

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 Version 5.0 Revision Date 30.10.2012

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

#### 1.1 Product identifiers

Product name : Potassium nitrate

Product Number : 52-7528

Brand : Rapid

CAS-No. : 7757-79-1

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

Identified uses : Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

Company : Rapid Electronics,  
Severalls Lane,  
Colchester,  
Essex,  
CO4 5JS, United Kingdom

Telephone : +44 (0) 1206 751166

Fax : +44 (0) 1206 751188

E-mail address : sales@rapidelec.co.uk

#### 1.4 Emergency telephone number

Emergency Phone # : +44 (0) 1206 751166

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Oxidizing solids (Category 3)

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Contact with combustible material may cause fire.

#### 2.2 Label elements

**Labelling according Regulation (EC) No 1272/2008 [CLP]**

Pictogram



Signal word

Warning

Hazard statement(s)

H272

May intensify fire; oxidiser.

Precautionary statement(s)

P220

Keep/Store away from clothing/ combustible materials.

Supplemental Hazard

none

Statements

**According to European Directive 67/548/EEC as amended.**

Hazard symbol(s)



R-phrases(s)  
R 8 Contact with combustible material may cause fire.

S-phrases(s) none

## 2.3 Other hazards - none

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula :  $\text{KNO}_3$   
Molecular Weight : 101.10 g/mol

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## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

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

no data available

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## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

nitrogen oxides (NO<sub>x</sub>), Potassium oxides

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

## 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

### 7.3 Specific end uses

no data available

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### Immersion protection

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: > 480 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

##### Splash protection

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: > 30 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

##### Body Protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |                                    |
|---|------------------------------------|
| a) Appearance                                   | Form: crystalline<br>Colour: white |
| b) Odour  | no data available                  |
| c) Odour Threshold                              | no data available                  |
| d) pH   | 5.5 - 8 at 50 g/l at 20 °C         |
| e) Melting point/freezing point                 | Melting point/range: 334 °C - lit. |
| f) Initial boiling point and boiling range      | no data available                  |
| g) Flash point                                  | no data available                  |
| h) Evaporation rate                             | no data available                  |
| i) Flammability (solid, gas)                    | no data available                  |
| j) Upper/lower flammability or explosive limits | no data available                  |
| k) Vapour pressure                              | no data available                  |
| l) Vapour density                               | no data available                  |
| m) Relative density                             | 2.109 g/cm <sup>3</sup>            |
| n) Water solubility                             | no data available                  |
| o) Partition coefficient: n-octanol/water       | no data available                  |
| p) Autoignition temperature                     | no data available                  |
| q) Decomposition temperature                    | no data available                  |
| r) Viscosity                                    | no data available                  |
| s) Explosive properties                         | no data available                  |
| t) Oxidizing properties                         | no data available                  |

### 9.2 Other safety information

- |              |                       |
|--------------|-----------------------|
| Bulk density | 800 kg/m <sup>3</sup> |
|--------------|-----------------------|

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

no data available

#### 10.4 Conditions to avoid

no data available

#### 10.5 Incompatible materials

Strong reducing agents, Powdered metals, Strong acids, Organic materials

#### 10.6 Hazardous decomposition products

Other decomposition products - no data available

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### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

##### Acute toxicity

LD50 Oral - rat - 3,750 mg/kg

##### Skin corrosion/irritation

no data available

##### Serious eye damage/eye irritation

no data available

##### Respiratory or skin sensitization

no data available

##### Germ cell mutagenicity

no data available

##### Carcinogenicity

IARC: 2A - Group 2A: Probably carcinogenic to humans (Potassium nitrate)

##### Reproductive toxicity

Reproductive toxicity - rat - Oral

Effects on Fertility: Other measures of fertility

Reproductive toxicity - rat - Oral

Effects on Newborn: Behavioral.

Reproductive toxicity - rabbit - Oral

Effects on Fertility: Abortion.

Reproductive toxicity - guinea pig - Oral

Effects on Newborn: Stillbirth.

Reproductive toxicity - guinea pig - Oral

Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated ). Effects on Embryo or Fetus: Other effects to embryo.

##### Specific target organ toxicity - single exposure

no data available

##### Specific target organ toxicity - repeated exposure

no data available

##### Aspiration hazard

no data available

##### Potential health effects

###### Inhalation

May be harmful if inhaled. May cause respiratory tract irritation.

###### Ingestion

May be harmful if swallowed.

###### Skin

May be harmful if absorbed through skin. May cause skin irritation.

###### Eyes

May cause eye irritation.

##### Signs and Symptoms of Exposure

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

##### Additional Information

RTECS: TT3700000

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## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 22.5 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 226 mg/l - 72 h

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

Harmful to aquatic life.

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: 1486

IMDG: 1486

IATA: 1486

### 14.2 UN proper shipping name

ADR/RID: POTASSIUM NITRATE

IMDG: POTASSIUM NITRATE

IATA: Potassium nitrate

### 14.3 Transport hazard class(es)

ADR/RID: 5.1

IMDG: 5.1

IATA: 5.1

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

no data available

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## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

### 15.2 Chemical Safety Assessment

no data available

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**16. OTHER INFORMATION****Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.