

# Nitrophoska Perfect (15-2.2-16.6-9S+TE)

## Nitro Ag Pty Ltd

Chemwatch Hazard Alert Code: 2

Chemwatch: 5693-89

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Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

S.GHS.AUS.EN.E

### SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### Product Identifier

|                               |   |
|-------------------------------|---|
| Product name                  | Nitrophoska Perfect (15-2.2-16.6-9S+TE) |
| Chemical Name                 | Not Applicable                          |
| Synonyms                      | Not Available                           |
| Chemical formula              | Not Applicable                          |
| Other means of identification | Not Available                           |

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

|                          |   |
|--------------------------|---|
| Relevant identified uses | Fertilisers Industrial Professional.<br>Use according to manufacturer's directions. |
|--------------------------|---|

#### Details of the manufacturer or supplier of the safety data sheet

|                         |  |
|-------------------------|--|
| Registered company name | Nitro Ag Pty Ltd   |
| Address                 | Innovation Hub, c/o CHEC Campus, 1 Doug Knight Dr NSW 2450 Australia |
| Telephone               | +61 499 847 706  |
| Fax                     | Not Available  |
| Website                 | <a href="https://nitroag.com.au/">https://nitroag.com.au/</a>        |
| Email                   | Not Available  |

#### Emergency telephone number


|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Association / Organisation          | CHEMWATCH EMERGENCY RESPONSE (24/7) |
| Emergency telephone number(s)       | +61 1800 951 288 (ID#: 5693-89)     |
| Other emergency telephone number(s) | +61 3 9573 3188                     |

### SECTION 2 Hazards identification

#### Classification of the substance or mixture

|                               |   |
|-------------------------------|---|
| Poisons Schedule              | Not Applicable  |
| Classification <sup>[1]</sup> | Serious Eye Damage/Eye Irritation Category 2A   |
| Legend:                       | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

#### Label elements

|                     |   |
|---------------------|---|
| Hazard pictogram(s) |  |
| Signal word         | Warning   |

#### Hazard statement(s)

|      |                                |
|------|--------------------------------|
| H319 | Causes serious eye irritation. |
|------|--------------------------------|

#### Precautionary statement(s) Prevention

|      |  |
|------|--|
| P280 | Wear protective gloves, protective clothing, eye protection and face protection. |
| P264 | Wash all exposed external body areas thoroughly after handling.                  |

#### Precautionary statement(s) Response

|                       |  |
|-----------------------|--|
| <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.  |

**Precautionary statement(s) Storage**

Not Applicable

**Precautionary statement(s) Disposal**

Not Applicable

**SECTION 3 Composition / information on ingredients****Substances**

See section below for composition of Mixtures

**Mixtures**

| CAS No         | %[weight]  | Name                                |
|----------------|--|-------------------------------------|
| 6484-52-2      | 15   | <u>ammonium nitrate</u>             |
| 7758-23-8      | 2.2  | <u>calcium phosphate, monobasic</u> |
| 7778-80-5      | 16.6   | <u>potassium sulfate</u>            |
| 7778-18-9      | 1.5  | <u>calcium sulfate</u>              |
| 7487-88-9      | 1.2  | <u>magnesium sulfate, anhydrous</u> |
| 12007-56-6     | traces   | <u>calcium tetraborate</u>          |
| 1314-13-2      | traces   | <u>zinc oxide</u>                   |
| <b>Legend:</b> | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available |                                     |

**SECTION 4 First aid measures****Description of first aid measures**

|                     |  |
|---------------------|--|
| <b>Eye Contact</b>  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ 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.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>  |
| <b>Skin Contact</b> | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>  |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>  |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul> |

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

Treat symptomatically.

**SECTION 5 Firefighting measures****Extinguishing media**

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

**Special hazards arising from the substrate or mixture**

|                             |  |
|-----------------------------|--|
| <b>Fire Incompatibility</b> | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|--|

**Advice for firefighters**

|                              |  |
|------------------------------|--|
| <b>Fire Fighting</b>         | <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.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>▶ <b>DO NOT</b> approach containers suspected to be hot.</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>▶ Equipment should be thoroughly decontaminated after use.</li> </ul> |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.</li> <li>▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary</li> </ul>  |

