Safety Data Sheet

according to 29 CFR 1910.1200(g)

Alkoholische Salpetersäure 5% Nital

1. Identification

Product identifier

Alkoholische Salpetersäure 5% Nital

Further trade names

Alkoholische Salpetersäure 5% Nital / Alcoholic nitric acid, 5% Nital
order number 92006878 - 1 L

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Reagents and laboratory chemicals (Etching agent)
Restricted to professional users.

Details of the supplier of the safety data sheet

Manufacturer

Company name:	ATM Qness GmbH
Street:	Emil-Reinert-Straße 2
Place:	D-57636 Mammelzen
Telephone:	+49 (0) 2681 95390
E-mail:	info@qatm.com
Contact person:	info@qatm.com

Importer/Only Representative

Company name:	Verder Scientific Inc.
Street:	11 Penns Trail
Place:	USA Newtown, PA 18940
Telephone:	+1 866-473-8724
E-mail:	info-us@verder-scientific.com

Emergency phone number: Global Access Code: 333498 (Europe: +44 20 35147487 / Americas: +1 866 519 4752 / Middle East/Africa: +1 760 476 3959 / Asia/Pacific: +1 760 476 3960)

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200

Flammable liquids: Category 2
Corrosive to metals: Category 1
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 1

Label elements

29 CFR Part 1910.1200

Signal word: Danger

Pictograms:

Hazard statements

Highly flammable liquid and vapor
May be corrosive to metals
Causes skin irritation
Causes serious eye damage

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Keep only in original container.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
In case of fire: Use sand, earth, extinguishing powder or foam to extinguish.
Absorb spillage to prevent material damage.
Store in a well-ventilated place. Keep cool.
Store in corrosive resistant container with a resistant inner liner.
Dispose of waste according to applicable legislation.

Additional advice on labelling

GHS label elements, including precautionary statements: none

Hazards not otherwise classified

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

3. Composition/information on ingredients

Mixtures

Relevant ingredients

CAS No	Components	Quantity
64-17-5	ethanol; ethyl alcohol	68.51 %
7697-37-2	nitric acid	5 %

Further Information

The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Remove casualty to fresh air and keep warm and at rest. If experiencing respiratory symptoms: Call a doctor.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin irritation, consult a physician.

After contact with eyes

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. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth. Observe risk of aspiration if vomiting occurs. Never give anything by mouth to an unconscious person or a person with cramps. Call a doctor if you feel unwell. Rinse mouth.

Most important symptoms and effects, both acute and delayed

Dizziness, Inebriation, Narcotic effects
Vomiting

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2), Water spray jet
Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet

Specific hazards arising from the chemical

Highly flammable. Vapors may form explosive mixtures with air.
In case of fire may be liberated: Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx), Pyrolysis products, toxic

Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe gas/fume/vapor/spray. Avoid contact with skin, eyes and clothes. Evacuate area.

For non-emergency personnel

Remove all sources of ignition. Provide adequate ventilation. Use personal protection equipment.

For emergency responders

Wear personal protection equipment (refer to section 8).

Environmental precautions

Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up

For containment

Stop leak if safe to do so. Cover drains.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.
Ventilate affected area.

Other information

Use only non-sparking tools.
Clean contaminated articles and floor according to the environmental legislation.

Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8
Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Provide adequate ventilation. Do not breathe gas/fume/vapor/spray. Avoid contact with skin, eyes and clothes.
Avoid: aerosol or mist formation
Use personal protection equipment.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.
Vapors may form explosive mixtures with air. Use only non-sparking tools.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Store in a well-ventilated place. Keep cool. Keep/Store only in original container.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances. metals.

Further information on storage conditions

Protect against: Heat

8. Exposure controls/personal protection

Control parameters

Exposure limits

CAS No	Substance	ppm	mg/m³		Category	Origin
78-93-3	2-Butanone (Methyl ethyl ketone)	200	590		TWA (8 h)	PEL
78-93-3	2-Butanone	200	590		TWA (8 h)	REL
		300	885		STEL (15 min)	REL
67-63-0	2-Propanol	200	491		TWA (8 h)	ACGIH-2025
		400	984		STEL (15 min)	ACGIH-2025
64-17-5	Ethanol	1000	1880		STEL (15 min)	ACGIH-2025
64-17-5	Ethyl alcohol (Ethanol)	1000	1900		TWA (8 h)	PEL
64-17-5	Ethyl alcohol	1000	1900		TWA (8 h)	REL
67-63-0	Isopropyl alcohol	400	980		TWA (8 h)	PEL
		400	980		TWA (8 h)	REL
		500	1225		STEL (15 min)	REL
78-93-3	Methyl ethyl ketone	75			TWA (8 h)	ACGIH-2025
		150			STEL (15 min)	ACGIH-2025
7697-37-2	Nitric acid	2	5		TWA (8 h)	PEL
		2	5		TWA (8 h)	REL
		4	10		STEL (15 min)	REL
7697-37-2	Nitric acid	2	5.2		TWA (8 h)	ACGIH-2025
		4	10		STEL (15 min)	ACGIH-2025

