <b>P501</b>                                                                                                                                                         | 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)

|                                       |                                                                                                                                 |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Dangerous Goods Classification</b> | 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

|                             |                       |               |                                                             |
|-----------------------------|-----------------------|---------------|-------------------------------------------------------------|
| <b>HSNO Classifications</b> | Physical Hazards      | <b>5.1.1C</b> | Oxidising substances that are liquids or solids: low hazard |
|                             | Health Hazards        | <b>6.1D</b>   | Substances that are acutely toxic - Harmful                 |
|                             | Environmental Hazards | <b>9.3C</b>   | Substances that are harmful to terrestrial vertebrates      |

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients

| Chemical Entity | Formula           | CAS Number | Proportion |
|-----------------|-------------------|------------|------------|
| Sodium nitrate  | NaNO <sub>3</sub> | 7631-99-4  | >98 %      |

### 4. FIRST AID MEASURES

*Description of necessary measures according to routes of exposure*

|                                                  |                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Swallowed</b>                                 | IF SWALLOWED: Rinse mouth, then drink 200 - 300 ml water. Call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.                                                                                                                                                                    |
| <b>Eye</b>                                       | IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.                                  |
| <b>Skin</b>                                      | IF ON SKIN: Remove contaminated clothing and shoes immediately. Wash skin with plenty of soap and water. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse. |
| <b>Inhaled</b>                                   | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing - Administer oxygen if breathing is difficult.                                                                            |
| <b>Advice to Doctor</b>                          | Treat symptomatically (symptoms may be delayed). Ensure that attending medical personnel are aware of identity and nature of the product(s) involved, and take precautions to protect themselves.                                                                                                                                        |
| <b>Medical Conditions Aggravated by Exposure</b> | No information available.                                                                                                                                                                                                                                                                                                                |

## 5. FIRE FIGHTING MEASURES

|                                           |                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Measures</b>                   | If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat. Large fire: Flood fire area with water from a protected position. Cool containers with water spray until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. |
| <b>Flammability Conditions</b>            | OXIDISING SUBSTANCE: Will accelerate burning when involved in a fire.                                                                                                                                                                                                                                                                                                        |
| <b>Extinguishing Media</b>                | Use flooding quantities of water for extinction - Do not use dry chemicals, Carbon dioxide (CO2) or foam.                                                                                                                                                                                                                                                                    |
| <b>Fire and Explosion Hazard</b>          | May explode from heating, shock, friction or contamination. May ignite combustibles. Containers may explode when heated.                                                                                                                                                                                                                                                     |
| <b>Hazardous Products of Combustion</b>   | Fire may produce irritating, toxic and/or corrosive gases, including oxides of Nitrogen (brown fumes).                                                                                                                                                                                                                                                                       |
| <b>Special Fire Fighting Instructions</b> | Contain fire control water for later disposal - Runoff may create fire or explosion hazard and may pollute waterways.                                                                                                                                                                                                                                                        |
| <b>Personal Protective Equipment</b>      | Normal firefighting clothing is appropriate, i.e. self-contained breathing apparatus (SCBA), worn in combination with full fire kit.                                                                                                                                                                                                                                         |
| <b>Flash Point</b>                        | No Data Available                                                                                                                                                                                                                                                                                                                                                            |
| <b>Lower Explosion Limit</b>              | No Data Available                                                                                                                                                                                                                                                                                                                                                            |
| <b>Upper Explosion Limit</b>              | No Data Available                                                                                                                                                                                                                                                                                                                                                            |
| <b>Auto Ignition Temperature</b>          | No Data Available                                                                                                                                                                                                                                                                                                                                                            |
| <b>Hazchem Code</b>                       | 1Z                                                                                                                                                                                                                                                                                                                                                                           |