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## Nitrophoska Perfect (15-2.2-16.6-9S+TE)

|         |   |
|---------|---|
|         | <p>explosions).</p> <ul style="list-style-type: none"> <li>▶ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.</li> <li>▶ In the same way as gases and vapours, dusts in the form of a cloud are only ignitable over a range of concentrations; in principle, the concepts of lower explosive limit (LEL) and upper explosive limit (UEL) are applicable to dust clouds but only the LEL is of practical use; - this is because of the inherent difficulty of achieving homogeneous dust clouds at high temperatures (for dusts the LEL is often called the "Minimum Explosible Concentration", MEC).</li> <li>▶ When processed with flammable liquids/vapors/mists, ignitable (hybrid) mixtures may be formed with combustible dusts. Ignitable mixtures will increase the rate of explosion pressure rise and the Minimum Ignition Energy (the minimum amount of energy required to ignite dust clouds - MIE) will be lower than the pure dust in air mixture. The Lower Explosive Limit (LEL) of the vapour/dust mixture will be lower than the individual LELs for the vapors/mists or dusts.</li> <li>▶ A dust explosion may release of large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.</li> <li>▶ Usually the initial or primary explosion takes place in a confined space such as plant or machinery, and can be of sufficient force to damage or rupture the plant. If the shock wave from the primary explosion enters the surrounding area, it will disturb any settled dust layers, forming a second dust cloud, and often initiate a much larger secondary explosion. All large scale explosions have resulted from chain reactions of this type.</li> <li>▶ Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.</li> <li>▶ Build-up of electrostatic charge may be prevented by bonding and grounding.</li> <li>▶ Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.</li> <li>▶ All movable parts coming in contact with this material should have a speed of less than 1-meter/sec.</li> <li>▶ A sudden release of statically charged materials from storage or process equipment, particularly at elevated temperatures and/ or pressure, may result in ignition especially in the absence of an apparent ignition source.</li> <li>▶ One important effect of the particulate nature of powders is that the surface area and surface structure (and often moisture content) can vary widely from sample to sample, depending of how the powder was manufactured and handled; this means that it is virtually impossible to use flammability data published in the literature for dusts (in contrast to that published for gases and vapours).</li> <li>▶ Autoignition temperatures are often quoted for dust clouds (minimum ignition temperature (MIT)) and dust layers (layer ignition temperature (LIT)); LIT generally falls as the thickness of the layer increases.</li> </ul> <p>Combustion products include:<br/> carbon monoxide (CO)<br/> carbon dioxide (CO<sub>2</sub>)<br/> hydrogen fluoride<br/> nitrogen oxides (NO<sub>x</sub>)<br/> phosphorus oxides (PO<sub>x</sub>)<br/> sulfur oxides (SO<sub>x</sub>)<br/> silicon dioxide (SiO<sub>2</sub>)<br/> metal oxides<br/> other pyrolysis products typical of burning organic material.<br/> May emit poisonous fumes.<br/> May emit corrosive fumes.</p> |
| HAZCHEM | Not Applicable  |

## 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>▶ Remove all ignition sources.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Use dry clean up procedures and avoid generating dust.</li> <li>▶ Place in a suitable, labelled container for waste disposal.</li> </ul>   |
| Major Spills | <p>Moderate hazard.</p> <ul style="list-style-type: none"> <li>▶ <b>CAUTION:</b> Advise personnel in area.</li> <li>▶ Alert Emergency Services and tell them location and nature of hazard.</li> <li>▶ Control personal contact by wearing protective clothing.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Recover product wherever possible.</li> <li>▶ <b>IF DRY:</b> Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. <b>IF WET:</b> Vacuum/shovel up and place in labelled containers for disposal.</li> <li>▶ <b>ALWAYS:</b> Wash area down with large amounts of water and prevent runoff into drains.</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

## Precautions for safe handling

|               |  |
|---------------|--|
| Safe handling | <ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ <b>DO NOT allow material to contact humans, exposed food or food utensils.</b></li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ <b>When handling, DO NOT eat, drink or smoke.</b></li> <li>▶ Keep containers securely sealed when not in use.</li> <li>▶ Avoid physical damage to containers.</li> <li>▶ Always wash hands with soap and water after handling.</li> </ul> |
|---------------|--|

