

# SAFETY DATA SHEET

**1. Identification**

**Product identifier:** LITHIUM NITRATE

**Other means of identification**

**Product No.:** 2384, 5872

**Recommended use and restriction on use**

**Recommended use:** Not determined.

**Restrictions on use:** Not determined.

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

	Avantor Performance Materials, LLC.
	3477 Corporate Parkway
	Center Valley, PA 18034
Telephone:	
	Customer Service: 855-282-6867
Fax:	610-573-2610
Contact Person:	Environmental Health & Safety
E-mail:	info@avantormaterials.com

**Emergency telephone number:**

CHEMTREC: 1-800-424-9300 within US and Canada

**2. Hazard(s) identification**

**Hazard Classification**

**Physical Hazards**

Oxidizing solids	Category 3
------------------	------------

**Health Hazards**

Acute toxicity (Oral)	Category 4
Serious Eye Damage/Eye Irritation	Category 2

**Unknown toxicity - Health**

Acute toxicity, oral	100 %
Acute toxicity, dermal	100 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

**Label Elements**

**Hazard Symbol:**



<b>Signal Word:</b>	Warning
<b>Hazard Statement:</b>	May intensify fire; oxidizer. Harmful if swallowed. Causes serious eye irritation.
<b>Precautionary Statements</b>	
<b>Prevention:</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
<b>Response:</b>	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Disposal:</b>	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
<b>Other hazards which do not result in GHS classification:</b>	None.

### 3. Composition/information on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	Content in percent (%)*
NITRIC ACID, LITHIUM SALT		7790-69-4	97 - 100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

<b>General information:</b>	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance. Ensure that emergency personnel are aware of the material involved, and take precautions to protect themselves.
<b>Ingestion:</b>	Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. Never give liquid to an unconscious person.
<b>Inhalation:</b>	Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary.

**Skin Contact:** Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** Harmful if swallowed. Causes serious eye irritation.

**Hazards:** None known.

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

**Treatment:** Symptoms may be delayed. Treat symptomatically.

**5. Fire-fighting measures**

**General Fire Hazards:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None known.

**Specific hazards arising from the chemical:** May intensify fire; oxidizer.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Oxidizing material. Noncombustible, but will support combustion. In case of fire and/or explosion do not breathe fumes.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Keep unauthorized personnel away. Ventilate closed spaces before entering them. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Remove sources of ignition. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Use non-sparking tools.

**Notification Procedures:** Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

## 7. Handling and storage

<b>Precautions for safe handling:</b>	DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Keep away from combustible material. Use personal protective equipment as required. Do not get in eyes and avoid contact with skin and clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not taste or swallow. Do not eat, drink or smoke when using the product. See Section 8 of the SDS for Personal Protective Equipment. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Conditions for safe storage, including any incompatibilities:</b>	Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Store away from incompatible materials. Eliminate sources of ignition.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

None of the components have assigned exposure limits.

#### Appropriate Engineering Controls

No data available.

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

<b>General information:</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles) and a face shield.
<b>Skin Protection</b>	
<b>Hand Protection:</b>	Chemical resistant gloves
<b>Other:</b>	Wear suitable protective clothing.
<b>Respiratory Protection:</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
<b>Hygiene measures:</b>	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Solid
<b>Form:</b>	Granules
<b>Color:</b>	Colorless, White, Pale yellow

<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	255 °C
<b>Initial boiling point and boiling range:</b>	600 °C
<b>Flash Point:</b>	Not applicable
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Density:</b>	2,38 g/cm <sup>3</sup> (20 °C)
<b>Relative density:</b>	2,38 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	522 g/l (20 °C)
<b>Solubility (other):</b>	ethanol: Soluble ammonia: Soluble acetone: Soluble
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other information</b>	
<b>Molecular weight:</b>	68,95 g/mol (HNO <sub>3</sub> .Li)

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Decomposes explosively upon heating, shock, concussion or friction.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames. Contact with incompatible materials.
<b>Incompatible Materials:</b>	Reducing agents. Flammable/combustible material. Organic compounds.
<b>Hazardous Decomposition Products:</b>	Nitrogen Oxides

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation:** May cause irritation to the respiratory system.

