



Profert (Pty) Ltd
Material Safety Data Sheet (MSDS)

1. Product and Company identification

Identification of the substance or preparation

Product name	- NPK Granular mixtures and Bulk blends	Serial Number : P043
Material uses	- Fertilizer	Date issued : Jan 2012
Synonyms	- All solids chemical fertilizer mixtures and blends a:b:c (Total) = ratio N:P:K (Total % N+P+K) 1.0.1 (35) K as KCl, 1.0.1 (33) K as K ₂ SO ₄ , 1.0.1 (40) K as KNO ₃ , 3.0.5 (38) K as KCl, 3.0.5 (35) K as K ₂ SO ₄ , 3.0.5 (45) K as KNO ₃ , 2.3.2 (24)+Zn, 2.3.2 (35)+Zn, 2.3.4 (31)+Zn, 3.2.1 (32)+Zn, 3.1.5 (38) K as KCl, 1.0.1 (47) K as KCl, 3.0.5 (48) K as KCl	Pages : 4
Supplier address	- Profert (Pty) Ltd 43 Ross Street Potchefstroom 2531 Tel nr : +27 18 293 3530	

2. Composition / Information on ingredients

Composition	- Granulated or bulk-blended mixture of two or three of nitrogenous (5-34% N), phosphatic (3-21% P) and potassic (4-33% K) materials. It may contain 0.25-1% Zn, 0.1-0.5% B, 1% Cu and Urea, NO ₃ ⁻ , NH ₄ ⁺ , HPO ₄ ⁼ , H ₂ PO ₄ ⁻ , K ⁺ , Cl ⁻ , SO ₄ ⁼ , Ca ⁺⁺ , Mg ⁺⁺ and in small quantities OCl ⁻ , H ₂ BO ₃ ⁻ , Zn ⁺⁺ , Cu ⁺⁺ .
Appearance	- White to dark grey-brown granular, prilled or chipped material (Dia. Ca. 0.5 to 5 mm) with some dust present.

3. Hazards identification

Effects and symptoms	- Hazardous in case of contact with skin and eyes, inhalation and/or ingestion.
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4. First Aid measures

Specific immediate treatment	
Inhalation	- If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.
Ingestion	- Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get medical attention if symptoms appear.
Skin contact	- In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothes and shoes before re-use. Get medical attention if symptoms appear.
Eye contact	- In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Check for and remove any contact lenses. Get medical attention if symptoms appear.
Notes to physician	- Support respiratory and cardiovascular function.

5. Fire-fighting measures

Suitable

- Special fire-fighting procedures - In the event of a fire, avoid inhaling fumes from exposed fertilizer products use water to put out the fire and obtain medical attention for persons exposed to the fumes. Unless otherwise instructed by the local fire brigade. Do not use chemical extinguishers, foams or attempt to smother the fire. To be determined by surrounding materials. Material must be cooled and broken up in a fire situation. In the presence of steam, ammonia may be released when heated.
- Protection of fire-fighters - Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6. Accidental release measures

Spill and leak

- Personal Precautions - Dam or dyke spillage with absorbent material or earth. Use only with adequate ventilation. Wear suitable protective clothing. Avoid breathing dusts.
- Environmental precautions and clean-up methods - Use shovel to put the material into well labelled and convenient waste disposal container. Do not clean-up or dispose except under supervision of a specialist.

7. Handling and Storage

Handling

- Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Avoid creating dust when handling and avoid all possible sources of ignition (spark or flames).

Storage

- Keep container tightly closed. Keep container in a cool, well-ventilated area. Store and use away from organic materials, reducing agents, moisture and powdered metals.

Packaging materials

- Use original container.

8. Exposure Controls / Personal Protection

Engineering measures

- Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Hygiene measures

- Wash hands after handling compounds and before eating, smoking, using lavatory and at the end of the day.

Skin and body protection

- Full length chemical resistant overalls / apron, dust mask.

Hand protection

- Gloves (Impervious)

Eye protection

- Use dust goggles / masks if high dust concentration is generated.

Protective clothing
(Pictograms)



9. Physical and chemical properties

Appearance / Colour	- May vary from white to dark grey-brown granular, prilled or chipped material.
Molecular mass / Bulk density	- 0,8-0,4 kg/dm ³ at 20 °C (Mostly 0,95-1,1)
Acidity	- Small amounts of free acid may be present in some materials. Others may be slightly alkaline if small amounts of ammonia may have been liberated.

10. Stability and Reactivity

Stability	- Stable under recommended storage and handling conditions. Has a high resistance to detonation.
Hazardous reaction	- Keep away from strong oxidizers and strong reducers which may cause nitration (Keep away from strong bases and acids).
Hazardous decomposition products	- On exposure to intense heat the material may yield ammonia, chlorine, Sublimated ammonium chloride fumes (smoke), oxides of nitrogen.

11. Toxicological information

Potential acute health effects	
Eye contact	- Hazardous in case of eye contact.
Skin contact	- Hazardous in case of skin contact.
Inhalation	- Dust may irritate nose, throat and the respiratory tract which may cause coughing and choking.
Ingestion	- May cause gastrointestinal disorders and large doses may cause nausea, diarrhoea, vomiting and / or collapse. Nitrates cause dilation of blood vessels, methaemoglobin formation, low blood pressure and decreased blood oxygen carrying capacity.
Long term exposure	- No known side effects have been associated with repeated or prolonged exposure.

12. Ecological information

Users should ensure that they comply with local, provincial and national environmental legislation.	
Environmental affects, behaviour and fate	- Toxic to aquatic organisms in low concentrations.

13. Disposal considerations

Method of disposal	- Waste must be disposed of in accordance with local, provincial and national environmental control regulations. Recover, reclaim or recycle if practicable.
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14. Transport information

Hazchem	- 1S (white S on black background)
UN Number	- 2072
Shipping name	- Ammonium Nitrate Fertilizers N.O.S.

15. Regulatory information

Risk phrases	- Contact with combustible material may cause fire. Explosive when mixed with combustible material.
Safety phrases	- Keep away from combustible material. This material and its container must be disposed of as hazardous waste.
Users should ensure that they comply with any relevant local, provincial and national legislation.	

16. Other information

This MSDS summarises at the date of issue our best knowledge of the health, safety and environmental hazard information related to the product and in particular how to safely handle, use, store and transport the product. Since Profert (Pty) Ltd cannot anticipate or control the conditions under which the product may be handled, used, stored or transported, each user must, prior to usage, review this MSDS in the context of how the user intends to handle, use, store or transport the product and beyond, and communicate such information to all relevant parties.

We shall not assume any liability for the accuracy or completeness of the information contained herein or any advice given unless there has been gross negligence on our part. Profert (Pty) Ltd emphasizes safe use of all materials, promotes sustainable practices and encourages preservation of the environment.