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## Nitrophoska Perfect (15-2.2-16.6-9S+TE)

|                          |  |
|--------------------------|--|
|                          | <ul style="list-style-type: none"> <li>▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>▶ Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> <li>▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions)</li> <li>▶ Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.</li> <li>▶ Establish good housekeeping practices.</li> <li>▶ Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.</li> <li>▶ Use continuous suction at points of dust generation to capture and minimise the accumulation of dusts. Particular attention should be given to overhead and hidden horizontal surfaces to minimise the probability of a "secondary" explosion. According to NFPA Standard 654, dust layers 1/32 in.(0.8 mm) thick can be sufficient to warrant immediate cleaning of the area.</li> <li>▶ Do not use air hoses for cleaning.</li> <li>▶ Minimise dry sweeping to avoid generation of dust clouds. Vacuum dust-accumulating surfaces and remove to a chemical disposal area. Vacuums with explosion-proof motors should be used.</li> <li>▶ Control sources of static electricity. Dusts or their packages may accumulate static charges, and static discharge can be a source of ignition.</li> <li>▶ Solids handling systems must be designed in accordance with applicable standards (e.g. NFPA including 654 and 77) and other national guidance.</li> <li>▶ Do not empty directly into flammable solvents or in the presence of flammable vapors.</li> <li>▶ The operator, the packaging container and all equipment must be grounded with electrical bonding and grounding systems. Plastic bags and plastics cannot be grounded, and antistatic bags do not completely protect against development of static charges.</li> </ul> <p>Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.</p> <ul style="list-style-type: none"> <li>▶ <b>Do NOT cut, drill, grind or weld such containers.</b></li> <li>▶ In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.</li> </ul> |
| <b>Other information</b> | <ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry area protected from environmental extremes.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> <li>▶ Protect containers against physical damage and check regularly for leaks.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul> <p>For major quantities:</p> <ul style="list-style-type: none"> <li>▶ Consider storage in bunded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).</li> <li>▶ Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.</li> </ul>  |

## Conditions for safe storage, including any incompatibilities

|                                |  |
|--------------------------------|--|
| <b>Suitable container</b>      | <ul style="list-style-type: none"> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul> |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents, bases and strong reducing agents.</li> <li>▶ Avoid strong acids, bases.</li> </ul>      |

## SECTION 8 Exposure controls / personal protection

## Control parameters

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

| Source                       | Ingredient      | Material name     | TWA      | STEL          | Peak          | Notes  |
|------------------------------|-----------------|-------------------|----------|---------------|---------------|--|
| Australia Exposure Standards | calcium sulfate | Calcium sulphate  | 10 mg/m3 | Not Available | Not Available | (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica. |
| Australia Exposure Standards | zinc oxide      | Zinc oxide (dust) | 10 mg/m3 | Not Available | Not Available | (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica. |
| Australia Exposure Standards | zinc oxide      | Zinc oxide (fume) | 5 mg/m3  | 10 mg/m3      | Not Available | Not Available  |

| Ingredient                   | Original IDLH | Revised IDLH  |
|------------------------------|---------------|---------------|
| ammonium nitrate             | Not Available | Not Available |
| calcium phosphate, monobasic | Not Available | Not Available |
| potassium sulfate            | Not Available | Not Available |
| calcium sulfate              | Not Available | Not Available |
| magnesium sulfate, anhydrous | Not Available | Not Available |
| calcium tetraborate          | Not Available | Not Available |
| zinc oxide                   | 500 mg/m3     | Not Available |

## Exposure controls

|   |  |
|---|--|
| <b>Appropriate engineering controls</b> | <p>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:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <ul style="list-style-type: none"> <li>▶ Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.</li> <li>▶ Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.</li> </ul> |
|---|--|

## Nitrophoska Perfect (15-2.2-16.6-9S+TE)

- ▶ If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:
  - (a): particle dust respirators, if necessary, combined with an absorption cartridge;
  - (b): filter respirators with absorption cartridge or canister of the right type;
  - (c): fresh-air hoods or masks

- ▶ Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding.

- ▶ Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to efficiently remove the contaminant.

| Type of Contaminant:   | Air Speed:                   |
|--|------------------------------|
| 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 ft/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 ft/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 4-10 m/s (800-2000 ft/min) for extraction of crusher dusts generated 2 metres 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.

#### Individual protection measures, such as personal protective equipment



#### Eye and face protection

- ▶ Safety glasses with side shields.
- ▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- ▶ 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].

#### Skin protection

See Hand protection below

#### Hands/feet protection

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 moisturiser 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.

