

## 1 Identification

### Product identifier

**Product name:** 1-n-Butyl-3-methylimidazolium nitrate

**Stock number:** H59803

**CAS Number:**

179075-88-8

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

**Identified use:** SU24 Scientific research and development

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

#### Manufacturer/Supplier:

Alfa Aesar

Thermo Fisher Scientific Chemicals, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

**Information Department:** Health, Safety and Environmental Department

#### Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

## 2 Hazard(s) identification

### Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS03 Flame over circle

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

**Hazards not otherwise classified** No information known.

### Label elements

**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

### Hazard pictograms



GHS03 GHS07

### Signal word

**Danger**

### Hazard statements

H272 May intensify fire; oxidizer.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

### Precautionary statements

P221 Take any precaution to avoid mixing with combustibles.

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P220 Keep/Store away from clothing/combustible materials.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

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

### WHMIS classification

C - Oxidizing materials

D2B - Toxic material causing other toxic effects



### Classification system

**HMIS ratings (scale 0-4)**

**(Hazardous Materials Identification System)**

HEALTH 1 Health (acute effects) = 1

FIRE 2 Flammability = 2

REACTIVITY 2 Physical Hazard = 2

### Other hazards

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3 Composition/information on ingredients

### Chemical characterization: Substances

#### CAS# Description:

179075-88-8 1-n-Butyl-3-methylimidazolium nitrate

## 4 First-aid measures

### Description of first aid measures

#### After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

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Seek immediate medical advice.

**After skin contact**

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

**After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing** Seek medical treatment.

**Information for doctor**

**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 Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing agents** Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents** Halocarbon extinguisher

**Special hazards arising from the substance or mixture**

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

**Advice for firefighters**

**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

**Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.

**Methods and material for containment and cleaning up:** Ensure adequate ventilation.

**Prevention of secondary hazards:**

Acts as an oxidizing agent on organic materials such as wood, paper and fats

Keep away from combustible material.

**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**

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:**

Substance/product can reduce the ignition temperature of flammable substances.

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

**Conditions for safe storage, including any incompatibilities**

**Storage**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:**

Store away from flammable substances.

Store away from reducing agents.

Do not store with organic materials.

Store away from metal powders.

Store away from water/moisture.

Store away from oxidizing agents.

**Further information about storage conditions:**

Store under dry inert gas.

This product is moisture sensitive.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Protect from humidity and water.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Control parameters**

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** No data

**Exposure controls**

**Personal protective equipment**

**General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

**Breathing equipment:** Use suitable respirator when high concentrations are present.

**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

**Penetration time of glove material (in minutes)** Not determined

**Eye protection:** Safety glasses

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**Body protection:** Protective work clothing. (Contd. of page 2)

<b>9 Physical and chemical properties</b>	
<b>Information on basic physical and chemical properties</b>	
<b>General Information</b>	
<b>Appearance:</b>	
Form:	Powder
Color:	Pale brown
Odor:	Not determined
Odor threshold:	Not determined.
pH-value:	Not applicable.
<b>Change in condition</b>	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined
Flammability (solid, gaseous)	Contact with combustible material may cause fire.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.
<b>Danger of explosion:</b>	
Explosion limits:	Not determined.
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not applicable.
Density:	Not determined
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
<b>Solubility in / Miscibility with</b>	
Water:	Not determined
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
Other information	No further relevant information available.



<b>10 Stability and reactivity</b>	
<b>Reactivity</b> May intensify fire; oxidizer.	
<b>Chemical stability</b> Stable under recommended storage conditions.	
<b>Thermal decomposition / conditions to be avoided:</b> Decomposition will not occur if used and stored according to specifications.	
<b>Possibility of hazardous reactions</b>	
Reacts with strong oxidizing agents	
Reacts with reducing agents	
Reacts with flammable substances	
<b>Conditions to avoid</b> No further relevant information available.	
<b>Incompatible materials:</b>	
Flammable substances	
Reducing agents	
Water/moisture	
Oxidizing agents	
Organic materials	
Metal powders	
<b>Hazardous decomposition products:</b>	
Carbon monoxide and carbon dioxide	
Nitrogen oxides	



