

# Safety Data Sheet

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name/designation:	Nitric acid laboratory reagent
Product No.:	N0090
Synonymes:	none
CAS No.	7697-37-2

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

Relevant identified uses:	General chemical reagent
---------------------------	--------------------------

**1.3 Details of the supplier of the safety data sheet****Supplier****Avantor Performance Materials India Ltd.**

Street	501, 5th floor, Tiffany Building, Hiranandani Business Park,
Postal code/city	Thane, Maharashtra - 400607, India
Telephone	022-41288100

**Emergency phone number**

Telephone	1800105561
-----------	------------

**Preparation Information**

Product Information Compliance

**1.4 E-mail**

SDS@avantorsciences.com

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

#### Physical hazards

Oxidising liquid, category 2

Substance or mixture corrosive to metals, category 1

#### health hazards

Acute toxicity, category 3, inhalation

Skin corrosion, category 1A

### 2.2 Label elements

#### Hazard pictograms



#### Signal word: Danger

May intensify fire; oxidiser.

May be corrosive to metals.

Toxic if inhaled.

Causes severe skin burns and eye damage.

### 2.3 Other hazards none

## SECTION 3: Composition / information on ingredients

### Substances

not applicable

### Mixtures

#### Hazardous ingredients

Substance name	Identifier	Concentration	Hazard classes and hazard categories
Nitric acid	CAS No.: 7697-37-2	65 - 70%	Ox. Liq. 2 - H272 Met. Corr. 1 - H290 Acute Tox. 3 - H331 Skin Corr. 1A - H314

## SECTION 4: First aid measures

### 4.1 General information

IF exposed: Immediately call a POISON CENTRE/doctor. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

#### After inhalation

Immediately call a POISON CENTRE/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

#### In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

#### After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

#### In case of ingestion

Immediately call a POISON CENTRE/doctor. Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

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

no data available

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

no data available

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

The product itself does not burn.

May intensify fire; oxidiser.

Co-ordinate fire-fighting measures to the fire surroundings.

**Extinguishing media which must not be used for safety reasons**

no restriction

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

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

**5.3 Advice for firefighters**

DO NOT fight fire when fire reaches explosives.

Special protective equipment for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

**5.4 Additional information**

Do not allow run-off from fire-fighting to enter drains or water courses.

Do not inhale explosion and combustion gases.

Use water spray jet to protect personnel and to cool endangered containers.

In case of fire: Evacuate area.

<b>SECTION 6: Accidental release measures</b>
---

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

Do not breathe gas/vapour/aerosol. Provide adequate ventilation. Use personal protection equipment. In case of major fire and large quantities: Remove persons to safety. Wear a self-contained breathing apparatus and chemical protective clothing.

**6.2 Environmental precautions**

Do not allow to enter into surface water or drains. Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Discharge into the environment must be avoided.

**6.3 Methods and material for containment and cleaning up**

Spilled product must never be returned to the original container for recycling. Clean contaminated articles and floor according to the environmental legislation. Collect in closed and suitable containers for disposal.

**6.4 Additional information**

Clear spills immediately.

<b>SECTION 7: Handling and storage</b>
--

**Precautions for safe handling**

Avoid:

Inhalation

Avoid contact with eyes and skin.

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Protect from moisture.

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

Recommended storage temperature: Keep bottles tightly closed and away from sources of ignition and heat.

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

**Specific end use(s)**

no data available

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

Does not contain substances above concentration limits fixing an occupational exposure limit.

**8.2 Exposure controls****Appropriate engineering controls**

no data available

**Personal protection equipment**

no data available

*Eye/face protection*

no data available

*Skin protection*

no data available

By short-term hand contact

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,12 mm

Breakthrough time (maximum wearing time): > 480 min

By long-term hand contact

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,38 mm

Breakthrough time (maximum wearing time): > 480 min

*Respiratory protection*

no data available

*Additional information*

no data available

*Environmental exposure controls*

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                      |                   |
|----------------------|-------------------|
| (a) Appearance       |                   |
| Physical state:      | liquid            |
| Colour:              | no data available |
| (b) Odour:           | no data available |
| (c) Odour threshold: | no data available |

