

Trade name: Acid nitricum 60%

Substance number: 204375

Version: 7 / CH

Date revised: 16.10.2023

Replaces Version: 6 / CH

Print date: 16.10.23

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

1.1. Product identifier

Acid nitricum 60%

Item No. 20437500

Registration no.

Registration no. 01-2119487297-23-XXXX

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Hänseler AG

Industriestrasse 35

9100 Herisau

Telephone no. 0041 (0)71 353 58 58

E-mail address of sdb@haenseler.ch

person responsible
for this SDS

1.4. Emergency telephone number

Switzerland :145 / Abroad +41 (0)44 251 51 51

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Met. Corr. 1 H290

Acute Tox. 3 H331

Skin Corr. 1A H314

Eye Dam. 1 H318

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008

For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H290 May be corrosive to metals.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

EUH071 Corrosive to the respiratory tract.

Precautionary statements

P234 Keep only in original packaging.

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P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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 or doctor.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains nitric acid ...% [C <= 70 %]

2.3. Other hazards

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Alcoholic solution

Molecular weight

Value 63.01 g/mol

Hazardous ingredients**nitric acid ...% [C <= 70 %]**

CAS No.	7697-37-2
EINECS no.	231-714-2
Concentration	>= 50 < 65 %
Classification (Regulation (EC) No. 1272/2008)	
	Ox. Liq. 3 H272
	Met. Corr. 1 H290
	Acute Tox. 3 H331
	Skin Corr. 1A H314

Concentration limits (Regulation (EC) No. 1272/2008)

	Ox. Liq. 3	H272	>= 65 %
	Skin Corr. 1A	H314	>= 20 %
	Skin Corr. 1B	H314	>= 5 < 20 %
ATE	oral	1'500	mg/kg
cATpE	inhalative, Dust/Mist	0.5	mg/l
ATE	inhalative, Vapors	2.65	mg/l

Additional remarks:

CLP Regulation (EC) No 1272/2008, Annex VI, Note B

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove affected person from danger area, lay him down. Adhere to personal protective measures when giving first aid. Keep under medical supervision for at least 48 hours. Remove contaminated, soaked clothing immediately and dispose of safely.

After inhalation

Remove the casualty into fresh air and keep him calm. Irregular breathing/no breathing: artificial

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respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

After skin contact

Wash off immediately with soap and water and rinse well. Summon a doctor immediately. Causes severe burns.

After eye contact

Shield unaffected eye. Separate eyelids, wash the eyes thoroughly with water (15 min.). Summon a doctor immediately.

After ingestion

Rinse out mouth and give plenty of water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting. Summon a doctor immediately.

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

Irritating to respiratory system. Irritation of mucosa, Chemical burn, Vomiting

4.3. Indication of any immediate medical attention and special treatment needed**Hints for the physician / treatment**

Treat symptomatically

Hints for the physician / hazards

Frequent and persistent contact with the skin can cause dermatitis. Risk of stomach perforation

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water mist, Alcohol-resistant foam, Dry chemical extinguisher, Carbon dioxide

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released: Nitrogen oxides (NO_x)

5.3. Advice for firefighters**Special protective equipment for fire-fighting**

Use self-contained breathing apparatus. Wear full protective suit.

Other information

Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Keep away unprotected persons. Wear protective equipment. Ensure supply of fresh air. Avoid contact with eyes and skin. Do not inhale vapours. Respiratory protection

6.2. Environmental precautions

Suppress gases/vapours/mists with water spray jet. Do not discharge into the drains/surface waters/groundwater. Advise water authority if spillage has entered water course or drainage system.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (eg sand, kieselguhr). When picked up, treat material as prescribed under Section 13 "Disposal". Ensure adequate ventilation. Pick up rest with weakly alkaline solution.

6.4. Reference to other sections

Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep container tightly closed. Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid formation of aerosols. Wear protective equipment. Wear respiratory protection when spraying.

Advice on protection against fire and explosion

The product is not combustible. Oxidizing. Explosive in mixture with organic substances.

