



## POTASSIUM NITRATE (POTASSIUM NITRATE)

Swancorp Pty Ltd

Chemwatch Hazard Alert Code: 2

Chemwatch: 1486

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Safety Data Sheet according to WHS and ADG requirements

L.GHS.AUS.EN

### SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### Product Identifier

Product name	POTASSIUM NITRATE (POTASSIUM NITRATE)
Chemical Name	potassium nitrate
Synonyms	Ikon potassium nitrate fines, Ikon potassium nitrate prill, K-N-O3, Merck AnalaR 10214 GPR 29638, niter, nitrate of potash, nitre, nitric acid, potassium salt, saltpeter, vicknite
Proper shipping name	POTASSIUM NITRATE
Chemical formula	HNO3.K
Other means of identification	Not Available
CAS number	7757-79-1

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Used as a laboratory reagent in analytical chemistry. Used in fertiliser; in toothpaste; fireworks, matches, gun powder and explosives; in glass manufacture; pickling meats; tempering steel; and tobacco treatment.
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#### Details of the supplier of the safety data sheet

Registered company name	Swancorp Pty Ltd
Address	123 Boundary Road Rocklea QLD 4106 Australia
Telephone	Not Available
Fax	+61 7 3276 8622
Website	Not Available
Email	Not Available

#### Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	1800 039 008
Other emergency telephone numbers	+61 3 9573 3112 (international)

#### CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
1800 039 008	1800 039 008	+612 9186 1132

Once connected and if the message is not in your preferred language then please dial 01

### SECTION 2 HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification [1]	Oxidizing Solid Category 3, Acute Toxicity (Oral) Category 4, Eye Irritation Category 2A, Acute Aquatic Hazard Category 3

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### Legend:

1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

### Label elements

#### GHS label elements



SIGNAL WORD **WARNING**

### Hazard statement(s)

<b>H272</b>	May intensify fire; oxidiser.
<b>H302</b>	Harmful if swallowed.
<b>H319</b>	Causes serious eye irritation.
<b>H402</b>	Harmful to aquatic life

### Precautionary statement(s) Prevention

<b>P210</b>	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
<b>P221</b>	Take any precaution to avoid mixing with combustibles/organic material.
<b>P220</b>	Keep/Store away from clothing/organic material/combustible materials.
<b>P270</b>	Do not eat, drink or smoke when using this product.
<b>P273</b>	Avoid release to the environment.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.

### Precautionary statement(s) Response

<b>P370+P378</b>	In case of fire: Use water jets for extinction.
<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.
<b>P337+P313</b>	If eye irritation persists: Get medical advice/attention.
<b>P301+P312</b>	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
<b>P330</b>	Rinse mouth.

### Precautionary statement(s) Storage

Not Applicable

### Precautionary statement(s) Disposal

<b>P501</b>	Dispose of contents/container in accordance with local regulations.
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## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

CAS No	%[weight]	Name
7757-79-1	>95	<u>potassium nitrate</u>

### Mixtures

See section above for composition of Substances

## SECTION 4 FIRST AID MEASURES

### Description of first aid measures

<b>Eye Contact</b>	If this product comes in contact with the eyes: ► Wash out immediately with fresh running water. ► Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ► Seek medical attention without delay; if pain persists or recurs seek medical attention. ► Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
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Skin Contact	If skin contact occurs: ► Immediately remove all contaminated clothing, including footwear. ► Flush skin and hair with running water (and soap if available). ► Seek medical attention in event of irritation.
Inhalation	► If dust is inhaled, remove from contaminated area. ► Encourage patient to blow nose to ensure clear passage of breathing. ► If irritation or discomfort persists seek medical attention.
Ingestion	► <b>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</b> ► For advice, contact a Poisons Information Centre or a doctor. ► Urgent hospital treatment is likely to be needed. ► In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. ► If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. ► If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.  <b>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</b> ► <b>INDUCE</b> vomiting with fingers down the back of the throat, <b>ONLY IF CONSCIOUS</b> . Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. <b>NOTE:</b> Wear a protective glove when inducing vomiting by mechanical means.

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

The toxicity of nitrates and nitrites result from their vasodilating properties and their propensity to form methaemoglobin.