As defined in ASTM F-739-96 in any application, gloves are rated as:

- Excellent when breakthrough time > 480 min
- Good when breakthrough time > 20 min
- Fair when breakthrough time < 20 min
- Poor when glove material degrades

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.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- ▶ polychloroprene.
- ▶ nitrile rubber.
- ▶ butyl rubber.
- ▶ fluorocautchouc.

|                         |  |
|-------------------------|--|
|                         | <ul style="list-style-type: none"> <li>▶ polyvinyl chloride.</li> <li>Gloves should be examined for wear and/ or degradation constantly.</li> </ul>                        |
| <b>Body protection</b>  | See Other protection below   |
| <b>Other protection</b> | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C apron.</li> <li>▶ Barrier cream.</li> <li>▶ Skin cleansing cream.</li> <li>▶ Eye wash unit.</li> </ul> |

### Respiratory protection

- 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.
  - Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
  - Use approved positive flow mask if significant quantities of dust becomes airborne.
  - Try to avoid creating dust conditions.
- Class P2 particulate filters are used for protection against mechanically and thermally generated particulates or both. P2 is a respiratory filter rating under various international standards, Filters at least 94% of airborne particles Suitable for:
- Relatively small particles generated by mechanical processes eg. grinding, cutting, sanding, drilling, sawing.
  - Sub-micron thermally generated particles e.g. welding fumes, fertilizer and bushfire smoke.
  - Biologically active airborne particles under specified infection control applications e.g. viruses, bacteria, COVID-19, SARS

## SECTION 9 Physical and chemical properties

### Information on basic physical and chemical properties

|   |  |  |                      |
|---|--|--|----------------------|
| <b>Appearance</b>                                     | Solid brown granules with none to slight odor; mixes with water. |  |                      |
| <b>Physical state</b>                                 | Divided Solid  | <b>Relative density (Water = 1)</b>                        | Not Available        |
| <b>Odour</b>  | Slight   | <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 Available  | <b>Decomposition temperature (°C)</b>                      | Not Available        |
| <b>Melting point / freezing point (°C)</b>            | Not Available  | <b>Viscosity (cSt)</b>                                     | Not Available        |
| <b>Initial boiling point and boiling range (°C)</b>   | Not Available  | <b>Molecular weight (g/mol)</b>                            | Not Available        |
| <b>Flash point (°C)</b>                               | Not Available  | <b>Taste</b>   | Not Available        |
| <b>Evaporation rate</b>                               | Not Available  | <b>Explosive properties</b>                                | Not Available        |
| <b>Flammability</b>                                   | Not Applicable   | <b>Oxidising properties</b>                                | Not Available        |
| <b>Upper Explosive Limit (%)</b>                      | Not Available  | <b>Surface Tension (dyn/cm or mN/m)</b>                    | Not Applicable       |
| <b>Lower Explosive Limit (%)</b>                      | Not Available  | <b>Volatile Component (%vol)</b>                           | Not Available        |
| <b>Vapour pressure (kPa)</b>                          | Not Available  | <b>Gas group</b>   | Not Available        |
| <b>Solubility in water</b>                            | Not Available  | <b>pH as a solution (1%)</b>                               | 5.1 (100 g/l @ 20 C) |
| <b>Vapour density (Air = 1)</b>                       | Not Available  | <b>VOC g/L</b>   | Not Available        |
| <b>Heat of Combustion (kJ/g)</b>                      | Not Available  | <b>Ignition Distance (cm)</b>                              | Not Available        |
| <b>Flame Height (cm)</b>                              | Not Available  | <b>Flame Duration (s)</b>                                  | Not Available        |
| <b>Enclosed Space Ignition Time Equivalent (s/m3)</b> | Not Available  | <b>Enclosed Space Ignition Deflagration Density (g/m3)</b> | Not Available        |

## SECTION 10 Stability and reactivity

|   |  |
|---|--|
| <b>Reactivity</b>                         | See section 7  |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | See section 7  |
| <b>Conditions to avoid</b>                | See section 7  |
| <b>Incompatible materials</b>             | See section 7  |
| <b>Hazardous decomposition products</b>   | See section 5  |

