

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 16.08.2011

Revision: 16.08.2011

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

- **Product identifier**

- **Trade name:** POTASSIUM NITRATE

- **CAS Number:**

7757-79-1

- **EC number:**

231-818-8

- **Relevant identified uses of the substance or mixture and uses advised against**

- **Application of the substance / the preparation**

The substance is used in the manufacture of nitric acid. It is used as a fertiliser, in fireworks, as a food preservative, in the manufacture of ice cream and in the manufacture of toothpastes for sensitive teeth. It is also used as a food additive (252: preservative; colour fixative).

- **Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

PLATER CHEMICALS Ltd

Alrewas House, Main Street

Alrewas

Burton on Trent

DE13 7ED

Staffordshire

UK

Tel: (0044) 1283 792600

Fax: (0044) 1283 792041

e-mail: sales@platerchemicals.co.uk

- **Further information obtainable from:** Product safety department.

- **Emergency telephone number:** Tel: (0044) 1283 792600 (not 24 hours)

### 2 Hazards identification

- **Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008**



GHS03 flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidiser.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



O; Oxidising

R8: Contact with combustible material may cause fire.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

- **Hazard pictograms** GHS03

- **Signal word** Danger

- **Hazard statements**

H272 May intensify fire; oxidiser.

- **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P221 Take any precaution to avoid mixing with combustibles.

P260 Do not breathe dust.

P220 Keep/Store away from clothing/combustible materials.

P370+P378 In case of fire: Use for extinction: Water.

P420 Store away from flammable substances.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
7757-79-1 Potassium nitrate
- **Identification number(s)**
- **EC number:** 231-818-8

### 4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Check for and remove any contact lenses.  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Wash mouth out with water  
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**  
The substance may cause effects on the blood, resulting in formation of methaemoglobin when ingested. The effects may be delayed. Medical observation is indicated.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Water
- **For safety reasons unsuitable extinguishing agents:**  
Do NOT use dry chemicals, carbon dioxide, halon or foam.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.  
Do not inhale explosion gases or combustion gases.
- **Additional information**  
Not combustible but enhances combustion of other substances.  
Gives off irritating or toxic fumes (or gases) in a fire.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.

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- Avoid formation of dust.
- Ensure adequate ventilation
- **Environmental precautions:**
  - Do not allow to enter sewers/ surface or ground water.
  - Do not allow to penetrate the ground/soil.
- **Methods and material for containment and cleaning up:**
  - Pick up mechanically.
  - Send for recovery or disposal in suitable receptacles.
  - Do not use combustible materials such as paper towels to clean up spills.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
  - Prevent formation of dust.
  - Ensure good ventilation/exhaustion at the workplace.
  - Avoid contact with clothing and other combustible materials.
  - Rinse contaminated clothes (fire hazard) with plenty of water.
- **Information about fire - and explosion protection:** The product is not flammable.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
  - Do not store on combustible materials such as wooden floors or wooden pallets.
- **Information about storage in one common storage facility:**
  - Store away from flammable substances.
  - Do not store together with textiles.
  - Store away from foodstuffs.
  - Store away from reducing agents.
  - Do not store nitrites together with ammonium salts (e.g. ammonium sulfate, ammonium chloride or ammonium carbonate, nitrogen-containing fertilizers) or amides (such as urea) and products containing them. Similarly, it may react violently with reducing agents, e.g. alkali sulfites and dithionites.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
  - Select PPE appropriate for the operations taking place taking into account the product properties.
- **General protective and hygienic measures:**
  - Wash hands before breaks and at the end of work.
  - Immediately remove all soiled and contaminated clothing
  - Keep away from foodstuffs, beverages and feed.
  - Avoid contact with the eyes.
  - Avoid close or long term contact with the skin.
  - Do not eat, drink, smoke or sniff while working.
  - Do not breath dust

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- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

<b>Form:</b>	Crystalline
<b>Colour:</b>	White
<b>Odour:</b>	Odourless

· **pH-value (50 g/l) at 20°C:** 5-8

#### · Change in condition

<b>Melting point/Melting range:</b>	334°C
<b>Boiling point/Boiling range:</b>	400°C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Contact with combustible material may cause fire.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density at 20°C:** 2.109 g/cm<sup>3</sup>

#### · Solubility in / Miscibility with

**water at 20°C:** 320 g/l

· **Other information** No further relevant information available.

## 10 Stability and reactivity

### · Reactivity

#### · Chemical stability

#### · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

#### · Possibility of hazardous reactions

The substance is a strong oxidant and reacts with combustible and reducing materials.

Risk of fire and explosion on contact with reducing agents.

· **Conditions to avoid** No further relevant information available.

#### · Incompatible materials:

Reducing agents.

Organic solvents.

Combustible materials.

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- **Hazardous decomposition products:**  
The substance decomposes on heating producing nitrogen oxides, oxygen, which increases fire hazard.

### 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

**7757-79-1 Potassium nitrate**

Oral	LD50	3750 mg/kg (rat)
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- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

Absorption of significant amounts of nitrates may cause: abdominal pain; blue lips or fingernails; blue skin; dizziness; laboured breathing; confusion; convulsions; diarrhoea; headache; nausea; unconsciousness.

**ROUTES OF EXPOSURE:** the substance can be absorbed into the body by inhalation of its dust or solution aerosol and by ingestion.

**INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

### 12 Ecological information

- **Toxicity**

- **Acquatic toxicity:** No further relevant information available.

- **Persistence and degradability** biodegradable

- **Behaviour in environmental systems:**

- **Bioaccumulative potential** Product is not expected to bioaccumulate.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

- **European waste catalogue**

Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined.

Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

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- **Uncleaned packaging:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Container remains hazardous when empty. Continue to observe all precautions.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>ADR, IMDG</b></li> </ul>	1486
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> </ul>	1486 POTASSIUM NITRATE POTASSIUM NITRATE
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>ADR</b></li> </ul>	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>
<ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul>	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	III
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	No
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> <li>· <b>EMS Number:</b></li> </ul>	Warning: Oxidising substances. 50 F-A,S-Q
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>	Do not transport nitrites together with ammonium salts (e.g. ammonium sulfate, ammonium chloride or ammonium carbonate, nitrogen-containing fertilizers) or amides (such as urea) and products containing them. Similarly, it may react violently with reducing agents, e.g. alkali sulfites and dithionites.
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Tunnel restriction code</b></li> </ul>	E
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	UN1486, POTASSIUM NITRATE, 5.1, III

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**15 Regulatory information**

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department.

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