

SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Revision Date 06/14/2018

Version 1.7

SECTION 1. Identification**Product identifier**

| | |
|----------------|---|
| Product number | 105061 |
| Product name | Potassium nitrate EMPROVE®ESSENTIAL Ph Eur, BP, USP, FCC, E 252 |
| CAS-No. | 7757-79-1 |

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

| | |
|-----------------|--|
| Identified uses | Pharmaceutical production, Reagent for analysis, Cosmetic raw material |
|-----------------|--|

Details of the supplier of the safety data sheet

| | |
|---------|---|
| Company | Millipore (Canada) Ltd 109 Woodbine Downs Blvd. Unit 5 Etobicoke Ontario M9W 6Y1 Canada General Inquiries: +1 800-645-5476 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany. |
|---------|---|

| | |
|---------------------|--|
| Emergency telephone | 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week |
|---------------------|--|

SECTION 2. Hazards identification**GHS Classification**

Oxidizing solid, Category 3, H272

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling*Hazard pictograms**Signal Word*

Warning

Hazard Statements

H272 May intensify fire; oxidizer.

Precautionary Statements

P210 Keep away from heat.

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P220 Keep/Store away from clothing/ combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

| | | |
|------------|------------------|-------------------------|
| Formula | KNO ₃ | KNO ₃ (Hill) |
| Molar mass | 101.10 g/mol | |

Hazardous ingredients

Chemical name (Concentration)

CAS-No.

potassium nitrate (>= 90 % - <= 100 %)

7757-79-1

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

Ingestion

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

The following applies to nitrites/nitrates in general: methemoglobinemia after the uptake of large quantities.

irritant effects, Diarrhea, Nausea, Vomiting

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

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Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Not combustible.

Has a fire-promoting effect due to release of oxygen.

Ambient fire may liberate hazardous vapors.

Fire may cause evolution of:

nitrous gases, nitrogen oxides

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Do not store near combustible materials.

Store at +5°C to +30°C (+41°F to +86°F).

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SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

Eye/face protection

Safety glasses

Hand protection

full contact:

| | |
|---------------------|----------------|
| Glove material: | Nitrile rubber |
| Glove thickness: | 0.11 mm |
| Break through time: | > 480 min |

splash contact:

| | |
|---------------------|----------------|
| Glove material: | Nitrile rubber |
| Glove thickness: | 0.11 mm |
| Break through time: | > 480 min |

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment:

protective clothing

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

SECTION 9. Physical and chemical properties

Physical state

crystalline

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| | |
|--|---|
| Color | white |
| Odor | odorless |
| Odor Threshold | Not applicable |
| pH | 5.0 - 7.5 at 50 g/l 68 °F (20 °C) |
| Melting point | 633 °F (334 °C) |
| Boiling point/boiling range | Not applicable |
| Flash point | Not applicable |
| Evaporation rate | No information available. |
| Flammability (solid, gas) | The product is not flammable. |
| Lower explosion limit | Not applicable |
| Upper explosion limit | Not applicable |
| Vapor pressure | No information available. |
| Relative vapor density | No information available. |
| Density | No information available. |
| Relative density | No information available. |
| Water solubility | 320 g/l at 68 °F (20 °C) |
| Partition coefficient: n-octanol/water | No information available. |
| Autoignition temperature | No information available. |
| Decomposition temperature | > 752 °F (> 400 °C) |
| Viscosity, dynamic | No information available. |
| Explosive properties | Not classified as explosive. |
| Oxidizing properties | May intensify fire; oxidizer. |

The substance or mixture is classified as oxidizing with the category 3.

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Ignition temperature

Not applicable

Bulk density

ca.800 kg/m³

SECTION 10. Stability and reactivity

Reactivity

See below

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Risk of explosion with:

Cyanides, Sulfides, combustible substances, Fluorine, Potassium, acetates, oxidizable substances, phosphides, Organic Substances, Peroxides, Aluminum, antimony, charcoal, Titanium, Zinc, Powdered metals, arsenic, Boron, Germanium, nitrides, magnesium, sodium thiosulfate, phosphorus, strong reducing agents, sulfur, sugars

Generates dangerous gases or fumes in contact with:

Acids

Possible formation of:

nitrogen dioxide

Risk of ignition or formation of inflammable gases or vapors with:

calcium silicide

Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials

no information available

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact, Ingestion

Acute oral toxicity

LD50 Rat: 3,015 mg/kg (IUCLID)

Symptoms: Irritation of mucous membranes, Nausea, Vomiting, Diarrhea

Eye irritation

slight irritation

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Genotoxicity in vitro

Ames test

Result: negative

(IUCLID)

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

After absorption of large quantities:

Methemoglobinemia with headache, cardiac arrhythmia, drop in blood pressure, dyspnoea, and spasms, key symptom: cyanosis (blue coloration of the blood).

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

LC50 *Poecilia reticulata* (guppy): 191 mg/l; 96 h (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 *Daphnia magna* (Water flea): 490 mg/l; 48 h (IUCLID)

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

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Additional ecological information

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

| | |
|---------------------------|-------------------|
| UN number | UN 1486 |
| Proper shipping name | POTASSIUM NITRATE |
| Class | 5.1 |
| Packing group | III |
| Environmentally hazardous | -- |

Air transport (IATA)

| | |
|------------------------------|-------------------|
| UN number | UN 1486 |
| Proper shipping name | POTASSIUM NITRATE |
| Class | 5.1 |
| Packing group | III |
| Environmentally hazardous | -- |
| Special precautions for user | no |

Sea transport (IMDG)

| | |
|------------------------------|-------------------|
| UN number | UN 1486 |
| Proper shipping name | POTASSIUM NITRATE |
| Class | 5.1 |
| Packing group | III |
| Environmentally hazardous | -- |
| Special precautions for user | yes |
| EmS | F-A S-Q |

SECTION 15. Regulatory information

United States of America

Canada

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

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Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word

Warning

Hazard Statements

H272 May intensify fire; oxidizer.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 06/14/2018

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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