## SECTION 11 Toxicological information

### Information on toxicological effects

|                          |   |
|--------------------------|---|
| <b>a) Acute Toxicity</b> | Based on available data, the classification criteria are not met. |
|--------------------------|---|

|   |  |
|---|--|
| <b>b) Skin Irritation/Corrosion</b>         | Based on available data, the classification criteria are not met.                    |
| <b>c) Serious Eye Damage/Irritation</b>     | There is sufficient evidence to classify this material as eye damaging or irritating |
| <b>d) Respiratory or Skin sensitisation</b> | Based on available data, the classification criteria are not met.                    |
| <b>e) Mutagenicity</b>                      | Based on available data, the classification criteria are not met.                    |
| <b>f) Carcinogenicity</b>                   | Based on available data, the classification criteria are not met.                    |
| <b>g) Reproductivity</b>                    | Based on available data, the classification criteria are not met.                    |
| <b>h) STOT - Single Exposure</b>            | Based on available data, the classification criteria are not met.                    |
| <b>i) STOT - Repeated Exposure</b>          | Based on available data, the classification criteria are not met.                    |
| <b>j) Aspiration Hazard</b>                 | Based on available data, the classification criteria are not met.                    |

|                     |  |
|---------------------|--|
| <b>Inhaled</b>      | The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.<br>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.<br>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. |
| <b>Ingestion</b>    | Accidental ingestion of the material may be damaging to the health of the individual.  |
| <b>Skin Contact</b> | Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.<br>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.<br>Open cuts, abraded or irritated skin should not be exposed to this material<br>Entry into the blood-stream, through, for example, cuts, abrasions 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.  |
| <b>Eye</b>          | This material can cause eye irritation and damage in some persons.   |
| <b>Chronic</b>      | This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.<br>There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.<br>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.<br>There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.<br>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.  |

| Nitrophoska Perfect (15-2.2-16.6-9S+TE) | TOXICITY   | IRRITATION  |
|---|--|---|
|   |  | Not Available   |
| ammonium nitrate                        | TOXICITY   | IRRITATION  |
|   | dermal (rat) LD50: >5000 mg/kg <sup>[1]</sup>      | Eye: adverse effect observed (irritating) <sup>[1]</sup>          |
|   | Inhalation (Rat) LC50: >88.8 mg/l4h <sup>[2]</sup> | Skin: no adverse effect observed (not irritating) <sup>[1]</sup>  |
|   | Oral (Rat) LD50: 2217 mg/kg <sup>[2]</sup>         |   |
| calcium phosphate, monobasic            | TOXICITY   | IRRITATION  |
|   | Dermal (rabbit) LD50: >7940 mg/kg <sup>[2]</sup>   | Eye: adverse effect observed (irreversible damage) <sup>[1]</sup> |
|   | Inhalation (Rat) LC50: >2.6 mg/L4h <sup>[2]</sup>  | Skin: no adverse effect observed (not irritating) <sup>[1]</sup>  |
|   | Oral (Rat) LD50: 7100 mg/kg <sup>[2]</sup>         |   |
| potassium sulfate                       | TOXICITY   | IRRITATION  |
|   | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>      | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>   |
|   | Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup>        | Skin: no adverse effect observed (not irritating) <sup>[1]</sup>  |
| calcium sulfate                         | TOXICITY   | IRRITATION  |
|   | Inhalation (Rat) LC50: >3.26 mg/l4h <sup>[1]</sup> | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>   |
|   | Oral (Rat) LD50: >1581 mg/kg <sup>[1]</sup>        | Skin: no adverse effect observed (not irritating) <sup>[1]</sup>  |
| magnesium sulfate, anhydrous            | TOXICITY   | IRRITATION  |
|   | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>      | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>   |
|   | Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup>        | Skin: no adverse effect observed (not irritating) <sup>[1]</sup>  |
| calcium tetraborate                     | TOXICITY   | IRRITATION  |
|   | Oral (Rat) LD50: 5600 mg/kg <sup>[2]</sup>         | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>   |
|   |  | Skin: no adverse effect observed (not irritating) <sup>[1]</sup>  |
| zinc oxide                              | TOXICITY   | IRRITATION  |
|   | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>      | Eye (Rodent - rabbit): 500mg/24H - Mild                           |
|   | Inhalation (Rat) LC50: >1.79 mg/l4h <sup>[1]</sup> | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>   |