## 6. ACCIDENTAL RELEASE MEASURES

|                                             |                                                                                                                                                                                                                |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Response Procedure</b>           | Ensure adequate ventilation. Prevent exposure to heat. Do not contaminate - Keep combustibles away from spilled material. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing. |
| <b>Clean Up Procedures</b>                  | Use clean, non-sparking tools to transfer material to a suitable container for disposal (see SECTION 13); Move container from spill area.                                                                      |
| <b>Containment</b>                          | Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.                                                                                                                           |
| <b>Decontamination</b>                      | Wash away remainder with plenty of water.                                                                                                                                                                      |
| <b>Environmental Precautionary Measures</b> | Spillages and decontamination runoff should be prevented from entering drains and watercourses.                                                                                                                |
| <b>Evacuation Criteria</b>                  | Spill or leak area should be isolated immediately. Keep unauthorised personnel away; Keep upwind.                                                                                                              |
| <b>Personal Precautionary Measures</b>      | Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).                                                                                            |

## 7. HANDLING AND STORAGE

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b>  | 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. Avoid breathing dust and contact with eyes, skin and clothing. Wear protective gloves/eye protection/face protection (see SECTION 8). Keep away from heat. Take any precaution to avoid mixing with combustibles/incompatible materials. |
| <b>Storage</b>   | Store in a cool, dry and well-ventilated place. Keep container tightly closed. Protect from moisture (hygroscopic). Keep away from heat. Keep/store away from clothing/combustible materials and incompatible materials (flammable, combustible and reducing agents).                                                                                                                                                                                                          |
| <b>Container</b> | Keep only in the original container.                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General</b>                       | No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: <ul style="list-style-type: none"><li>- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m<sup>3</sup> (measured as inhalable dust).</li><li>- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m<sup>3</sup> (total); TWA = 3 mg/m<sup>3</sup> (respirable).</li></ul>                                                                                                                                                                                                                                                                                                                 |
| <b>Exposure Limits</b>               | No Data Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Biological Limits</b>             | Derived no-effect levels (DNELs) for Workers: <ul style="list-style-type: none"><li>- Dermal, long-term, systemic effects: 20.8 mg/kg/day.</li><li>- Inhalative, long-term, systemic effects: 36.7 mg/m<sup>3</sup>.</li></ul> Predicted no-effect concentrations (PNECs): <ul style="list-style-type: none"><li>- Freshwater: 0.45 mg/L</li><li>- Marine water: 0.045 mg/L</li><li>- Intermittent release: 4.5 mg/L</li><li>- STP: 18 mg/L</li></ul>                                                                                                                                                                                                                                                                                                                                |
| <b>Engineering Measures</b>          | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Personal Protection Equipment</b> | <ul style="list-style-type: none"><li>- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Dust mask/respirator, type P3. Use respirators and components tested and approved under appropriate government standards.</li><li>- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles. Use equipment for eye protection tested and approved under appropriate government standards.</li><li>- Hand protection: Wear protective gloves. Recommended: Impervious gloves, e.g. Nitrile rubber.</li><li>- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes.</li></ul> |
| <b>Special Hazards Precautions</b>   | No information available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Work Hygienic Practices</b>       | Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash before storage or reuse.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                |                          |
|--------------------------------|--------------------------|
| <b>Physical State</b>          | Solid                    |
| <b>Appearance</b>              | Crystalline (powder)     |
| <b>Odour</b>                   | Odourless                |
| <b>Colour</b>                  | White                    |
| <b>pH</b>                      | No Data Available        |
| <b>Vapour Pressure</b>         | No Data Available        |
| <b>Relative Vapour Density</b> | No Data Available        |
| <b>Boiling Point</b>           | 380 °C (decomposes)      |
| <b>Melting Point</b>           | 308 °C                   |
| <b>Freezing Point</b>          | No Data Available        |
| <b>Solubility</b>              | 92.1 g/100 ml water 25°C |

