SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.1
Prepared on : 04.06.2024
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SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name	Nitric acid
Product Number	PSR44687 / PSR39474 / PSR42850
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-StraBe. 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.
P220	Keep away from clothing and other combustible materials.
P280	Wear protective gloves/ protective clothing/ eye protection/ face Protection/ hearing protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing.
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_3	7697-37-2

Component	Classification	Concentration
Nitric acid	Ox. Liq. 2; H272 Acute Tox. 3; H331 Skin Corr. 1A; H314 EUH071	>= 67 - < 69 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
In case of skin contact	Wash off with soap and plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Consult a physician.
In case of eye contact	Protect unharmed eye. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
If swallowed	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 (CO2), 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 (NOx)
Advice for fire-fighters	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. 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.
Methods and materials for containment and cleaning up	Use chemical neutralising agents Neutralise with the following product(s): lime Never neutralise with the following products: soda ash 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

Precautions for safe handling	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.
Advice on protection against fire and explosion:	Keep away from combustible material.

Hygiene measures:	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.
Conditions for safe storage, including any incompatibilities	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.
Specific end use(s)	Advice on common storage: Do not store with combustible materials. No Data Available

SECTION 8: Exposure controls / Personal protection

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

SECTION 9: Physical and chemical properties

Appearance	Form: liquid Colour: light yellow
Odour	Stinging
pH - Value	Acidic
Density	ca. 1,420 g/cm3 at 20 °C
Boiling Point	120.5 °C
Melting Point	-38 °C
Solubility in water	Completely miscible
Flash point	No data available
Vapour pressure	9 hPa at 20 °C
Auto -ignition temperature	Not auto-flammable
Vapour density	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Partition coefficient: n- octanol / water	No data available
Viscosity	No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidizing properties	No data available

Other safety information: No data available

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

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

Carcinogenicity	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.
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure Aspiration hazard	No data available
Additional Information	Causes severe burns. Risk of serious damage to the lungs (by inhalation). Symptoms of poisoning may appear several hours later.

SECTION 12: Ecological information

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

SECTION 13: Disposal considerations

Waste treatment methods Products	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.
Contaminated packaging	Dispose of as unused product.

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	2031	NITRIC ACID	8 (5.1)	II	No
IMDG	2031	NITRIC ACID	8 (5.1)	II	No
IATA	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.