## Nitrophoska Perfect (15-2.2-16.6-9S+TE)

|  |   |  |
|--|---|--|
|  | Oral (Rat) LD50: >5000 mg/kg <sup>[1]</sup> | Skin (Human): 300ug/3D (intermittent) - Mild                     |
|  |   | Skin (Rodent - rabbit): 500mg/24H - Mild                         |
|  |   | Skin: no adverse effect observed (not irritating) <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

|   |   |
|---|---|
| <b>POTASSIUM SULFATE</b>                                  | For sodium sulfate:<br>The acute toxicity of sodium sulfate has not been established, but existing data indicate very low acute toxicity. Very high doses cause severe diarrhea. Sodium sulfate is not irritating to the skin, and only slightly irritating to the eyes. It is highly unlikely to cause sensitizing effects.<br>There is no data regarding genetic toxicity except for a single negative test. There is no data regarding cancer-causing potential or reproductive toxicity.  |
| <b>CALCIUM SULFATE</b>                                    | Gypsum (calcium sulfate dehydrate) irritates the skin, eye, mucous membranes, and airways. A series of studies involving Gypsum industry workers in Poland reported chronic, non-specific airways diseases.<br>Repeat dose toxicity: Examination of workers at a gypsum manufacturing plant found restrictive defects on long-function tests in those who were chronically exposed to gypsum dust.<br>Synergistic/antagonistic effects: Gypsum appears to be protective on quartz toxicity in animal testing. On the other hand, it tended to aggravate tuberculosis in animals.<br>Cytotoxicity: Tests results regarding cytotoxicity have been negative.<br>Cancer-causing potential: Tests involving animals produced mixed results; no causal relationship between gypsum and tumour formation was found.<br>Genetic toxicity: Test on bacterial cells have shown negative results.<br>Developmental toxicity: In animal testing, developmental toxicity was not seen.  |
| <b>MAGNESIUM SULFATE, ANHYDROUS</b>                       | Intravenous (woman) LDLo: 80 mg/kg/2m-l   |
| <b>ZINC OXIDE</b>   | The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.  |
| <b>CALCIUM PHOSPHATE, MONOBASIC &amp; CALCIUM SULFATE</b> | Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production. |

|  |   |                                 |   |
|--|---|---------------------------------|---|
| <b>Acute Toxicity</b>                    | ✘ | <b>Carcinogenicity</b>          | ✘ |
| <b>Skin Irritation/Corrosion</b>         | ✘ | <b>Reproductivity</b>           | ✘ |
| <b>Serious Eye Damage/Irritation</b>     | ✔ | <b>STOT - Single Exposure</b>   | ✘ |
| <b>Respiratory or Skin sensitisation</b> | ✘ | <b>STOT - Repeated Exposure</b> | ✘ |
| <b>Mutagenicity</b>                      | ✘ | <b>Aspiration Hazard</b>        | ✘ |

**Legend:** ✘ – Data either not available or does not fill the criteria for classification  
✔ – Data available to make classification

## SECTION 12 Ecological information

## Toxicity

| Nitrophoska Perfect (15-2.2-16.6-9S+TE) | Endpoint  | Test Duration (hr) | Species                       | Value            | Source        |
|---|-----------|--------------------|-------------------------------|------------------|---------------|
|   |           | Not Available      | Not Available                 | Not Available    | Not Available |
| ammonium nitrate                        | Endpoint  | Test Duration (hr) | Species                       | Value            | Source        |
|   | EC50      | 48h                | Crustacea                     | 490mg/l          | 2             |
|   | LC50      | 96h                | Fish                          | 48.184-59.63mg/L | 4             |
|   | NOEC(ECx) | 480h               | Fish                          | 0.003mg/l        | 4             |
| calcium phosphate, monobasic            | Endpoint  | Test Duration (hr) | Species                       | Value            | Source        |
|   | EC50      | 48h                | Crustacea                     | >2.9mg/l         | 2             |
|   | NOEC(ECx) | 1848h              | Algae or other aquatic plants | 0.001mg/L        | 4             |
|   | EC50      | 72h                | Algae or other aquatic plants | >4.4mg/l         | 2             |
|   | LC50      | 96h                | Fish                          | >13.5mg/l        | 2             |
| potassium sulfate                       | Endpoint  | Test Duration (hr) | Species                       | Value            | Source        |
|   | EC50      | 48h                | Crustacea                     | 890mg/l          | 1             |
|   | NOEC(ECx) | 1h                 | Algae or other aquatic plants | 0.014mg/L        | 4             |
|   | EC50      | 72h                | Algae or other aquatic plants | 1430-2900mg/l    | 2             |
|   | EC50      | 96h                | Algae or other aquatic plants | 1742.5mg/L       | 4             |
|   | LC50      | 96h                | Fish                          | 510-880mg/l      | 4             |

Continued...