<b>11 Toxicological information</b>	
<b>Information on toxicological effects</b>	
<b>Acute toxicity:</b> No effects known.	
<b>LD/LC50 values that are relevant for classification:</b> No data	
<b>Skin irritation or corrosion:</b> Causes skin irritation.	
<b>Eye irritation or corrosion:</b> Causes serious eye irritation.	
<b>Sensitization:</b> No sensitizing effects known.	
<b>Germ cell mutagenicity:</b> No effects known.	
<b>Carcinogenicity:</b> No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
<b>Reproductive toxicity:</b> No effects known.	
<b>Specific target organ system toxicity - repeated exposure:</b> No effects known.	
<b>Specific target organ system toxicity - single exposure:</b> May cause respiratory irritation.	
<b>Aspiration hazard:</b> No effects known.	
<b>Subacute to chronic toxicity:</b> No effects known.	
<b>Additional toxicological information:</b> To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	

<b>12 Ecological information</b>	
<b>Toxicity</b>	
<b>Aquatic toxicity:</b> No further relevant information available.	
<b>Persistence and degradability</b> No further relevant information available.	
<b>Bioaccumulative potential</b> No further relevant information available.	
<b>Mobility in soil</b> No further relevant information available.	
<b>Additional ecological information:</b>	
<b>General notes:</b>	
Do not allow material to be released to the environment without proper governmental permits.	
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.	
Avoid transfer into the environment.	
<b>Results of PBT and vPvB assessment</b>	
<b>PBT:</b> Not applicable.	
<b>vPvB:</b> Not applicable.	
<b>Other adverse effects</b> No further relevant information available.	

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**13 Disposal considerations**  
**Waste treatment methods**  
**Recommendation** Consult state, local or national regulations to ensure proper disposal.  
**Uncleaned packagings:**  
**Recommendation:** Disposal must be made according to official regulations.

<b>14 Transport information</b>	
UN-Number DOT, IMDG, IATA	UN1479
UN proper shipping name DOT IMDG, IATA	Oxidizing solid, n.o.s. (1-n-Butyl-3-methylimidazolium nitrate) OXIDIZING SOLID, N.O.S. (1-n-Butyl-3-methylimidazolium nitrate)
Transport hazard class(es) DOT 	
Class Label Class Label Label IMDG, IATA 	5.1 Oxidising substances. 5.1 5.1 (O2) Oxidizing substances 5.1
Packing group DOT, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Oxidizing substances
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT Marine Pollutant (DOT):	No
UN "Model Regulation":	UN1479, Oxidizing solid, n.o.s. (1-n-Butyl-3-methylimidazolium nitrate), 5.1, II

**15 Regulatory information**  
**Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)  
**Hazard pictograms**  
  
GHS03 GHS07  
**Signal word** Danger  
**Hazard statements**  
H272 May intensify fire; oxidizer.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
**Precautionary statements**  
P221 Take any precaution to avoid mixing with combustibles.  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P220 Keep/Store away from clothing/combustible materials.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  
**National regulations**  
This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.  
This product is not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).  
**SARA Section 313 (specific toxic chemical listings)** Substance is not listed.  
**California Proposition 65**  
**Prop 65 - Chemicals known to cause cancer** Substance is not listed.  
**Prop 65 - Developmental toxicity** Substance is not listed.  
**Prop 65 - Developmental toxicity, female** Substance is not listed.  
**Prop 65 - Developmental toxicity, male** Substance is not listed.  
**Information about limitation of use:** For use only by technically qualified individuals.  
**Other regulations, limitations and prohibitive regulations**  
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.  
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.  
Substance is not listed.  
**Annex XIV of the REACH Regulations (requiring Authorisation for use)** Substance is not listed.  
**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**Product name: 1-n-Butyl-3-methylimidazolium nitrate**

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**16 Other information**

*Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.*

**Department issuing SDS:** Global Marketing Department  
**Date of preparation / last revision** 11/24/2015 / -

**Abbreviations and acronyms:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
vPvB: very Persistent and very Bioaccumulative  
ACGIH: American Conference of Governmental Industrial Hygienists (USA)  
OSHA: Occupational Safety and Health Administration (USA)  
NTP: National Toxicology Program (USA)  
IARC: International Agency for Research on Cancer  
EPA: Environmental Protection Agency (USA)

USA