|                                                                       |                                                                                                                                                                    |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Specific Gravity</b>                                               | No Data Available                                                                                                                                                  |
| <b>Flash Point</b>                                                    | No Data Available                                                                                                                                                  |
| <b>Auto Ignition Temp</b>                                             | No Data Available                                                                                                                                                  |
| <b>Evaporation Rate</b>                                               | No Data Available                                                                                                                                                  |
| <b>Bulk Density</b>                                                   | No Data Available                                                                                                                                                  |
| <b>Corrosion Rate</b>                                                 | No Data Available                                                                                                                                                  |
| <b>Decomposition Temperature</b>                                      | No Data Available                                                                                                                                                  |
| <b>Density</b>                                                        | 2.3 g/cm <sup>3</sup>                                                                                                                                              |
| <b>Specific Heat</b>                                                  | No Data Available                                                                                                                                                  |
| <b>Molecular Weight</b>                                               | 84.99 g/mol                                                                                                                                                        |
| <b>Net Propellant Weight</b>                                          | No Data Available                                                                                                                                                  |
| <b>Octanol Water Coefficient</b>                                      | No Data Available                                                                                                                                                  |
| <b>Particle Size</b>                                                  | No Data Available                                                                                                                                                  |
| <b>Partition Coefficient</b>                                          | No Data Available                                                                                                                                                  |
| <b>Saturated Vapour Concentration</b>                                 | No Data Available                                                                                                                                                  |
| <b>Vapour Temperature</b>                                             | No Data Available                                                                                                                                                  |
| <b>Viscosity</b>                                                      | No Data Available                                                                                                                                                  |
| <b>Volatile Percent</b>                                               | No Data Available                                                                                                                                                  |
| <b>VOC Volume</b>                                                     | No Data Available                                                                                                                                                  |
| <b>Additional Characteristics</b>                                     | No information available.                                                                                                                                          |
| <b>Potential for Dust Explosion</b>                                   | No information available.                                                                                                                                          |
| <b>Fast or Intensely Burning Characteristics</b>                      | No information available.                                                                                                                                          |
| <b>Flame Propagation or Burning Rate of Solid Materials</b>           | No information available.                                                                                                                                          |
| <b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b> | No information available.                                                                                                                                          |
| <b>Properties That May Initiate or Contribute to Fire Intensity</b>   | OXIDISING SUBSTANCE: Will accelerate burning when involved in a fire.                                                                                              |
| <b>Reactions That Release Gases or Vapours</b>                        | Fire/thermal decomposition may produce irritating, toxic and/or corrosive gases, including oxides of Nitrogen (NO <sub>x</sub> ), Sodium nitrite and Sodium oxide. |
| <b>Release of Invisible Flammable Vapours and Gases</b>               | The substance decomposes on heating producing nitrogen oxides and oxygen, which increases fire hazard.                                                             |

## 10. STABILITY AND REACTIVITY

|                                         |                                                                                                                                                                    |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Information</b>              | No hazardous reactions when handled and stored according to provisions.                                                                                            |
| <b>Chemical Stability</b>               | Stable under normal storage and handling conditions.                                                                                                               |
| <b>Conditions to Avoid</b>              | Keep away from heat. Take any precaution to avoid mixing with combustibles.                                                                                        |
| <b>Materials to Avoid</b>               | Incompatible/reactive with flammable, combustible and reducing agents.                                                                                             |
| <b>Hazardous Decomposition Products</b> | Fire/thermal decomposition may produce irritating, toxic and/or corrosive gases, including oxides of Nitrogen (NO <sub>x</sub> ), Sodium nitrite and Sodium oxide. |
| <b>Hazardous Polymerisation</b>         | No information available.                                                                                                                                          |