Biological Exposure Indices (BEI-ACGIH)

CAS No	Substance	Determinant	Value	Test material	Sampling time
67-63-0	2-PROPANOL	Acetone	40 mg/L	urine	End of shift at end of workweek
78-93-3	METHYL ETHYL KETONE	Methyl ethyl ketone	2 mg/L	urine	End of shift

Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses. EN ISO 16321 (EN 166).

Hand protection

Wear suitable gloves. (EN ISO 374)
Suitable material: FKM (fluoro rubber)
Breakthrough time: >= 480 min
Thickness of the glove material: 0,4 mm

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the

specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: insufficient ventilation, exceeding exposure limit values, aerosol or mist formation

Thermal hazards

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Environmental exposure controls

Avoid release to the environment.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid
Color:	colorless
Odor:	characteristic
Odour threshold:	not determined
Melting point/freezing point:	-114,5 °C
Boiling point or initial boiling point and boiling range:	78 °C
Flammability:	Highly flammable
Lower explosion limits:	3,5 vol. %
Upper explosion limits:	15 vol. %
Flash point:	13 °C
Auto-ignition temperature:	425 °C
Decomposition temperature:	not determined
pH-Value (at 20 °C):	< 1
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	1000 g/l
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapor pressure: (at 20 °C)	59 hPa
Density (at 20 °C):	0,8 g/cm³
Relative vapour density:	not determined
Particle characteristics:	not applicable

Other information

Information with regard to physical hazard classes

Explosive properties

Vapors may form explosive mixtures with air.

Sustained combustibility:	Sustained combustibility

Other safety characteristics

Solvent content:	97 %

Further Information

No information available.

10. Stability and reactivity

Reactivity

Highly flammable. Corrosive to metals

Chemical stability

Stability: Stable

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

Hazardous reactions: May occur

Vapors may form explosive mixtures with air.

Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Incompatible materials

Oxidizing agent. Pyrophoric or self-heating substances. metals.

Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx), Pyrolysis products, toxic

11. Toxicological information

Route(s) of Entry

oral, Skin contact, Eye contact, Inhalation.

Information on toxicological effects

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 50 mg/l; ATE (inhalation dust/mist) > 12.5 mg/l

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol; ethyl alcohol				
	oral	LD50 10470 mg/kg	Rat	Pre-supplier/manufacturer	
	inhalation (4 h) vapour	LC50 124,7 mg/l	Rat	Pre-supplier/manufacturer	
7697-37-2	nitric acid				
	inhalation (4 h) vapour	LC50 2,65 mg/l	ECHA	Rat	

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation

Serious eye damage/eye irritation: Causes serious eye damage

Sensitizing effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Specific target organ toxicity (STOT) - single exposure

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

Specific target organ toxicity (STOT) - repeated exposure

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

Carcinogenicity (OSHA):	No ingredient of this mixture is listed.
Carcinogenicity (IARC):	Ethanol in alcoholic beverages (CAS 64-17-5) is listed in group 1. Isopropyl alcohol (CAS 67-63-0) is listed in group 3.
Carcinogenicity (NTP):	No ingredient of this mixture is listed.

Aspiration hazard

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

Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

No information available.

12. Ecological information

Ecotoxicity

Damaging effect on aquatic ecosystems possible due to change in the pH value.

Persistence and degradability

The product has not been tested.

Bioaccumulative potential

The product has not been tested.

Mobility in soil

The product has not been tested.

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Other adverse effects

Damaging effect on aquatic ecosystems possible due to change in the pH value.