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage temperature

Value < 25 °C

Requirements for storage rooms and vessels

Keep only in original packaging. Provide acid-resistant floor. Use stainless steel containers. Use PVC containers. Use glass containers. Unsuitable material: Do not use containers, lines etc. made of copper or copper alloys. Do not use zinc containers. Polypropylene

Hints on storage assembly

Do not store with combustible materials. Do not store together with textiles.

Storage classes

Storage category (Switzerland)	6.1	Toxic substances
Storage class according to TRGS 510	5.1B	Oxidising hazardous substances

Further information on storage conditions

Keep in a cool place. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.2. Exposure controls

General protective and hygiene measures

Hold eye wash fountain available. Keep away from food-stuffs, beverages and feed-stocks. Remove contaminated, soaked clothing immediately and dispose of safely. Wash hands before breaks and after work. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes.

Respiratory protection

Short term: filter apparatus; combination filter BE-P2; EN 141; Gas filter E. At intensive and longer exposition use self-contained breathing apparatus.

Hand protection

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Appropriate Material	Fluoro carbon rubber - FKM
Material thickness	0.4 mm
Breakthrough time	> 480 min
Hand protection must comply with EN 374.	
Appropriate Material	Natural Latex
Material thickness	0.5 mm
Breakthrough time	> 480 min
Appropriate Material	Polychloroprene
Material thickness	0.5 mm
Breakthrough time	> 480 min
Appropriate Material	Butyl rubber
Material thickness	0.5 mm

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Breakthrough time > 480 min

Eye protection

Safety glasses with side protection shield; Face shield; Eye protection must comply with EN 166.

Body protection

Impermeable protective clothing; apron

Environmental exposure controls

Do not allow to enter drains or water courses.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Physical state** liquid**Colour** colourless**Odour** acrid**Freezing point**Value < 1 °C
Pressure 1013 hPa**Boiling point or initial boiling point and boiling range**Value > 100 °C
Pressure 1013 hPa**Flammability**

Not self inflammable

Flash pointValue °C
Remarks Not applicable**Decomposition temperature**

Value 83 °C

pH value

Value -1.2 to -1.0

ViscosityValue 0.75 mPa.s
Temperature 25 °C
Remarks undiluted product**Vapour pressure**Value 9.5 hPa
Temperature 20 °C**Density and/or relative density**Value appr. 1.3 to 1.4 g/cm³
Temperature 20 °C**9.2. Other information****Odour threshold**

Value 0.29 µg/l

Solubility in waterValue > 500 g/l
Temperature 20 °C
Remarks Completely miscible**Other information**

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The product is not dangerous for explosions.

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

No decomposition if stored and applied as directed. Protect from light.

10.3. Possibility of hazardous reactions

Keep away from free radical initiators, peroxides, strong alkalis or reactive metals.

10.4. Conditions to avoid

Keep away from sources of heat and ignition. Flames. Sparks. Protect from light.

10.5. Incompatible materials

Avoid contact with: Bases, Reactions with combustible substances. Build-up strong heat when diluted or dissolved in water. Partly very violent reactions with bases and numerous organic classes of substances such as alcohols and amines. Forms nitrous gases and hydrogen on action upon metals.

10.6. Hazardous decomposition products

Hydrogen, Nitrous gases, Corrosive gases/vapours

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity

ATE	2'459.01	mg/kg
	64	
Method	calculated value (Regulation (EC) No. 1272/2008)	

Acute oral toxicity (Components)

nitric acid ...% [C <= 70 %]

Species	rat	
NOAEL	1500	mg/g
Duration of exposure	1	d
Method	OECD 422	

Acute inhalational toxicity

ATE	4.3443	mg/l
Administration/Form	Vapors	
Method	calculated value (Regulation (EC) No. 1272/2008)	
ATE	0.8197	mg/l
Administration/Form	Dust/Mist	
Method	calculated value (Regulation (EC) No. 1272/2008)	

Acute inhalative toxicity (Components)

nitric acid ...% [C <= 70 %]

ATE	2.65	mg/l
Administration/Form	Vapors	

Skin corrosion/irritation

Remarks Corrosive action on the skin and mucous membrane.