## 11. TOXICOLOGICAL INFORMATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Information</b> | <ul style="list-style-type: none"> <li>- Acute toxicity: Based on available data, the classification criteria are not met.</li> <li>- Skin corrosion/irritation: Based on available data, the classification criteria are not met. Non-irritant (Rabbit) [Equivalent to OECD TG 404; Data obtained by analogy].</li> <li>- Eye damage/irritation: Causes serious eye irritation. Irritant (Rabbit) [OECD TG 405].</li> </ul> |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- Respiratory/skin sensitisation: Based on available data, the classification criteria are not met. Not sensitising (Mouse) [OECD TG 429].
- Germ cell mutagenicity: Based on available data, the classification criteria are not met. Overall assessment of data/literature information indicates that the product is not genotoxic in vitro/in vivo.
- Carcinogenicity: Based on available data/literature information, the classification criteria are not met.
- Reproductive toxicity: Based on available data, the classification criteria are not met. At the highest dose tested, no adverse effects on sexual function, fertility or development were observed in a repeated dose toxicity study [OECD TG 422; Data obtained from chemically related substance].
- STOT (single exposure): Based on available data, the classification criteria are not met.
- STOT (repeated exposure): Based on available data, the classification criteria are not met.
- Aspiration toxicity: Based on available data, the classification criteria are not met. Physiochemical/toxicological data does not indicate a potential aspiration hazard.

#### **Acute**

|                            |                                                                                                                                           |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ingestion</b>           | Acute toxicity (Oral):<br>- LD50, Rat: >2,000 mg/kg bw [OECD TG 425; Data obtained by analogy].                                           |
| <b>Other</b>               | Acute toxicity (Dermal):<br>- LD50, Rat: >5,000 mg/kg bw [OECD TG 402; Data obtained by analogy].                                         |
| <b>Inhalation</b>          | Acute toxicity (Inhalation):<br>- LC50, Rat: >0.527 mg/L (maximum achievable concentration, 4 h) [OECD TG 403; Data obtained by analogy]. |
| <b>Carcinogen Category</b> | None                                                                                                                                      |

## **12. ECOLOGICAL INFORMATION**

|                                  |                                                                                                                                                                                                                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ecotoxicity</b>               | Aquatic toxicity:<br>- LC50, Fish (freshwater): 6,000 mg/L (96 h).<br>- LC50, Fish (marine water): 4,400 mg/L (96 h).<br>- EC50, Daphnia magna: 8,600 mg/L (24 h).<br>- EC50, Algae (several species): >1,700 mg/L (10 d).                                                                   |
| <b>Persistence/Degradability</b> | In aqueous compartments, the substance will dissociate into sodium and nitrate ions. Sodium ions are not subject to further degradation. Under anoxic conditions, nitrate is subjected to denitrification and is ultimately converted into molecular Nitrogen as part of the Nitrogen cycle. |
| <b>Mobility</b>                  | Nitrate has low potential for adsorption; Portion not taken up by plants can leach to ground water. Sodium can participate in ion exchange processes.                                                                                                                                        |
| <b>Environmental Fate</b>        | Excess nitrate leaching may enrich waters, leading to eutrophication. Prevent entry into drains and waterways.                                                                                                                                                                               |
| <b>Bioaccumulation Potential</b> | Sodium nitrate has low potential for bioaccumulation based on physio-chemical properties.                                                                                                                                                                                                    |
| <b>Environmental Impact</b>      | No Data Available                                                                                                                                                                                                                                                                            |

## **13. DISPOSAL CONSIDERATIONS**

|                                          |                                                                                                                                            |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Information</b>               | If material cannot be recycled, dispose of through a licensed waste contractor and in accordance with local/regional/national regulations. |
| <b>Special Precautions for Land Fill</b> | Contaminated packaging: Dispose of as unused product.                                                                                      |

## **14. TRANSPORT INFORMATION**

#### **Land Transport (Australia)**

ADG Code

|                             |                          |
|-----------------------------|--------------------------|
| <b>Proper Shipping Name</b> | SODIUM NITRATE           |
| <b>Class</b>                | 5.1 Oxidising Substances |
| <b>Subsidiary Risk(s)</b>   | No Data Available        |

|                          |                         |
|--------------------------|-------------------------|
| <b>EPG</b>               | 31 Oxidizing Substances |
| <b>UN Number</b>         | 1498                    |
| <b>Hazchem</b>           | 1Z                      |
| <b>Pack Group</b>        | III                     |
| <b>Special Provision</b> | No Data Available       |