## Nitrophoska Perfect (15-2.2-16.6-9S+TE)

|                | Endpoint   | Test Duration (hr) | Species                       | Value                         | Source          |
|----------------|--|--------------------|-------------------------------|-------------------------------|-----------------|
|                | calcium sulfate  | NOEC(ECx)          | 0.25h                         | Fish                          | 75mg/l          |
| EC50           |  | 72h                | Algae or other aquatic plants | >79mg/l                       | 2               |
| EC50           |  | 96h                | Algae or other aquatic plants | 3200mg/L                      | 4               |
| LC50           |  | 96h                | Fish                          | >79mg/l                       | 2               |
|                | Endpoint   | Test Duration (hr) | Species                       | Value                         | Source          |
|                | magnesium sulfate, anhydrous   | EC50               | 48h                           | Crustacea                     | 266.4-417.3mg/l |
| EC0(ECx)       |  | 72h                | Algae or other aquatic plants | 220mg/l                       | 1               |
| EC50           |  | 72h                | Algae or other aquatic plants | 2700mg/l                      | 1               |
| LC50           |  | 96h                | Fish                          | 33-50mg/l                     | 4               |
|                | Endpoint   | Test Duration (hr) | Species                       | Value                         | Source          |
|                | calcium tetraborate  | EC50               | 72h                           | Algae or other aquatic plants | >100mg/l        |
| EC10(ECx)      |  | 72h                | Algae or other aquatic plants | 79mg/l                        | 2               |
|                | Endpoint   | Test Duration (hr) | Species                       | Value                         | Source          |
|                | zinc oxide   | BCF                | 1344h                         | Fish                          | 19-110          |
| EC50           |  | 48h                | Crustacea                     | 0.105mg/L                     | 2               |
| EC50           |  | 72h                | Algae or other aquatic plants | 0.022mg/L                     | 2               |
| ErC50          |  | 72h                | Algae or other aquatic plants | 0.62mg/l                      | 2               |
| EC50           |  | 96h                | Algae or other aquatic plants | 0.042mg/L                     | 2               |
| EC10(ECx)      |  | 168h               | Algae or other aquatic plants | 0.003mg/L                     | 2               |
| LC50           |  | 96h                | Fish                          | 0.102mg/L                     | 2               |
| <b>Legend:</b> | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 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 |                    |                               |                               |                 |

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

#### Persistence and degradability

| Ingredient                   | Persistence: Water/Soil | Persistence: Air |
|------------------------------|-------------------------|------------------|
| calcium sulfate              | HIGH                    | HIGH             |
| magnesium sulfate, anhydrous | HIGH                    | HIGH             |

#### Bioaccumulative potential

| Ingredient                   | Bioaccumulation   |
|------------------------------|-------------------|
| calcium sulfate              | LOW (BCF = 3.162) |
| magnesium sulfate, anhydrous | LOW (BCF = 3.162) |
| zinc oxide                   | LOW (BCF = 217)   |

#### Mobility in soil

| Ingredient                   | Mobility              |
|------------------------------|-----------------------|
| calcium sulfate              | LOW (Log KOC = 6.124) |
| magnesium sulfate, anhydrous | LOW (Log KOC = 6.124) |

### SECTION 13 Disposal considerations

#### Waste treatment methods

|                                     |  |
|-------------------------------------|--|
| <b>Product / Packaging disposal</b> | <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. 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> |
|-------------------------------------|--|

### SECTION 14 Transport information

#### Labels Required

|                         |                |
|-------------------------|----------------|
| <b>Marine Pollutant</b> | NO             |
| <b>HAZCHEM</b>          | Not Applicable |

**Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

#### 14.7. Maritime transport in bulk according to IMO instruments

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

Not Applicable

##### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product name                 | Group         |
|------------------------------|---------------|
| ammonium nitrate             | Not Available |
| calcium phosphate, monobasic | Not Available |
| potassium sulfate            | Not Available |
| calcium sulfate              | Not Available |
| magnesium sulfate, anhydrous | Not Available |
| calcium tetraborate          | Not Available |
| zinc oxide                   | Not Available |

##### 14.7.3. Transport in bulk in accordance with the IGC Code

| Product name                 | Ship Type     |
|------------------------------|---------------|
| ammonium nitrate             | Not Available |
| calcium phosphate, monobasic | Not Available |
| potassium sulfate            | Not Available |
| calcium sulfate              | Not Available |
| magnesium sulfate, anhydrous | Not Available |
| calcium tetraborate          | Not Available |
| zinc oxide                   | Not Available |

