

# SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.0  
Prepared on : 23.02.2026  
Revised on : -

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

### 1.1 Product identifiers

**Product name** Nitric acid  
**Product Number** PSR50213  
**Brand** PureSynth research chemicals  
**CAS No.** 7697-37-2

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

**Identified uses** : Laboratory Chemicals

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

**Company** PureSynth Research Chemicals GmbH.  
64683 Einhausen Marie-Curie-Straße. 3, Germany

### 1.4 Emergency telephone number

**Worldwide Helpline No.:** 1800-8908-260

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

Oxidizing liquids (Category 3), H272

Corrosive to Metals (Category 1), H290

Acute toxicity, Inhalation (Category 3), H331

Skin corrosion (Sub-category 1A), H314

Serious eye damage (Category 1), H318

### 2.2 Label elements

**Labelling according Regulation (EC) No 1272/2008**

**Pictogram**



**Signal word** Danger

**Hazard statement(s)**

H272 May intensify fire; oxidizer.  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H331 Toxic if inhaled.

EUH071 Corrosive to the respiratory tract.

**Precautionary statement(s)**

|                                |                                                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| P210                           | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.                                   |
| P234                           | Keep only in original container.                                                                                                 |
| P260                           | Do not breathe dust/ fume/ gas/ mist/ vapours / spray.                                                                           |
| P280                           | Wear protective gloves/ protective clothing/ eye protection/ face Protection/ hearing protection.                                |
| P284                           | Wear respiratory protection.                                                                                                     |
| P301 + P330 + P331             | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. .                                                                             |
| P302 + P352                    | IF ON SKIN: Wash with plenty of water.                                                                                           |
| 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. |
| P308 + P313                    | IF exposed or concerned: Get medical advice/ attention.                                                                          |
| Supplemental Hazard Statements | None                                                                                                                             |

**2.3 Other hazards:**

Contact with combustible material may cause fire. Explosive when mixed with combustible material.

**SECTION 3: Composition / information on ingredients**

**3.1 Substances**

| Common names & Synonyms | Mol. formula                                                            | CAS number     |
|-------------------------|-------------------------------------------------------------------------|----------------|
| -                       | HNO <sub>3</sub>                                                        | 7697-37-2      |
| Component               | Classification                                                          | Concentration  |
| Nitric acid             | Ox. Liq. 2; H272<br>Acute Tox. 3; H331<br>Skin Corr. 1A; H314<br>EUH071 | >= 67 - < 69 % |

**SECTION 4: First aid measures**

**Description of first aid measures**

|                                |                                                                                                                                                              |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>          | Consult a physician. Show this safety data sheet to the doctor in attendance.                                                                                |
| <b>If inhaled</b>              | If breathed in, move person into fresh air. If not breathing, give artificial respiration.                                                                   |
| <b>In case of skin contact</b> | Wash off with soap and plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Consult a physician. |
| <b>In case of eye contact</b>  | Protect unharmed eye. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.                 |
| <b>If swallowed</b>            | Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. Rinse mouth with water. |

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

No data available

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

Health injuries may be delayed. Medical supervision for minimum 48 hours.

## SECTION 5: Firefighting measures

**Extinguishing media**

**Suitable extinguishing media**

Water spray, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

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

Heating will cause pressure rise with risk of bursting

Some risk may be expected of corrosive and toxic decomposition products.

Fire may cause evolution of:  
nitrogen oxides (NO<sub>x</sub>)

Cool closed containers exposed to fire with water spray.

In fires, the product supports combustion.

Wear self-contained breathing apparatus and protective suit.

No unprotected exposed skin areas.

**Advice for fire-fighters**

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

The product itself does not burn.

Collect contaminated fire extinguishing water separately.

This must not be discharged into drains.

**Further information**

No Data Available

## SECTION 6: Accidental release measures

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

Keep people away from and upwind of spill/leak. Wear personal protective equipment. Unprotected persons must be kept away.

**Environmental precautions**

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Suppress (knock down) gases/vapours/mists with a water spray jet.

Dilute with plenty of water.

Use chemical neutralising agents

Neutralise with the following product(s): lime

Never neutralise with the following products: soda ash

**Methods and materials for containment and cleaning up**

Soak up with inert absorbent material.

Do not pick up with the help of saw-dust or other combustible substances.

Pick for disposal in tightly closed containers

Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus.

**Reference to other sections**

For disposal see section 8.

## SECTION 7: Handling and storage

|                                                                     |                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Precautions for safe handling</b>                                | Exhaust ventilation at the object is necessary. Use only acid resistant equipment. Keep limited supplies at workplace. Always have on hand a first-aid kit, together with proper instructions.                                                                                      |
| <b>Advice on protection against fire and explosion:</b>             | Keep away from combustible material.                                                                                                                                                                                                                                                |
| <b>Hygiene measures:</b>                                            | Separate rooms are required for washing, showering and changing clothes. Contaminated work clothing should not be allowed out of the workplace. Take off all contaminated clothing immediately. Wash Hands before breaks and at the end of workday. When using do not eat or drink. |
| <b>Conditions for safe storage, including any incompatibilities</b> | Store in original container. Keep in a dry, cool and well-ventilated place. Do not leave vessels/containers open Avoid product residues in/on containers. Store in a place accessible by authorized persons only.                                                                   |
| <b>Specific end use(s)</b>                                          | Advice on common storage: Do not store with combustible materials.<br>No Data Available                                                                                                                                                                                             |