### Land Transport (Malaysia)

|                             |                          |
|-----------------------------|--------------------------|
| ADR Code                    |                          |
| <b>Proper Shipping Name</b> | SODIUM NITRATE           |
| <b>Class</b>                | 5.1 Oxidising Substances |
| <b>Subsidiary Risk(s)</b>   | No Data Available        |
| <b>EPG</b>                  | 31 Oxidizing Substances  |
| <b>UN Number</b>            | 1498                     |
| <b>Hazchem</b>              | 1Z                       |
| <b>Pack Group</b>           | III                      |
| <b>Special Provision</b>    | No Data Available        |

### Land Transport (New Zealand)

|                             |                          |
|-----------------------------|--------------------------|
| NZS5433                     |                          |
| <b>Proper Shipping Name</b> | SODIUM NITRATE           |
| <b>Class</b>                | 5.1 Oxidising Substances |
| <b>Subsidiary Risk(s)</b>   | No Data Available        |
| <b>EPG</b>                  | 31 Oxidizing Substances  |
| <b>UN Number</b>            | 1498                     |
| <b>Hazchem</b>              | 1Z                       |
| <b>Pack Group</b>           | III                      |
| <b>Special Provision</b>    | No Data Available        |

### Land Transport (United States of America)

|                             |                          |
|-----------------------------|--------------------------|
| US DOT                      |                          |
| <b>Proper Shipping Name</b> | SODIUM NITRATE           |
| <b>Class</b>                | 5.1 Oxidising Substances |
| <b>Subsidiary Risk(s)</b>   | No Data Available        |
| <b>ERG</b>                  | 140 Oxidizers            |
| <b>UN Number</b>            | 1498                     |
| <b>Hazchem</b>              | 1Z                       |
| <b>Pack Group</b>           | III                      |
| <b>Special Provision</b>    | No Data Available        |

### Sea Transport

|                             |                          |
|-----------------------------|--------------------------|
| IMDG Code                   |                          |
| <b>Proper Shipping Name</b> | SODIUM NITRATE           |
| <b>Class</b>                | 5.1 Oxidising Substances |
| <b>Subsidiary Risk(s)</b>   | No Data Available        |
| <b>UN Number</b>            | 1498                     |
| <b>Hazchem</b>              | 1Z                       |
| <b>Pack Group</b>           | III                      |
| <b>Special Provision</b>    | No Data Available        |
| <b>EMS</b>                  | F-A, S-Q                 |
| <b>Marine Pollutant</b>     | No                       |

**Air Transport**  
IATA DGR

|                      |                          |
|----------------------|--------------------------|
| Proper Shipping Name | SODIUM NITRATE           |
| Class                | 5.1 Oxidising Substances |
| Subsidiary Risk(s)   | No Data Available        |
| UN Number            | 1498                     |
| Hazchem              | 1Z                       |
| Pack Group           | III                      |
| 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     | No Data Available |
| Poisons Schedule (Aust) | Not Scheduled     |

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

|               |           |
|---------------|-----------|
| Approval Code | HSR001350 |
|---------------|-----------|