## SECTION 15 Regulatory information

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

#### ammonium nitrate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2A: Probably carcinogenic to humans

#### calcium phosphate, monobasic is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

#### potassium sulfate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

#### calcium sulfate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

#### magnesium sulfate, anhydrous is found on the following regulatory lists

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 3

Australian Inventory of Industrial Chemicals (AIIC)

FEI Equine Prohibited Substances List - Controlled Medication

FEI Equine Prohibited Substances List (EPSL)

#### calcium tetraborate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4

Australian Inventory of Industrial Chemicals (AIIC)

#### zinc oxide is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4

Australian Inventory of Industrial Chemicals (AIIC)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

### Additional Regulatory Information

Not Applicable

### National Inventory Status

## Nitrophoska Perfect (15-2.2-16.6-9S+TE)

| National Inventory                              | Status  |
|---|---|
| Australia - AIIC / Australia Non-Industrial Use | Yes   |
| Canada - DSL                                    | No (calcium tetraborate)  |
| Canada - NDSL                                   | No (calcium phosphate, monobasic; potassium sulfate; calcium sulfate; magnesium sulfate, anhydrous)   |
| China - IECSC                                   | Yes   |
| Europe - EINEC / ELINCS / NLP                   | Yes   |
| Japan - ENCS                                    | No (calcium tetraborate)  |
| Korea - KECI                                    | Yes   |
| New Zealand - NZIoC                             | Yes   |
| Philippines - PICCS                             | No (calcium tetraborate)  |
| USA - TSCA                                      | All chemical substances in this product have been designated as TSCA Inventory 'Active'   |
| Taiwan - TCSI                                   | Yes   |
| Mexico - INSQ                                   | Yes   |
| Vietnam - NCI                                   | Yes   |
| Russia - FBEPH                                  | Yes   |
| <b>Legend:</b>                                  | Yes = All CAS declared ingredients are on the inventory<br>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

## SECTION 16 Other information

|                      |            |
|----------------------|------------|
| <b>Revision Date</b> | 29/04/2025 |
| <b>Initial Date</b>  | 11/03/2025 |

## SDS Version Summary

| Version | Date of Update | Sections Updated   |
|---------|----------------|--|
| 3.1     | 12/03/2025     | Composition / information on ingredients - Ingredients   |
| 4.1     | 29/04/2025     | Toxicological information - Acute Health (eye), Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (skin), Toxicological information - Acute Health (swallowed), First Aid measures - Advice to Doctor, Physical and chemical properties - Appearance, Toxicological information - Chronic Health, Hazards identification - Classification, Disposal considerations - Disposal, Ecological Information - Environmental, Firefighting measures - Fire Fighter (extinguishing media), Firefighting measures - Fire Fighter (fire/explosion hazard), Firefighting measures - Fire Fighter (fire fighting), Firefighting measures - Fire Fighter (fire incompatibility), First Aid measures - First Aid (eye), First Aid measures - First Aid (inhaled), First Aid measures - First Aid (skin), First Aid measures - First Aid (swallowed), Handling and storage - Handling Procedure, Composition / information on ingredients - Ingredients, Stability and reactivity - Instability Condition, Exposure controls / personal protection - Personal Protection (other), Exposure controls / personal protection - Personal Protection (Respirator), Exposure controls / personal protection - Personal Protection (eye), Exposure controls / personal protection - Personal Protection (hands/feet), Accidental release measures - Spills (major), Accidental release measures - Spills (minor), Handling and storage - Storage (storage incompatibility), Handling and storage - Storage (storage requirement), Handling and storage - Storage (suitable container), Transport information - Transport, Transport Information, Name |

## 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.

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
- ▶ ES: Exposure Standard
- ▶ 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
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- ▶ MARPOL: International Convention for the Prevention of Pollution from Ships
- ▶ IMSBC: International Maritime Solid Bulk Cargoes Code
- ▶ IGC: International Gas Carrier Code
- ▶ IBC: International Bulk Chemical Code
  
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European Inventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances

**Nitrophoska Perfect (15-2.2-16.6-9S+TE)**

- ▶ NLP: No-Longer Polymers
- ▶ ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- ▶ NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ▶ TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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