- Most produce a peak effect within 30 minutes.
- Clinical signs of cyanosis appear before other symptoms because of the dark pigmentation of methaemoglobin.
- Initial attention should be directed towards improving oxygen delivery, with assisted ventilation, if necessary. Hyperbaric oxygen has not demonstrated conclusive benefits.
- Institute cardiac monitoring, especially in patients with coronary artery or pulmonary disease.
- Hypotension should respond to Trendelenburg's position and intravenous fluids; otherwise dopamine may be needed.
- Naloxone, glucose and thiamine should be given if a multiple ingestion is suspected.
- Decontaminate using Ipecac Syrup for alert patients or lavage for obtunded patients who present within 2-4 hours of ingestion.
- Symptomatic patients with methaemoglobin levels over 30% should receive methylene blue.(Cyanosis alone, is not an indication for treatment). The usual dose is 1-2 mg/kg of a 1% solution (10 mg/ml) IV over 5 minutes; repeat, using the same dose if symptoms of hypoxia fail to subside within 1 hour.

[Ellenhorn and Barceloux: Medical Toxicology]

### BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker who has been exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
1. Methaemoglobin in blood	1.5% of haemoglobin	During or end of shift	B,NS,SQ

B: Background levels occur in specimens collected from subjects **NOT** exposed

NS: Non-specific determinant; also observed after exposure to other materials

SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

#### FOR SMALL FIRE:

- USE FLOODING QUANTITIES OF WATER.
- **DO NOT** use dry chemical, CO<sub>2</sub>, foam or halogenated-type extinguishers.

#### FOR LARGE FIRE

- Flood fire area with water from a protected position

### Special hazards arising from the substrate or mixture

Fire Incompatibility	► Avoid storage with reducing agents. ► Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous
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### Advice for firefighters

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Fire Fighting	<ul style="list-style-type: none"><li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li><li>▶ Prevent, by any means available, spillage from entering drains or water course.</li><li>▶ Fight fire from a safe distance, with adequate cover.</li><li>▶ Extinguishers should be used only by trained personnel.</li><li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li><li>▶ Avoid spraying water onto liquid pools.</li><li>▶ <b>DO NOT approach containers suspected to be hot.</b></li><li>▶ Cool fire exposed containers with water spray from a protected location.</li><li>▶ If safe to do so, remove containers from path of fire.</li><li>▶ If fire gets out of control withdraw personnel and warn against entry.</li><li>▶ Equipment should be thoroughly decontaminated after use.</li></ul>
Fire/Explosion Hazard	<ul style="list-style-type: none"><li>▶ Will not burn but increases intensity of fire.</li><li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li><li>▶ Heat affected containers remain hazardous.</li><li>▶ Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition.</li><li>▶ May emit irritating, poisonous or corrosive fumes.</li></ul> <p>Decomposition may produce toxic fumes of:</p> <p>,</p> <p>nitrogen oxides (NOx)</p> <p>,</p> <p>metal oxides</p>
HAZCHEM	1Z

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none"><li>▶ Clean up all spills immediately.</li><li>▶ No smoking, naked lights, ignition sources.</li><li>▶ Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result.</li><li>▶ Avoid breathing dust or vapours and all contact with skin and eyes.</li><li>▶ Control personal contact with the substance, by using protective equipment.</li><li>▶ Contain and absorb spill with dry sand, earth, inert material or vermiculite.</li><li>▶ <b>DO NOT use sawdust as fire may result.</b></li><li>▶ Scoop up solid residues and seal in labelled drums for disposal.</li><li>▶ Neutralise/decontaminate area.</li></ul>
Major Spills	<ul style="list-style-type: none"><li>▶ Clear area of personnel and move upwind.</li><li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▶ May be violently or explosively reactive.</li><li>▶ Wear full body protective clothing with breathing apparatus.</li><li>▶ Prevent, by any means available, spillage from entering drains or water course.</li><li>▶ Consider evacuation (or protect in place).</li><li>▶ No smoking, flames or ignition sources.</li><li>▶ Increase ventilation.</li><li>▶ Contain spill with sand, earth or other clean, inert materials.</li><li>▶ <b>NEVER</b> use organic absorbents such as sawdust, paper, cloth; as fire may result.</li><li>▶ Avoid any contamination by organic matter.</li><li>▶ Use spark-free and explosion-proof equipment.</li><li>▶ Collect any recoverable product into labelled containers for possible recycling.</li><li>▶ <b>DO NOT mix fresh with recovered material.</b></li><li>▶ Collect residues and seal in labelled drums for disposal.</li><li>▶ Wash area and prevent runoff into drains.</li><li>▶ Decontaminate equipment and launder all protective clothing before storage and re-use.</li><li>▶ If contamination of drains or waterways occurs advise emergency services.</li></ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

