

Revision date: 04/13/2015

Version: 1.0

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

### 1.1. Product identifier

Trade name/designation:	Nitric Acid
Product No.:	BDH3044500MLPC BDH3046-2.5LPC BDH3048-24L BDH3130-2.2LP
Other means of identification:	Aqua Fortis, Azotic acid, Hydrogen nitrate

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

Relevant identified uses: Manufacturing and Laboratory use

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

Company VWR International, LLC  
Radnor Corporate Center  
100 Matsonford Road  
Radnor, PA 19087-8660  
Telephone 610.386.1700

### 1.4. Emergency Telephone number

CHEMTREC 800.424.9300  
CANUTEC 613.996.6666

## SECTION 2: Hazards identification


### 2.1. Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

For the full text of the H-Statement(s) and R-phrases(s) mentioned in this Section, see Section 16.

Hazard classes and hazard categories	Hazard statements
Oxidizing liquids; Category 3	May intensify fire; oxidizer
Skin corrosion; Category 1A	Causes severe skin burns and eye damage
Serious eye damage; Category 1	Causes serious eye damage

## 2.2. GHS Label elements, including precautionary statements

Pictograms 

Signal word **Danger**

Hazard statements	
H272	May intensify fire; oxidizer.
H314	Causes severe skin burns and eye damage.

Precautionary statements	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220	Keep/Store away from clothing and other combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use water spray, dry chemical or carbon dioxide to extinguish.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

## 2.3. WHIMS Classification

Class C: Oxidizing material  
Class E: Corrosive material

## 2.4. Hazards not otherwise classified (HNOC) or not covered by GHS or WHIMS

Not Available

## SECTION 3: Composition / information on ingredients

### 3.1. Hazard components

Chemical name	Formula	Molecular weight	CAS#	Weight%
Nitric acid	HNO <sub>3</sub>	63.01 g/mol	7697-37-2	67-70

## SECTION 4: First aid measures

### 4.1. General information

#### In case of inhalation

Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respirations.

#### In case of skin contact

Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.

#### In case of eye contact

Immediately rinse with plenty of water for at least 15 minutes and seek medical attention.

#### In case of ingestion

**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

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

May cause deep, penetrating ulcers of the skin. Contact with skin may cause staining, inflammation, and thickening of the skin. Contact to eyes may cause severe burns and possible irreversible eye damage including corneal injury and cataracts. Inhalation may cause coughing, burns and breathing difficulty. May cause acute pulmonary edema, pneumoconiosis, fibrosis, and even coma. Ingestion may cause burns, swelling of the lips, mouth, and larynx, throat constriction, nausea, vomiting, convulsions, shock, and may cause severe and permanent damage to gastrointestinal tract.

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

Not Available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use appropriate media for adjacent fire. Cool unopened containers with water.

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

Nitrogen oxides

### 5.3. Special protective equipment for firefighters

Not Available

### 5.4. Hazardous combustion products

Not Available

### 5.5. Advice for firefighters

Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

### 5.6. Additional information

Not Available

## SECTION 6: Accidental release measures

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

See section 8 for recommendations on the use of personal protective equipment.

### 6.2. Environmental precautions

Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

### 6.3. Methods and material for containment and cleaning up

Neutralize spill with sodium bicarbonate or soda lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

### 6.4. Additional information

Not Available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

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

Store in cool, dry, well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

### 7.3. Specific end use(s)

Not Available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Chemical Name	Limit value type & Country of Origin	Exposure Limit value	Source
Nitric Acid	2 ppm 5.2 mg/m <sup>3</sup>	TLV	ACGIH
	4 ppm 10 mg/m <sup>3</sup>	STEL	ACGIH
	2 ppm 5 mg/m <sup>3</sup>	PEL	OSHA
	2 ppm 5 mg/m <sup>3</sup>	REL	NIOSH
	4 ppm 10 mg/m <sup>3</sup>	STEL	NIOSH
	25 ppm	IDLH	NIOSH

### 8.2. Exposure controls

#### Appropriate engineering controls

Showers  
Eye wash stations  
Ventilation system

## Personal protection equipment

### Eye/face protection

Safety glasses or goggles with face shield

### Skin protection

Nitrile or rubber gloves and full body protection

### Respiratory protection

Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.

## Hygiene measures

Handle in accordance with good industrial hygiene and safety practices.