Skin corrosion/irritation (Components)

nitric acid ...% [C <= 70 %]

evaluation	corrosive
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Serious eye damage/irritation

evaluation strongly corrosive

Serious eye damage/irritation (Components)**nitric acid ...% [C <= 70 %]**

evaluation corrosive

Sensitization

Remarks No sensitisation effect known.

Mutagenicity (Components)**nitric acid ...% [C <= 70 %]**evaluation No mutagenicity according to various in vitro tests.
Method OECD 471**nitric acid ...% [C <= 70 %]**Route of exposure oral
Species mouse
evaluation No experimental indications on genotoxicity in vivo found.**nitric acid ...% [C <= 70 %]**

Method OECD 473

Reproduction toxicity (Components)**nitric acid ...% [C <= 70 %]**Route of exposure oral
Species rat
Dose >= 1500 mg/kg/d
evaluation Based on available data, the classification criteria are not met.
Method OECD 422**Carcinogenicity (Components)****nitric acid ...% [C <= 70 %]**

Remarks No data available

11.2 Information on other hazards**Endocrine disrupting properties with respect to humans**

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

Experience in practice

Damage to the lungs possible. After Swallowing: burns in mouth, throat, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.

SECTION 12: Ecological information *****12.1. Toxicity****Fish toxicity (Components)****nitric acid ...% [C <= 70 %]**Species rainbow trout (*Oncorhynchus mykiss*)
LC50 12.5 mg/l
Duration of exposure 96 h**Daphnia toxicity (Components)****nitric acid ...% [C <= 70 %]**Species Ceriodaphnia dubia
EC50 4.6 mg/l
Duration of exposure 48 h

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Method US-EPA

Bacteria toxicity (Components)

nitric acid ...% [C <= 70 %]

EC0 794 mg/l

12.2. Persistence and degradability**General information**

No data available

Biodegradability (Components)

nitric acid ...% [C <= 70 %]

Remarks Inorganic product, cannot be eliminated from the water by biological purification processes.

12.3. Bioaccumulative potential**General information**

Not applicable

Octanol/water partition coefficient (log Pow) (Components)

nitric acid ...% [C <= 70 %]

log Pow -0.21

12.4. Mobility in soil**General information**

No data available

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

Not applicable

Results of PBT and vPvB assessment ***The product contains no PBT substances
The product contains no vPvB substances.**12.6 Endocrine disrupting properties****Endocrine disrupting properties with respect to the environment**

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects**General information**

The product causes changes in the pH value in the test system. The result relates to the unneutralized sample. Do not allow it to reach soil, ground water, water bodies or sewage system.

General information / ecologyProduct is hazardous to water. Do not allow it to reach ground water, water bodies or sewage system.
Hazard for drinking water supplies.**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations for the product**

Disposal in compliance with local and national regulations.

Disposal recommendations for packaging

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Dispose of as unused product.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	E		
14.1. UN number	2031	2031	2031
14.2. UN proper shipping name	NITRIC ACID, Solution	NITRIC ACID, Solution	NITRIC ACID, Solution
14.3. Transport hazard class(es)	8	8	8
Subsidiary risk	5.1	5.1	5.1
Label			
14.4. Packing group	II	II	II
Limited Quantity	1 I		
Transport category	2		

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Water Hazard Class (Germany)**

Water Hazard Class (Germany) WGK 1

Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information**Hazard statements listed in Chapter 3**

H272 May intensify fire; oxidizer.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H331 Toxic if inhaled.

CLP categories listed in Chapter 3

Acute Tox. 3 Acute toxicity, Category 3
Eye Dam. 1 Serious eye damage, Category 1
Met. Corr. 1 Substance or mixture corrosive to metals, Category 1
Ox. Liq. 3 Oxidising liquid, Category 3

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Skin Corr. 1A

Skin corrosion, Category 1A

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.