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### Precautions for safe handling

- ▶ Avoid personal contact and inhalation of dust, mist or vapours.
- ▶ Provide adequate ventilation.
- ▶ Always wear protective equipment and wash off any spillage from clothing.
- ▶ Keep material away from light, heat, flammables or combustibles.
- ▶ Keep cool, dry and away from incompatible materials.
- ▶ Avoid physical damage to containers.
- ▶ **DO NOT** repack or return unused portions to original containers. Withdraw only sufficient amounts for immediate use.
- ▶ Use only minimum quantity required.
- ▶ Avoid using solutions of peroxides in volatile solvents. Solvent evaporation should be controlled to avoid dangerous concentration of the peroxide.
- ▶ Do NOT allow peroxides to contact iron or compounds of iron, cobalt, or copper, metal oxide salts, acids or bases.
- ▶ Do NOT use metal spatulas to handle peroxides
- ▶ Do NOT use glass containers with screw cap lids or glass stoppers.
- ▶ Store peroxides at the lowest possible temperature, consistent with their solubility and freezing point.
- ▶ CAUTION: Do NOT store liquids or solutions of peroxides at a temperature below that at which the peroxide freezes or precipitates. Peroxides in this form are extremely shock and heat-sensitive. Refrigerated storage of peroxides must ONLY be in explosion-proof units.
- ▶ The hazards and consequences of fires and explosions during synthesis and use of peroxides is widely recognised; spontaneous or induced decomposition may culminate in a variety of ways, ranging from moderate gassing to spontaneous ignition or explosion. The heat released from spontaneous decomposition of an energy-rich compound causes a rise in the surrounding temperature; the temperature will rise until thermal balance is established or until the material heats to decomposition,
- ▶ The most effective means for minimising the consequences of an accident is to limit quantities to a practical minimum. Even gram-scale explosions can be serious. Once ignited the burning of peroxides cannot be controlled and the area should be evacuated.
- ▶ Unless there is compelling reason to do otherwise, peroxide concentration should be limited to 10% (or less with vigorous reactants). Peroxide concentration is rarely as high as 1% in the reaction mixture of polymerisation or other free-radical reactions,
- ▶ Peroxides should be added slowly and cautiously to the reaction medium. This should be completed prior to heating and with good agitation.
- ▶ Addition of peroxide to the hot monomer is extremely dangerous. A violent reaction (e.g., fire or explosion) can result from inadvertent mixing of promoters (frequently used with peroxides in polymerisation systems) with full-strength peroxide
- ▶ Organic peroxides are very sensitive to contamination (especially heavy-metal compounds, metal oxide salts, alkaline materials including amines, strong acids, and many varieties of dust and dirt). This can initiate rapid, uncontrolled decomposition of peroxides and possible generation of intense heat, fire or explosion. The consequences of accidental contamination from returning withdrawn material to the storage container can be disastrous.
- ▶ When handling **NEVER** smoke, eat or drink.
- ▶ Always wash hands with soap and water after handling.
- ▶ Use only good occupational work practice.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

### Safe handling

- ▶ Store in original containers.
- ▶ Keep containers securely sealed as supplied.
- ▶ Store in a cool, well ventilated area.
- ▶ Keep dry.
- ▶ Store under cover and away from sunlight.
- ▶ Store away from flammable or combustible materials, debris and waste. Contact may cause fire or violent reaction.
- ▶ Store away from incompatible materials and foodstuff containers.
- ▶ **DO NOT** stack on wooden floors or pallets.
- ▶ Protect containers from physical damage.
- ▶ Check regularly for leaks.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

### Other information

In addition, Goods of Class 5.1, packing group III should be stored in packages and be separated from buildings, tanks, and compounds containing other dangerous goods in tanks, and from property boundaries by a distance of at least 5 metres.

### Conditions for safe storage, including any incompatibilities

- ▶ Glass container is suitable for laboratory quantities
- ▶ **DO NOT** repack. Use containers supplied by manufacturer only.

#### For low viscosity materials

- ▶ Drums and jerricans must be of the non-removable head type.
- ▶ Where a can is to be used as an inner package, the can must have a screwed enclosure.