## SECTION 9: Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

- |  |                    |
|--|--------------------|
| a) Appearance:                                     |                    |
| Physical state                                     | Liquid             |
| Color  | Clear, colorless   |
| b) Odor  | Not Available      |
| c) Odor Threshold                                  | Not Available      |
| d) pH  | <1                 |
| e) Melting point/<br>freezing point                | Not Available      |
| f) Initial boiling point<br>and boiling range      | 120.5°C (248.9°F)  |
| g) Flash point                                     | Not Available      |
| h) Evaporation rate                                | Not Available      |
| i) Flammability (solid, gas)                       | Not Available      |
| j) Upper/lower flammability<br>or explosive limits | Not Available      |
| k) Vapor pressure                                  | 287.9 kPa (@ 20°C) |
| l) Vapor density                                   | Not Available      |
| m) Relative density                                | 1.48               |
| n) Solubilities                                    | Not Available      |
| o) Partition coefficient<br>(n-Octanol/Water)      | Not Available      |
| p) Auto-ignition temperature                       | Not Available      |
| q) Decomposition<br>temperature                    |                    |
| r) Viscosity                                       | Not Available      |
| s) Explosive properties                            | Not Available      |

t) Oxidizing properties      Not Available

## 9.2. Other information

Not Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not Available

### 10.2. Chemical stability

Stable under normal storage conditions

### 10.3. Possibility of hazardous reactions

Not Available

### 10.4. Conditions to avoid

May discolor on exposure to air and light

### 10.5. Incompatible materials

Alkali metals, organic materials, acetic anhydride, acetonitrile, alcohols, acrylonitrile

### 10.6. Hazardous decomposition products

Nitrogen oxides

## SECTION 11: Toxicology

### 11.1. Information on toxicological effects

#### Acute toxicity

Oral LD<sub>50</sub>

Inhalation LC<sub>50</sub>

Dermal LD<sub>50</sub>

Other information on acute toxicity

#### Skin corrosion/irritation

Not Available

#### Serious eye damage/eye irritation

Not Available

#### Respiratory or skin sensitization

Not Available

**Germ cell mutagenicity**

Not Available

**Carcinogenicity**

Not Available

**Reproductive toxicity**

Not Available

**Specific target organ toxicity-single exposure**

Not Available

**Specific target organ toxicity-repeated exposure**

Not Available

**Aspiration hazard**

Not Available

**Additional information**

Not Available

## SECTION 12: Ecological information

**12.1. Ecotoxicity**

LC50 – *Gambusia affinis* – 72 mg/L – 96h

**12.2. Persistence and degradability**

Not Available

**12.3. Bioaccumulative potential**

Not Available

**12.4. Mobility in soil**

Not Available

**12.5. Results of PBT and vPvB assessment**

Not Available

**12.6. Other adverse effects**

Not Available



## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

### Land Transport DOT (U.S.)

UN Number 2031  
Proper Shipping name Nitric acid  
Transport Hazard Classes  
Class 8  
Hazard Label(s) 8, (5.1)  
Packing Group II  
Environmental hazard(s)  
Special precautions for user

### Sea Transport IMDG

UN Number 2031  
Proper Shipping name Nitric acid  
Transport Hazard Classes  
Class 8  
Hazard Label(s) 8, (5.1)  
EMS- No. F-A, S-Q  
Packing Group II  
Environmental hazard(s)  
Segregation Group  
Special precautions for user

### Air Transport IATA

UN Number 2031  
Proper Shipping name Nitric acid  
Transport Hazard Classes  
Class 8  
Hazard Label(s) 8, (5.1)

Packing Group II  
Environmental hazard(s)  
Special precautions for user

## SECTION 15: Regulatory information

### OSHA Hazards

Corrosive

### SARA 302 Extremely Hazardous Substances

Nitric Acid

### SARA 313 (TRI reporting)

Nitric Acid

### SARA 311/312 Hazardous Chemicals

Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right-To-Know Substance List

Nitric Acid

### Pennsylvania Right-To-Know Hazardous substances

Nitric Acid

Water

### New Jersey Worker and Community Right-To-Know Components

Nitric Acid

Water

### California Proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### Inventory status:

Canada DSL Inventory List: Listed

US TSCA Inventory List: Listed

EINECS, ELINCS or NLP: 231-417-2

## SECTION 16: Other information

### Full text of H-Statement(s) and R-phrase(s)

- H272 May intensify fire; oxidizer.  
H314 Causes severe skin burns and eye damage.
- R8 Contact with combustible material may cause fire.  
R34 Causes burns.

### Canadian Carcinogenicity hazard class

PHNOC hazard class

HHNOC hazard class

Biohazardous Infectious Materials hazard class

### NFPA Rating:

Health: 3

Flammability: 0

Reactivity: 2

Special Hazard: Ox



### DISCLAIMER

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. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.