SAFETY DATA SHEET

Nitric acid 68%

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: Nitric acid 68%

Product no.: 4337

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

Relevant identified uses of the substance or mixture: Laboratory use

Uses advised against :

Sectors of use	Description
SU 4	Manufacture of food products

1.3. Details of the supplier of the safety data sheet

Company and address:

Laboratoriumdiscounter
Zandvoortstraat 75
1976BN Ijmuiden
Netherlands
Tel: +31 255 700 210
www.laboratoriumdiscounter.nl/en/

E-mail: info@laboratoriumdiscounter.nl

Revision: 22/02/2023

SDS Version: 1.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 “First aid measures”.

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Ox. Liq. 2; H272, May intensify fire; oxidiser.
Met. Corr. 1; H290, May be corrosive to metals.
Skin Corr. 1; H314, Causes severe skin burns and eye damage.
Skin Corr. 1A; H314, Causes severe skin burns and eye damage.
Eye Dam. 1; H318, Causes serious eye damage.
Acute Tox. 1; H330, Fatal if inhaled.
Acute Tox. 3; H331, Toxic if inhaled.

2.2. Label elements

Hazard pictogram(s):

Signal word: Danger

Hazard statement(s):	May intensify fire; oxidiser. (H272) May be corrosive to metals. (H290) Causes severe skin burns and eye damage. (H314) Causes severe skin burns and eye damage. (H314) Fatal if inhaled. (H330) Toxic if inhaled. (H331)
Safety statement(s):	
General:	-
Prevention:	Do not breathe vapour/mist. (P260) [In case of inadequate ventilation] wear respiratory protection. (P284) Wear eye protection/protective gloves/protective clothing. (P280) Use only outdoors or in a well-ventilated area. (P271)
Response:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. (P304+P340) Immediately call a POISON CENTER/doctor. (P310) IF SWALLOWED: Immediately call a POISON CENTER/doctor. (P301+P310) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . (P303+P361+P353) Absorb spillage to prevent material damage. (P390)
Storage:	Store in a well-ventilated place. Keep container tightly closed. (P403+P233) Store locked up. (P405)
Disposal:	Dispose of contents/container in accordance with local regulation. (P501)
Hazardous substances:	nitric acid ...% [C ≤ 70 %]
Additional labelling:	Not applicable.

2.3. Other hazards

Additional warnings:	This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
nitric acid ...% [C ≤ 70 %]	CAS No.: 7697-37-2 EC No.: 231-714-2 UK-REACH: Index No.: 007-030-00-3	60-80%	EUH071 Ox. Liq. 2, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Acute Tox. 1, H330	[1]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information:

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.
Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation:

Upon breathing difficulties or irritation of the respiratory tract: Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

Skin contact:

Flush exposed area with water for a long time - at least 30 minutes. It may be necessary to flush for several hours. Use a comfortable water temperature (20-30 °C). Contact Poison Information/doctor/hospital for further advice on follow-up and treatment.
Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin

	cleanser can be used. DO NOT use solvents or thinners. If skin irritation occurs: Get medical advice/attention.
Eye contact:	Upon irritation of the eye: Remove contact lenses. Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.
Ingestion:	In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit returning mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.
Burns:	Rinse with water until pain stops then continue to rinse for 30 minutes.

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

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

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

IF exposed or concerned:
Get immediate medical advice/attention.

Information to medics:	Bring this safety data sheet or the label from this product.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: 2R

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.
Avoid direct contact with spilled substances.
Avoid inhalation of vapours from spilled material.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. Methods and material for containment and cleaning up

Use only non-sparking tools. Clean up manually and place in appropriate containers for disposal. Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid direct contact with the product.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Must be stored in a cool and well-ventilated area, away from possible sources of ignition.
Store in a container with a resistant inner liner.

Recommended storage material:	Keep only in original packaging.
Storage temperature:	Room temperature 15 to 25°C
Incompatible materials:	Aluminium Amines Bases Combustible materials Combustible products Copper Metal Reducing agents

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

nitric acid ...% [C ≤ 70 %]
No substances are listed in the national list of substances with an occupational exposure limit.

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

Control is unnecessary if the product is used as intended.

General recommendations:	Smoking, drinking and consumption of food is not allowed in the work area.
Exposure scenarios:	There are no exposure scenarios implemented for this product.
Exposure limits:	Occupational exposure limits have not been defined for the substances in this product.
Appropriate technical measures:	Apply standard precautions during use of the product. Avoid inhalation of vapours.
Hygiene measures:	In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.
Measures to avoid environmental exposure:	Keep damming materials near the workplace. If possible, collect spillage during work.