#### For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids:

- ▶ Removable head packaging and
- ▶ cans with friction closures may be used.

Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages \*.

In addition, where inner packagings are glass and contain liquids of packing group I and II there must be sufficient inert absorbent to absorb any spillage \*.

### Suitable container

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	<p>-</p> <p>* unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.</p>
Storage incompatibility	<p>for metal nitrates:</p> <ul style="list-style-type: none"><li>▸ Segregate from heavy metals, phosphides, sodium acetate, lead nitrate, tartrates, trichloroethylene,</li><li>▸ Avoid shock and heat.</li><li>▸ Mixtures of metal nitrates with alkyl esters may explode due to the formation of unstable alkyl nitrates.</li><li>▸ Mixtures of a nitrate with phosphorous, tin(II) chloride and other reducing agents may react explosively.</li><li>▸ Mixtures containing nitrates and organic materials are potentially dangerous, especially if acidic materials or heavy metals are present.</li><li>▸ Fibrous organic material, jute, wood and similar cellulosic material can become highly combustible by nitrate impregnation</li><li>▸ Metal nitrates are incompatible with cyanides, thiocyanates, isothiocyanates and hypophosphites. Avoid reaction with the following which can cause an explosion: barium thiocyanate, boron phosphide, cyanides, sodium hypophosphite, sulfur and charcoal, powdered aluminium or aluminium oxide, sodium thiosulfate.</li><li>▸ Mixtures of metal nitrates and phosphinates may explode on heating</li><li>▸ A mixture of aluminium powder, water and metal nitrate may explode due to a self accelerating reaction.</li><li>▸ Mixtures containing nitrates, nitrites and organic materials are potentially dangerous, especially in the presence of acidic materials and heavy metals</li><li>▸ Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.</li><li>▸ These trifluorides are hypergolic oxidisers. They ignites on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.</li><li>▸ The state of subdivision may affect the results.</li><li>▸ Inorganic reducing agents react with oxidizing agents to generate heat and products that may be flammable, combustible, or otherwise reactive. Their reactions with oxidizing agents may be violent.</li><li>▸ Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic and examples of so-called redox reactions.</li><li>▸ Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous</li><li>▸ Avoid storage with reducing agents.</li></ul> <p> Segregate from reducing agents, strong acids, organic substances, combustible materials, heavy metals, phosphides, sodium acetate, lead nitrate, tartrates, trichloroethylene, shock and heat. A mixture with calcium silicide is easily ignited and burns at very high temperatures which is capable of initiating many high temperature reactions. Mixtures of potassium nitrate with: titanium, antimony, germanium or zirconium powders, antimony trisulfide, barium sulfide, calcium sulfide, arsenic disulfide, titanium disulfide, germanium monosulfide, molybdenum disulfide, powdered carbon, arsenic, white or red phosphorus, boron phosphide, copper phosphides, sodium phosphinate, sodium acetate, sodium thiosulfate, thorium dicarbide, aluminium, magnesium, sodium or iron, chromium nitride: may explode or detonate on heating, ignition or by shock.</p>

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Not Available

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
potassium nitrate	Potassium nitrate	9 mg/m3	100 mg/m3	600 mg/m3

Ingredient	Original IDLH	Revised IDLH
potassium nitrate	Not Available	Not Available

#### MATERIAL DATA

It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

**NOTE:** The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents

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- ▶ lead to permanent injury or dysfunction
- ▶ permit greater absorption of hazardous substances and
- ▶ acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

**Exposure controls**

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

**Personal protection**

- ▶ Chemical goggles.
- ▶ Full face shield may be required for supplementary but never for primary protection of eyes.
- ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

**Eye and face protection**

**Skin protection** See Hand protection below

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- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

- **DO NOT** wear cotton or cotton-backed gloves.
- **DO NOT** wear leather gloves.
- Promptly hose all spills off leather shoes or boots or ensure that such footwear is protected with PVC over-shoes.

### Body protection

See Other protection below

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Ensure there is ready access to a safety shower.

• Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.

• For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).  
• Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot and shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.

### Thermal hazards

Not Available

### Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	-	PAPR-P1 -
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-

Continued...