**Skin Contact:** May cause irritation.

**Eye contact:** Causes serious eye irritation.

**Ingestion:** Harmful if swallowed.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral**

**Product:** No data available.

**Dermal**

**Product:** No data available.

**Inhalation**

**Product:** No data available.

**Repeated dose toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** May cause skin irritation.

**Serious Eye Damage/Eye Irritation**

**Product:** Causes serious eye irritation.

**Respiratory or Skin Sensitization**

**Product:** Not a skin sensitizer.

**Carcinogenicity**

**Product:** This substance has no evidence of carcinogenic properties.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**ACGIH Carcinogen List:**

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No mutagenic components identified

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**  
**Product:** Not classified

**Other effects:** None known.

<b>12. Ecological information</b>
-----------------------------------

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**  
**Product:** No data available.

**Aquatic Invertebrates**  
**Product:** No data available.

**Chronic hazards to the aquatic environment:**

**Fish**  
**Product:** No data available.

**Aquatic Invertebrates**  
**Product:** No data available.

**Toxicity to Aquatic Plants**  
**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**  
**Product:** There are no data on the degradability of this product.

**BOD/COD Ratio**  
**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**  
**Product:** No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in soil:** The product is water soluble and may spread in water systems.

**Other adverse effects:** Contains a substance which causes risk of hazardous effects to the environment.

<b>13. Disposal considerations</b>
------------------------------------

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even

after container is emptied.

## 14. Transport information

### TDG

UN Number:	UN 2722
UN Proper Shipping Name:	LITHIUM NITRATE
Transport Hazard Class(es)	
Class:	5.1
Label(s):	5.1
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.

### IMDG

UN Number:	UN 2722
UN Proper Shipping Name:	LITHIUM NITRATE
Transport Hazard Class(es)	
Class:	5.1
Label(s):	5.1
EmS No.:	F-A, S-Q
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.

### IATA

UN Number:	UN 2722
UN Proper Shipping Name:	Lithium nitrate
Transport Hazard Class(es):	
Class:	5.1
Label(s):	5.1
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.
Cargo aircraft only:	Allowed.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

## 15. Regulatory information

### Canada Federal Regulations

#### List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

#### Export Control List (CEPA 1999, Schedule 3)

Not Regulated

#### National Pollutant Release Inventory (NPRI)

##### Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5 Not Regulated

##### Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

NPRI Not Regulated

### Greenhouse Gases

Not Regulated



**Controlled Drugs and Substances Act**

CA CDSI	Not Regulated
CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated
CA CDSVIII	Not Regulated

**Precursor Control Regulations**

Not Regulated

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

**16. Other information, including date of preparation or last revision**

<b>Revision Date:</b>	17.05.2018
<b>Version #:</b>	1.1
<b>Further Information:</b>	No data available.

**Disclaimer:**

The information provided in this Safety Data Sheet (SDS) was prepared based on data believed to be accurate as of the date of this SDS. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR PERFORMANCE MATERIALS (“AVANTOR”) EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN INCLUDING, WITHOUT LIMITATION, AS TO ACCURACY, COMPLETENESS, FITNESS FOR PURPOSE OR USE, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY AND STABILITY. This SDS is intended as a guide to the appropriate use, handling, storage and disposal of the product to which it relates by properly trained personnel, and is not intended to be comprehensive. Users of Avantor’s products are advised to perform their own tests and to exercise their own judgment to determine the safety, suitability and appropriate use, handling, storage and disposal of each product and product combination for their own purposes and uses. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR DISCLAIMS LIABILITY FOR, AND BY USING AVANTOR’S PRODUCTS PURCHASER AGREES THAT UNDER NO CIRCUMSTANCES SHALL AVANTOR BE LIABLE FOR, SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR KIND, INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.