## SECTION 8: Exposure controls / Personal protection

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Control parameters</b>                | Components with workplace control parameters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Exposure controls</b>                 | No data available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Appropriate engineering controls</b>  | Use with local exhaust ventilation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Personal protective equipment:</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Eye / face protection</b>             | Safety goggles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Skin protection</b>                   | Complete suit protecting against chemicals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Body Protection</b>                   | Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Respiratory protection</b>            | In the case of vapour formation use a respirator with an approved filter.<br>Glove material: Viton (R)<br>Break through time: > 60 min<br>Glove thickness: 0.7 mm<br>Vitoject® 890<br>Gloves must be inspected prior to use.<br>Replace when worn.<br>Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.                                                                                                                                                                                                                                                                                 |
| <b>Hand protection</b>                   | Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.<br>Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.<br>Manufacturer's directions for use should be observed because of great diversity of types .<br>Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH |
| <b>Control of environmental exposure</b> | Handle in accordance with local environmental regulations and good industrial practices.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## SECTION 9: Physical and chemical properties

|                                                       |                                         |
|-------------------------------------------------------|-----------------------------------------|
| <b>Appearance</b>                                     | Form: liquid<br>Colour: light yellow    |
| <b>Odour</b>                                          | Stinging                                |
| <b>pH - Value</b>                                     | Acidic                                  |
| <b>Density</b>                                        | ca. 1,420 g/cm <sup>3</sup><br>at 20 °C |
| <b>Boiling Point</b>                                  | 120.5 °C                                |
| <b>Melting Point</b>                                  | -38 °C                                  |
| <b>Solubility in water</b>                            | Completely miscible                     |
| <b>Flash point</b>                                    | No data available                       |
| <b>Vapour pressure</b>                                | 9 hPa<br>at 20 °C                       |
| <b>Auto -ignition temperature</b>                     | Not auto-flammable                      |
| <b>Vapour density</b>                                 | No data available                       |
| <b>Flammability (solid, gas)</b>                      | No data available                       |
| <b>Evaporation rate</b>                               | No data available                       |
| <b>Partition coefficient: n- octanol / water</b>      | No data available                       |
| <b>Viscosity</b>                                      | No data available                       |
| <b>Explosive properties</b>                           | No data available                       |
| <b>Upper / lower flammability or explosive limits</b> | No data available                       |
| <b>Oxidizing properties</b>                           | No data available                       |
| <b>Other safety information:</b>                      | No data available                       |

## SECTION 10: Stability and reactivity

|                                           |                                                                                                         |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                         | Stable under normal conditions.                                                                         |
| <b>Chemical stability</b>                 | No decomposition if used as directed.                                                                   |
| <b>Possibility of hazardous reactions</b> | Fire or intense heat may cause violent rupture of packages.                                             |
| <b>Condition to avoid</b>                 | Gives off hydrogen by reaction with metals.<br>Protect from heat/overheating.<br>Protect from moisture. |
| <b>Incompatible materials</b>             | Bases<br>Metals<br>Flammable materials<br>Organic materials                                             |
| <b>Hazardous decomposition products</b>   | Nitrous gases                                                                                           |

## SECTION 11: Toxicological information

|                                          |                                                                                                 |
|------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Acute inhalation toxicity</b>         | Acute toxicity estimate<br>Value: 3.84 mg/l<br>Exposure time: 4 h<br>Method: Calculation method |
| <b>Skin corrosion/irritation</b>         | Classification based on Annex VI of regulation 1272/2008/EC.                                    |
| <b>Serious eye damage/eye irritation</b> | Classification based on Annex VI of regulation 1272/2008/EC.                                    |
| <b>Respiratory or skin sensitization</b> | No data available                                                                               |
| <b>Germ cell mutagenicity</b>            | No data available                                                                               |

|                                                           |                                                                                                                                                               |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Carcinogenicity</b>                                    | IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| <b>Reproductive toxicity</b>                              | No data available                                                                                                                                             |
| <b>Specific target organ toxicity - single exposure</b>   | No data available                                                                                                                                             |
| <b>Specific target organ toxicity - repeated exposure</b> | No data available                                                                                                                                             |
| <b>Aspiration hazard</b>                                  | Causes severe burns.<br>Risk of serious damage to the lungs (by inhalation).<br>Symptoms of poisoning may appear several hours later.                         |
| <b>Additional Information</b>                             |                                                                                                                                                               |

## SECTION 12: Ecological information

|                                           |                                                                                                                                       |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Toxicity</b>                           | No data available                                                                                                                     |
| <b>Persistence and degradability</b>      | No data available                                                                                                                     |
| <b>Bioaccumulative potential</b>          | No data available                                                                                                                     |
| <b>Mobility in soil</b>                   | No data available                                                                                                                     |
| <b>Results of PBT and vPvB assessment</b> | No data available                                                                                                                     |
| <b>Other adverse effects</b>              | The methods for determining biodegradability are not applicable to inorganic substances. Neutralisation will reduce ecotoxic effects. |

## SECTION 13: Disposal considerations

|                                |                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste treatment methods</b> | Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. |
| <b>Products</b>                |                                                                                                                                                                                                                                                                                                                                              |
| <b>Contaminated packaging</b>  | Dispose of as unused product.                                                                                                                                                                                                                                                                                                                |

## SECTION 14: Transport information

|                  | UN no. | UN proper shipping name | Hazard Class(es) | Packaging group | Marine Pollutant |
|------------------|--------|-------------------------|------------------|-----------------|------------------|
| <b>ADR / RID</b> | 2031   | NITRIC ACID             | 8 (5.1)          | II              | No               |
| <b>IMDG</b>      | 2031   | NITRIC ACID             | 8 (5.1)          | II              | No               |
| <b>IATA</b>      | 2031   | Nitric acid             | 8 (5.1)          | II              | No               |

## SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### Chemical safety assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16: Other information

The information in this SDS 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. The user must be determined suitability of this information for his application.