## POTASSIUM NITRATE (POTASSIUM NITRATE)

100+ x ES	-	Air-line*	-
		Air-line**	PAPR-P3

\* - Negative pressure demand \*\* - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- ▶ Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- ▶ The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- ▶ Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- ▶ Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- ▶ Use approved positive flow mask if significant quantities of dust becomes airborne.
- ▶ Try to avoid creating dust conditions.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Colourless odourless transparent prisms or white crystalline powder or crystals. Has a cooling, pungent saline taste. Slightly hygroscopic. Oxidising agent. Soluble in water and glycerine, insoluble in absolute alcohol. Solubility in water = 36% When tested to UNDG 34.4.2 Test 0.2 Test for oxidising liquids a 30% w/w aqueous solution was not a class 5.1 oxidiser. ref UNDGC 34.4.2.5.		
<b>Physical state</b>	Divided Solid	<b>Relative density (Water = 1)</b>	2.11
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature</b>	400
<b>Melting point / freezing point (°C)</b>	334	<b>Viscosity (cSt)</b>	Not Applicable
<b>Initial boiling point and boiling range (°C)</b>	400 (decomposes)	<b>Molecular weight (g/mol)</b>	101.11
<b>Flash point (°C)</b>	Not Applicable	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Non Volatile	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Applicable	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Applicable
<b>Lower Explosive Limit (%)</b>	Not Applicable	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Negligible	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Miscible	<b>pH as a solution (1%)</b>	7 Approx.
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable under normal handling conditions. ▶ Prolonged exposure to heat. ▶ Hazardous polymerisation will not occur.
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7

Continued...

## POTASSIUM NITRATE (POTASSIUM NITRATE)

Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

Inhaled	<p>Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.</p> <p>Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.</p> <p>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.</p>
Ingestion	<p>Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.</p> <p>The substance and/or its metabolites may bind to haemoglobin inhibiting normal uptake of oxygen. This condition, known as "methaemoglobinemia", is a form of oxygen starvation (anoxia).</p> <p>Symptoms include cyanosis (a bluish discolouration skin and mucous membranes) and breathing difficulties. Symptoms may not be evident until several hours after exposure.</p> <p>At about 15% concentration of blood methaemoglobin there is observable cyanosis of the lips, nose and earlobes.</p> <p>Symptoms may be absent although euphoria, flushed face and headache are commonly experienced. At 25-40%, cyanosis is marked but little disability occurs other than that produced on physical exertion. At 40-60%, symptoms include weakness, dizziness, lightheadedness, increasingly severe headache, ataxia, rapid shallow respiration, drowsiness, nausea, vomiting, confusion, lethargy and stupor. Above 60% symptoms include dyspnea, respiratory depression, tachycardia or bradycardia, and convulsions. Levels exceeding 70% may be fatal.</p> <p>The lethal oral dose of nitrite for adults has been variously reported to be between 0.7 and 6 g NO<sub>2</sub>- (approximately 10 to 100 mg NO<sub>2</sub>/kg). Lower doses may apply for children (especially neonates), the elderly and people with certain enzyme deficiencies. The first symptoms of oral nitrite poisoning develop within 15 to 45 minutes</p> <p>In humans, inorganic nitrates produce smooth muscle relaxation, methaemoglobinaemia and cyanosis. The primary effect of nitrite intoxication in animals is methaemoglobinaemia whilst secondary effects include vasodilation, relaxation of smooth muscle and lowering of blood pressure. Other nitrite-induced toxic effects include abdominal pain, diarrhoea, atrophied intestinal villi and apoptotic cell death in the intestinal crypts. Nitrite may also cause sudden fall in blood pressure due to its vasodilating properties. Nitrite has vasodilating properties, probably through transformation into nitric oxide (NO) or a NO-containing molecule acting as a signal factor for smooth muscle relaxation.</p> <p>Fatal poisonings in infants, resulting from ingestion of nitrates in water or spinach, have been reported.</p> <p>When sodium nitrite was administered in drinking water for 6 weeks (0.06-1%), mice showed a slight degeneration and spotty necrosis of hepatocytes and haemosiderin deposition in the liver, spleen and lymph nodes, indicating haemolysis. At 2%, mice died within 3 weeks. In rats, subject to the same treatment regime, abnormal blood and spleen colours, due to MHG, were seen in 0.5% and 1.0% treatment groups. Hepatic microsomal lipoperoxidation (as measured by malondialdehyde formation) was increased in male rats given 0.2% sodium nitrite in drinking water. Liver lysosomal enzymes (acid phosphatase and cathepsin) and superoxide dismutase activities were also increased. This data suggests that the nitrite stimulates generation of superoxide radicals in the liver causing damage to cellular and subcellular membranes. Decreased plasma vitamin E and greater reduced glutathione-per erythrocyte were also reported in male rats receiving sodium nitrite in drinking water.</p> <p>Ingestion may cause abdominal spasm, faintness, muscular spasm, vomiting, and diarrhoea. Serious poisonings are characterised by blood disorders, anaemia and nephritis.</p>
Skin Contact	<p>Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	<p>Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.</p> <p>Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the</p>

Continued...