Further information

Before discharge into sewage plants the product normally needs to be neutralised.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Collect the waste separately. Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

14. Transport information

U.S. DOT 49 CFR 172.101

UN number or ID number:	UN 2924

Proper shipping name: FLAMMABLE LIQUIDS, CORROSIVE, N.O.S. (ethanol; ethyl alcohol, nitric acid [C<= 70 %])

Transport hazard class(es): 3

Packing group: II

Hazard label: 3, 8

Marine transport (IMDG)

UN number or ID number: UN 2924

UN proper shipping name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ethanol; ethyl alcohol, nitric acid [C<= 70 %])

Transport hazard class(es): 3

Packing group: II

Hazard label: 3+8

Marine pollutant: -

Special Provisions: 274

Limited quantity: 1 L

Excepted quantity: E2

EmS: F-E, S-C

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number: UN 2924

UN proper shipping name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ethanol; ethyl alcohol, nitric acid [C<= 70 %])

Transport hazard class(es): 3

Packing group: II

Hazard label: 3+8

Special Provisions: A3

Limited quantity Passenger: 0.5 L

Passenger LQ: Y340

Excepted quantity: E2

IATA-packing instructions - Passenger: 352

IATA-max. quantity - Passenger: 1 L

IATA-packing instructions - Cargo: 363

IATA-max. quantity - Cargo: 5 L

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

Special precautions for user

Warning: Flammable liquids! Vapors may form explosive mixtures with air. Corrosive to metals.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

15. Regulatory information

U.S. Regulations

National Inventory TSCA

CAS No.: 64-17-5: listed
CAS No.: 67-63-0: listed
CAS No.: 7697-37-2: listed
CAS No.: 78-93-3: listed

National regulatory information

SARA Section 302 Extremely hazardous substances:
Nitric acid (conc. < 80%) (7697-37-2): Reportable quantity = 1,000 lbs., Threshold planning quantity = 1,000 lbs.
SARA Section 304 CERCLA:
Nitric acid (conc. < 80%) (7697-37-2): Reportable quantity = 1,000 (454) lbs. (kg)
Methyl ethyl ketone (78-93-3): Reportable quantity = 5,000 (2270) lbs. (kg)
SARA Section 311/312 Hazards:
ethanol; ethyl alcohol (64-17-5): Fire hazard, Immediate (acute) health hazard
Nitric acid (conc. < 80%) (7697-37-2): Fire hazard, Immediate (acute) health hazard
Isopropyl alcohol (mfg-strong acid process) (67-63-0): Fire hazard, Immediate (acute) health hazard
Methyl ethyl ketone (78-93-3): Fire hazard, Immediate (acute) health hazard
SARA Section 313 Toxic release inventory:
Nitric acid (conc. < 80%) (7697-37-2): De minimis limit = 1.0 %, Reportable threshold = Standard
Isopropyl alcohol (mfg-strong acid process) (67-63-0): De minimis limit = 1.0 %, Reportable threshold = Standard
Clean Air Act Section 112(b):
Methyl ethyl ketone (78-93-3)

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Revision date:	10.12.2025
Revision No:	1.1

Abbreviations and acronyms

CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
OSHA: Occupational Safety and Health Administration
UN: United Nations
ACGIH: American Conference of Governmental Industrial Hygienists
ATE: Acute Toxicity Estimates
BCF: Bio-Concentration Factor
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
STEL: Short-Term Exposure Limit
TWA: Time Weighted Average
VOC: Volatile Organic Compounds
DIN: Deutsches Institut für Normung e.V. (German Institute for Standardization)
EN: European Standard
ISO: International Organization for Standardization
IUCLID: International Uniform ChemicaL Information Database
LC50: Lethal Concentration, 50 %
LD50: Lethal Dose, 50 %
LL50: Lethal Loading, 50 %
OECD: Organisation for Economic Co-operation and Development
EC50: Effective Concentration 50 %
EL50: Effect Loading, 50 %
ErC50: Effective Concentration 50 %, growth rate
NOEC: No Observed Effect Concentration
DGR: Dangerous Goods Regulations
DOT: Department Of Transportation
EmS: Emergency Schedules
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
ICAO: International Civil Aviation Organization
IE: Industrial Emissions
IMDG: International Maritime Code for Dangerous Goods
LQ: Limited Quantity
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
TI: Technical Instructions
IARC: International Agency for Research on Cancer
NFPA: National Fire Protection Association
NTP: National Toxicology Program
SARA: Superfund Amendments and Reauthorization Act
TSCA: Toxic Substances Control Act

Key literature references and sources for data

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations). (v.1.2, 2013)

Other data

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.
Observe in addition any national regulations!

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)