**National/Regional Inventories**

|                           |                |
|---------------------------|----------------|
| Australia (AICS)          | Listed         |
| Canada (DSL)              | Not Determined |
| Canada (NDSL)             | Not Determined |
| China (IECSC)             | Not Determined |
| Europe (EINECS)           | 231-554-3      |
| 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 | NISODA1000, NISODA1001, NISODA1002, NISODA1003, NISODA1004, NISODA1005, NISODA1006, NISODA1007, NISODA1008, NISODA1009, NISODA1010, NISODA1011, NISODA1012, NISODA1013, NISODA1014, NISODA1015, NISODA1051, NISODA1500, NISODA1800, NISODA1801, NISODA1802, NISODA1803, NISODA2000, NISODA2001, NISODA2002, NISODA2003, NISODA2500, NISODA3000, NISODA3100, NISODA3400, NISODA3500, NISODA3600, NISODA3700, NISODA3800, NISODA3900, NISODA4000, NISODA5000, NISODA5001, NISODA5002, NISODA5100, NISODA5101, NISODA5102, NISODA5103, NISODA5104, NISODA5105, NISODA5106, NISODA5107, NISODA5200, NISODA5201, NISODA5202, NISODA5203, NISODA5204, NISODA5205, NISODA5206, NISODA5207, NISODA5208, NISODA5209, NISODA5210, NISODA5211, NISODA5212, NISODA5213, NISODA5214, NISODA5215, NISODA5300, NISODA5301, NISODA5302, NISODA5303, NISODA5304, NISODA5400, NISODA5401, NISODA5500, NISODA5600, NISODA5601, NISODA5602, NISODA5610, NISODA5700, NISODA5800, NISODA5900, NISODA6000, NISODA6001, NISODA6002, NISODA6100, NISODA6700, NISODA7000, NISODA8000, NISODA8001, NISODA8100, NISODA8400, NISODA8500, NISODA8501, NISODA8600, NISODA9000, NISODA9500, NISODA9600, NISODA9700, NISODA9950, NISODA9951                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Revision              | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Revision Date         | 19 Sep 2016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Key/Legend            | <p>&lt; Less Than<br/> &gt; Greater Than<br/> <b>AICS</b> Australian Inventory of Chemical Substances<br/> <b>atm</b> Atmosphere<br/> <b>CAS</b> Chemical Abstracts Service (Registry Number)<br/> <b>cm<sup>2</sup></b> Square Centimetres<br/> <b>CO<sub>2</sub></b> Carbon Dioxide<br/> <b>COD</b> Chemical Oxygen Demand<br/> <b>deg C (°C)</b> Degrees Celcius<br/> <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand<br/> <b>deg F (°F)</b> Degrees Fahrenheit<br/> <b>g</b> Grams<br/> <b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre<br/> <b>g/l</b> Grams per Litre<br/> <b>HSNO</b> Hazardous Substance and New Organism<br/> <b>IDLH</b> Immediately Dangerous to Life and Health<br/> <b>immiscible</b> Liquids are insoluble in each other.<br/> <b>inHg</b> Inch of Mercury<br/> <b>inH<sub>2</sub>O</b> Inch of Water<br/> <b>K</b> Kelvin<br/> <b>kg</b> Kilogram<br/> <b>kg/m<sup>3</sup></b> Kilograms per Cubic Metre<br/> <b>lb</b> Pound<br/> <b>LC<sub>50</sub></b> LC stands for lethal concentration. LC<sub>50</sub> 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.<br/> <b>LD<sub>50</sub></b> LD stands for Lethal Dose. LD<sub>50</sub> is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.<br/> <b>ltr</b> or <b>L</b> Litre<br/> <b>m<sup>3</sup></b> Cubic Metre<br/> <b>mbar</b> Millibar<br/> <b>mg</b> Milligram<br/> <b>mg/24H</b> Milligrams per 24 Hours<br/> <b>mg/kg</b> Milligrams per Kilogram<br/> <b>mg/m<sup>3</sup></b> Milligrams per Cubic Metre<br/> <b>Misc</b> or <b>Miscible</b> Liquids form one homogeneous liquid phase regardless of the amount of either component present.<br/> <b>mm</b> Millimetre<br/> <b>mmH<sub>2</sub>O</b> Millimetres of Water<br/> <b>mPa.s</b> Millipascals per Second<br/> <b>N/A</b> Not Applicable<br/> <b>NIOSH</b> National Institute for Occupational Safety and Health<br/> <b>NOHSC</b> National Occupational Health and Safety Commission<br/> <b>OECD</b> Organisation for Economic Co-operation and Development</p> |

**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