## POTASSIUM NITRATE (POTASSIUM NITRATE)

conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung. A prime symptom is breathlessness. Lung shadows show on X-ray.

The major concern of possible long-term effects of exposure to nitrate and nitrite is associated with formation of nitroso compounds, many of which are carcinogenic. This formation may take place wherever nitrite and nitrosable compounds are present, but it is favoured by acidic conditions or the presence of some bacteria. The gastrointestinal tract and especially the stomach is regarded as the main formation site, but nitrosation reactions can also take place in an infected urinary bladder. Nitrite is mutagenic in a number of in vitro assays against microorganisms or cultured mammalian cells. Nitrates show no mutagenic activity in microbial tests under aerobic conditions. Activity has been reported under anaerobic conditions, probably due to reduction of nitrate into nitrite

**Chronic** The mutagenic effects of nitrites were observed in an in vivo and in vitro experiment using Syrian hamsters. In vivo assays have been equivocal, both positive and negative results having been reported

Exposure to sodium nitrite in drinking water resulted in an increased incidence of epithelial hyperplasia in the forestomach of male and female rats and in the glandular stomach of male mice.

There was equivocal evidence of carcinogenic activity of sodium nitrite in female B6C3F1 mice based on the positive trend in the incidences of squamous cell papillomas or carcinomas (combined) of the forestomach. There was no evidence of carcinogenic activity in male and female F344/N rats or B6C3F1 male mice exposed to 750, 1500 or 3000 ppm.

NTP Technical Report Series No. 495, May 2001

Under certain conditions, nitrites can react with secondary amines, either alone or in biological systems, to form carcinogenic nitrosamines.

Sodium nitrite (60 mg/kg) administered in drinking water to pregnant guinea pigs produced maternal anaemia and increased the incidences of abortion and foetal mortality. Administration of 2000-3000 mg/l sodium nitrite in drinking water, to pregnant rats, produced 30-53% foetal mortality. In rat dams given 0.025-0.5% in feed, sodium nitrite caused an increase in foetal and pup mortality and decreases in pre-weanling body weights.

[Chronic exposure can be harmful if material is ingested and converted to nitrites by bacterial action in the stomach.

potassium nitrate	TOXICITY	IRRITATION
	dermal (rat) LD50: >5000 mg/kg <sup>[1]</sup>	Not Available
	Oral (rat) LD50: >2000 mg/kg <sup>[1]</sup>	

**Legend:**

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.\* Value obtained from manufacturer's SDS.  
Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

Acute Toxicity	✓	Carcinogenicity	∅
Skin Irritation/Corrosion	∅	Reproductivity	∅
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	∅
Respiratory or Skin sensitisation	∅	STOT - Repeated Exposure	∅
Mutagenicity	∅	Aspiration Hazard	∅

**Legend:** ✗ – Data available but does not fill the criteria for classification  
✓ – Data required to make classification available  
∅ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
potassium nitrate	LC50	96	Fish	22.5mg/L	4
potassium nitrate	EC50	96	Algae or other aquatic plants	1181.887mg/L	3
potassium nitrate	EC50	384	Crustacea	49.116mg/L	3

**Legend:**

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Harmful to aquatic organisms.

The nitrates are of environmental concern because of their high water solubility and consequent leaching, diffusion, and environmental mobility in soil and

Continued...

## POTASSIUM NITRATE (POTASSIUM NITRATE)

water. Nitrate can contaminate groundwater to unacceptable levels. Nitrite is formed from nitrate or ammonium ion by micro-organisms in soil, water, sewage and the alimentary tract. The concern with nitrate in the environment is related to its conversion to nitrite.

Methaemoglobinemia is caused following exposure to high levels of nitrite and produces difficulties in oxygen transport in the blood. Thousands of cases involving poisoning of infants, particularly in rural areas, have been reported as a result of drinking nitrate rich well-water.