8.3. Individual protection measures, such as personal protective equipment

Generally: Wash contaminated clothing before reuse. Use only UKCA marked protective equipment.

Respiratory Equipment:

Type	Class	Colour	Standards	
E	Class 3 (High capacity)	Yellow	EN14387	

Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Fluoropolymer elastomer (e.g. Viton®)	0,35	> 120	EN374-2, EN374-3, EN388	

Eye protection:

Type	Standards	
Safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Yellowish
Odour / Odour threshold:	Acidic (Odour treshold: 0.29 ppm)
pH:	1.2 - 1
Density (g/cm³):	1.39
Kinematic viscosity:	Testing not relevant or not possible due to the nature of the product.
Particle characteristics:	Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C):	-38
Softening point/range (waxes and pastes) (°C):	Does not apply to liquids.
Boiling point (°C):	122
Vapour pressure:	Testing not relevant or not possible due to the nature of the product.
Relative vapour density:	Testing not relevant or not possible due to the nature of the product.
Decomposition temperature (°C):	83

Data on fire and explosion hazards

Flash point (°C):	Testing not relevant or not possible due to the nature of the product.
Flammability (°C):	Testing not relevant or not possible due to the nature of the product.
Auto-ignition temperature (°C):	Testing not relevant or not possible due to the nature of the product.
Lower and upper explosion limit (% v/v):	Testing not relevant or not possible due to the nature of the product.

Solubility

Solubility in water:	500g/l
n-octanol/water coefficient:	Testing not relevant or not possible due to the nature of the product.
Solubility in fat (g/L):	Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Other physical and chemical parameters:	No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability
The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
Aluminium
Amines
Bases
Combustible materials
Combustible products
Copper
Metal
Reducing agents

10.6. Hazardous decomposition products
The product is not degraded when used as specified in section 1.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity
Fatal if inhaled.
Toxic if inhaled.

Skin corrosion/irritation
Causes severe skin burns and eye damage.
Causes severe skin burns and eye damage.

Serious eye damage/irritation
Causes serious eye damage.

Respiratory sensitisation
Based on available data, the classification criteria are not met.

Skin sensitisation
Based on available data, the classification criteria are not met.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Long term effects

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

Endocrine disrupting properties

Not applicable.

Other information

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Endocrine disrupting properties

Not applicable.

12.7. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product is covered by the regulations on hazardous waste.
HP 2 – Oxidising
HP 6 - Acute toxicity
HP 8 – Corrosive
Dispose of contents/container to an approved waste disposal plant.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

Not applicable.

Specific labelling

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN2031	NITRIC ACID	Class: 8 Labels: 8+5.1 Classification code: CO1 	II	No	Limited quantities: 1 L Tunnel restriction code: (E) See below for additional information.
IMDG	UN2031	NITRIC ACID	Class: 8 Labels: 8+5.1 Classification code: CO1 	II	No	Limited quantities: 1 L EmS: F-A S-B* See below for additional information.
IATA	UN2031	NITRIC ACID	Class: 8 Labels: 8+5.1 Classification code: CO1 	II	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

ADR / See Table A, Section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.
IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.
IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.
This product is within scope of the regulations of transport of dangerous goods.
Hazchem Code: 2R

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance

or mixture

Restrictions for application:	Restricted to professional users. People under the age of 18 shall not be exposed to this product.
Demands for specific education:	No specific requirements.
SEVESO - Categories / dangerous substances:	H1 - ACUTE TOXIC, Qualifying quantity (lower-tier): 5 tonnes / (upper-tier): 20 tonnes P8 - OXIDISING LIQUIDS AND SOLIDS, Qualifying quantity (lower-tier): 50 tonnes / (upper-tier): 200 tonnes
Regulation on explosives precursors:	nitric acid ...% [C ≤ 70 %] (Annex I)
Additional information:	Not applicable.
Sources:	The Management of Health and Safety at Work Regulations 1999. Control of Major Accident Hazards (COMAH) Regulations 2015. Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law. Council Regulation (EC) No 2019/1148 on explosives precursors as retained and amended in UK law. Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3

EUH071, Corrosive to the respiratory tract.
H272, May intensify fire; oxidiser.
H290, May be corrosive to metals.
H314, Causes severe skin burns and eye damage.
H318, Causes serious eye damage.
H330, Fatal if inhaled.

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service

CE = Conformité Européenne
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.
The classification of the mixture in regard to physical hazards has been based on experimental data.

The safety data sheet is validated by

Chris

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product.
Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en