### Safety relevant basic data

- |  |                               |
|--|-------------------------------|
| (d) pH:                                      | no data available             |
| (e) Melting point/freezing point:            | no data available             |
| (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):               | not applicable                |
| (j) Flammability or explosive limits         |                               |
| Lower explosion limit:                       | no data available             |
| Upper explosion limit:                       | no data available             |
| (k) Vapour pressure:                         | no data available             |
| (l) Vapour density:                          | no data available             |
| (m) Relative density:                        | 1.4 g/cm <sup>3</sup> (20 °C) |
| (n) Solubility(ies)                          |                               |
| Water solubility (g/L):                      | no data available             |
| Soluble (g/L) in Ethanol:                    | no data available             |
| (o) Partition coefficient: n-octanol/water:  | no data available             |
| (p) Auto-ignition temperature:               | no data available             |
| (q) Decomposition temperature:               | no data available             |
| (r) Viscosity                                |                               |
| Kinematic viscosity:                         | no data available             |
| Dynamic viscosity:                           | no data available             |
| (s) Explosive properties:                    | not applicable                |
| (t) Oxidising properties:                    | May intensify fire; oxidiser. |

### 9.2 Other information

- |                        |                   |
|------------------------|-------------------|
| Bulk density:          | no data available |
| Refraction index:      | no data available |
| Dissociation constant: | no data available |
| Surface tension:       | no data available |
| Henry's Law Constant:  | no data available |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

- Oxidising agent, strong
- Corrosive to metals

### 10.2 Chemical stability

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

**10.3 Possibility of hazardous reactions**

Explosive when mixed with combustible material.

Explosive reaction with:

Alkali metals

Alkaline earth metal

Alkali (lye)

Substance, organic

Reducing agent

Peroxides

Oil

Violent reaction with:

light metals

Powdered metals

Formation of:

Hydrogen

Exothermic reaction with:

Water

**10.4 Conditions to avoid**

Humidity

Heat

**10.5 Incompatible materials**

Metal

**10.6 Hazardous decomposition products**

no data available

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute effects**

*Acute oral toxicity:*

Nitric acid - LDLo: > 430 mg/kg - Human - (Sax)

*Acute dermal toxicity:*

no data available

*Acute inhalation toxicity:*

Nitric acid - LC50: > 2.65 mg/l (4 h) - Rat - (OECD 403)

**Irritant and corrosive effects**

*Primary irritation to the skin:*

Causes severe skin burns and eye damage.

*Irritation to eyes:*

Causes serious eye damage.

*Irritation to respiratory tract:*

not applicable

**Respiratory or skin sensitisation**

In case of skin contact: not sensitising

After inhalation: not sensitising

**STOT-single exposure**

not applicable

**STOT-repeated exposure**

not applicable

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Carcinogenicity****Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

<b>SECTION 12: Ecological information</b>
---

**12.1 Ecotoxicity****Fish toxicity:**

no data available

**Daphnia toxicity:**

no data available

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

Partition coefficient: n-octanol/water: no data available

**12.4 Mobility in soil:**

no data available

**12.5 Results of PBT/vPvB assessment**

no data available

**12.6 Other adverse effects**

no data available



## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Appropriate disposal / Product

Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal.

#### Appropriate disposal / Package

Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### Land transport (ADR/RID)

14.1	UN-No.:	2031
14.2	Proper Shipping Name:	NITRIC ACID
14.3	Class(es):	8 (5.1)
	Classification code:	CO1
	Hazard label(s):	8+5.1
14.4	Packing group:	II
14.5	Environmental hazards:	No
14.6	Special precautions for user:	
	Hazard identification number (Kemler No.):	80
	tunnel restriction code:	E
		(Passage forbidden through tunnels of category E.)

### Sea transport (IMDG)

14.1	UN-No.:	2031
14.2	Proper Shipping Name:	NITRIC ACID
14.3	Class(es):	8 (5.1)
	Classification code:	
	Hazard label(s):	8+5.1
14.4	Packing group:	II
14.5	Environmental hazards:	No
	Marine pollutant:	No
14.6	Special precautions for user:	
	Segregation group:	1
	EmS-No.	F-A S-Q
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
	not relevant	

**Air transport (ICAO-TI / IATA-DGR)**

14.1	UN-No.:	2031
14.2	Proper Shipping Name:	NITRIC ACID
14.3	Class(es):	8 (5.1)
	Classification code:	
	Hazard label(s):	8+5.1
14.4	Packing group:	II
14.5	Special precautions for user:	

## SECTION 15: Regulatory information

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

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)  
CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures  
DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)  
Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
RID - Regulation concerning the International Carriage of Dangerous Goods by Rail  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
vPvB - very Persistent, very Bioaccumulative

### Additional information

Indication of changes: none

### 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 THE PURCHASER AGREES THAT UNDER NO CIRCUMSTANCES SHALL AVANTOR BE LIABLE FOR, SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGE OF ANY TYPE OR KIND, INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.