Other concerns deriving from exposure to environmental nitrates relate to the production of nitrosamines following the reaction of food nitrites and secondary amines. Other nitroso-compounds may result following reaction with nitrites and amides, ureas, carbamates and other nitrogenous compounds. Nitrosamines produce liver damage, haemorrhagic lung lesions, convulsions and coma in rats, and teratogenic effects in experimental animals.

The N-nitroso class of compounds include potent carcinogens and mutagens: induction of tumors by single doses of N-nitroso compounds testify to this.

**DO NOT discharge into sewer or waterways.**

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
potassium nitrate	LOW	LOW

### Bioaccumulative potential

Ingredient	Bioaccumulation
potassium nitrate	LOW (LogKOW = 0.209)

### Mobility in soil

Ingredient	Mobility
potassium nitrate	LOW (KOC = 14.3)

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"><li>▶ Containers may still present a chemical hazard/ danger when empty.</li><li>▶ Return to supplier for reuse/ recycling if possible.</li></ul> <p>Otherwise:</p> <ul style="list-style-type: none"><li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li><li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li></ul> <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"><li>▶ Reduction</li><li>▶ Reuse</li><li>▶ Recycling</li><li>▶ Disposal (if all else fails)</li></ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <p>Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should be consulted.</p> <ul style="list-style-type: none"><li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li><li>▶ It may be necessary to collect all wash water for treatment before disposal.</li><li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li><li>▶ Where in doubt contact the responsible authority.</li></ul> <p>For small quantities of oxidising agent:</p> <ul style="list-style-type: none"><li>▶ Cautiously acidify a 3% solution to pH 2 with sulfuric acid.</li><li>▶ Gradually add a 50% excess of sodium bisulfite solution with stirring.</li><li>▶ Add a further 10% sodium bisulfite.</li><li>▶ If no further reaction occurs (as indicated by a rise in temperature) cautiously add more acid.</li><li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li><li>▶ Consult State Land Waste Management Authority for disposal.</li><li>▶ Bury residue in an authorised landfill.</li><li>▶ Recycle containers if possible, or dispose of in an authorised landfill.</li></ul>

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

Continued...

## POTASSIUM NITRATE (POTASSIUM NITRATE)



<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	1Z

### Land transport (ADG)

<b>UN number</b>	1486
<b>UN proper shipping name</b>	POTASSIUM NITRATE
<b>Transport hazard class(es)</b>	Class 5.1 Subrisk Not Applicable
<b>Packing group</b>	III
<b>Environmental hazard</b>	Not Applicable
<b>Special precautions for user</b>	Special provisions Not Applicable Limited quantity 5 kg

### Air transport (ICAO-IATA / DGR)

<b>UN number</b>	1486
<b>UN proper shipping name</b>	Potassium nitrate
<b>Transport hazard class(es)</b>	ICAO/IATA Class 5.1 ICAO / IATA Subrisk Not Applicable ERG Code 5L
<b>Packing group</b>	III
<b>Environmental hazard</b>	Not Applicable
<b>Special precautions for user</b>	Special provisions Not Applicable Cargo Only Packing Instructions 563 Cargo Only Maximum Qty / Pack 100 kg Passenger and Cargo Packing Instructions 559 Passenger and Cargo Maximum Qty / Pack 25 kg Passenger and Cargo Limited Quantity Packing Instructions Y546 Passenger and Cargo Limited Maximum Qty / Pack 10 kg

### Sea transport (IMDG-Code / GGVSee)

<b>UN number</b>	1486
<b>UN proper shipping name</b>	POTASSIUM NITRATE
<b>Transport hazard class(es)</b>	IMDG Class 5.1 IMDG Subrisk Not Applicable
<b>Packing group</b>	III
<b>Environmental hazard</b>	Not Applicable
<b>Special precautions for user</b>	EMS Number F-A, S-Q Special provisions 964 967 Limited Quantities 5 kg

### Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Continued...

## POTASSIUM NITRATE (POTASSIUM NITRATE)

### SECTION 15 REGULATORY INFORMATION

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

##### POTASSIUM NITRATE(7757-79-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (potassium nitrate)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECL	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
<b>Legend:</b>	<i>Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)</i>

### SECTION 16 OTHER INFORMATION

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net](http://www.chemwatch.net)

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average  
PC—STEL: Permissible Concentration-Short Term Exposure Limit  
IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit.  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

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