

Safety Data Sheet

according to UK REACH Regulation

Nital 10% (aq)

Revision date: 06.04.2022

Product code:

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

1.1. Product identifier

Nital 10% (aq)

UFI: KQ6V-P3QC-GU9Q-A9WT

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

Use of the substance/mixture

Laboratory chemical

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	Schmitz-Metallographie GmbH	
Street:	Kaiserstraße 100	
Place:	D-52134 Herzogenrath	
Telephone:	02407 / 568296-0	Telefax: 02407 / 568296-9
e-mail:	info@schmitz-metallographie.de	
Contact person:	Herr Füllmann	
e-mail:	info@schmitz-metallographie.de	
Internet:	www.schmitz-metallographie.de	
Responsible Department:	Dr. Gans-Eichler	e-mail: info@tge-consult.de
	Chemieberatung GmbH	Tel.: +49(0)2534 6441185
	Otto-Hahn-Str. 36	www.tge-consult.de
	D-48161 Münster	

1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Met. Corr. 1; H290
Skin Corr. 1B; H314
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

nitric acid ... %

Signal word: Danger

Pictograms:



Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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/doctor.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Special labelling of certain mixtures

EUH071 Corrosive to the respiratory tract.

2.3. Other hazards

For information or further instructions, see also section 11 or 12.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization
in aqueous solution

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7697-37-2	nitric acid ... %			1 - < 3 %
	231-714-2	007-030-00-3	01-2119487297-23	
	Ox. Liq. 3, Acute Tox. 3, Skin Corr. 1A; H272 H331 H314 EUH071			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7697-37-2	231-714-2	nitric acid ... %	1 - < 3 %
	inhalation: ATE 2,65 mg/kg (vapours); inhalation: LC50 = 2500 ppm (gases) Ox. Liq. 3; H272: >= 65 - 100 Skin Corr. 1A; H314: >= 20 - 100 Skin Corr. 1B; H314: >= 5 - < 20		

Further information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Provide fresh air. Put victim at rest, cover with a blanket and keep warm. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. Immediately call a POISON CENTER/doctor/.

After contact with skin

Take off immediately all contaminated clothing. After contact with skin, wash immediately with: Water and soap. Call a physician immediately.

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After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Seek medical advice immediately. Let water be drunk in little sips (dilution effect). Do NOT induce vomiting.

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

acute danger of asphyxia due to spasm or glottis at high doses of nitrous gases by inhalation. , Prolonged and repeated inhalation of decomposition products may cause a pulmonary oedema..

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

Corroded eyes (again) rinse several minutes with Isogutt or water; Thereafter 5-10% ascorbic acid and tolazoline be dropped. Affected skin should be applied after thorough flushing with Dermatocorticoid. after inhalation of acid mists or nitrogen oxides released is indispensable for the immediate topical and parenteral Glucocorticoidapplikation, depending on findings if required intubation or tracheotomy and oxygen ventilator.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray. alcohol resistant foam. dry extinguishing powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

High power water jet

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Nitrogen oxides (NO_x).

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. In case of fire: Wear self-contained breathing apparatus.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Remove all sources of ignition. Ventilate affected area.

Avoid contact with skin, eyes and clothes. Do not breathe vapour/aerosol.

Wear personal protection equipment (refer to section 8).

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

No special measures are necessary.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Clean contaminated objects and areas thoroughly observing environmental regulations.

Other information

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

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Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate ventilation as well as local exhaustion at critical locations.
Wear suitable protective clothing. (See section 8.)
Avoid contact with skin, eyes and clothes.
Do not breathe vapour/aerosol.

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges.

Advice on general occupational hygiene

The usual precautions for handling chemicals should be considered.
Always close containers tightly after the removal of product. When using do not eat, drink or smoke. Wash hands before breaks and after work. Take off contaminated clothing and wash it before reuse.

Further information on handling

Flammable vapours can accumulate in head space of closed systems.
General protection and hygiene measures: See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep locked up. Keep container tightly closed and in a well-ventilated place. Keep in a cool place.
Unsuitable container/equipment material: Metal

Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Organic peroxides. Self-reactive substances and mixtures. Radioactive substances. Infectious substances.

Further information on storage conditions

Store small packages in a suitable, robust cabinet.
Protect against: UV-radiation/sunlight., Heat

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7697-37-2	nitric acid ... %			
Worker DNEL, long-term		inhalation	local	2,6 mg/m ³

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Consumer DNEL, long-term	inhalation	local	1,3 mg/m ³
Consumer DNEL, acute	inhalation	local	1,3 mg/m ³

8.2. Exposure controls



Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection. BS/EN 166

Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.

Suitable material:

(Penetration time (maximum wearing period): \geq 8 hours.

CR (polychloroprenes, Chloroprene rubber). (0,5 mm)

NBR (Nitrile rubber). (0,35 mm)

FKM (fluororubber). (0,4 mm)

PVC (Polyvinyl chloride). (0,5 mm)

Butyl rubber. (0,5 mm)

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

The selected protective gloves have to satisfy the specifications of EU Directive EC/2016/425 and the standard EN ISO 374 derived from it.

Skin protection

Protective clothing. Protective apron, Acid proof.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Exceeding exposure limit values

Insufficient ventilation

Suitable respiratory protective equipment: Combination filtering device (EN 14387) Type EB-P3

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	characteristic

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined

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Sublimation point: No information available.
Softening point: No information available.
Pour point: No information available.
Flash point: not determined

Flammability

Solid/liquid: No information available.
Gas: No information available.

Explosive properties

none

Lower explosion limits: not determined
Upper explosion limits: not determined
Auto-ignition temperature: not determined

Self-ignition temperature

Solid: No information available.
Gas: No information available.

Decomposition temperature: No information available.

pH-Value: 1

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Flow time: not determined

Water solubility: completely miscible
(at 20 °C)

Solubility in other solvents

No information available.

Partition coefficient n-octanol/water: No information available.

Vapour pressure: not determined
(at 20 °C)

Vapour pressure: not determined
(at 50 °C)

Density (at 20 °C): not determined

Bulk density: No information available.

Relative vapour density: not determined

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion: No data available

Oxidizing properties
none

Other safety characteristics

Solvent separation test: No information available.

Solvent content: No information available.

Solid content: not determined

Evaporation rate: No information available.

Further Information

No information available.

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SECTION 10: Stability and reactivity

10.1. Reactivity

May be corrosive to metals.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Violent reaction with: Base.

Reacts with : Substances which form flammable gases when in contact with water. Organic peroxides. Inflammatory substances. Alkali metals. Oxidizing agents.

10.4. Conditions to avoid

In case of warming: Ignition hazard.

Keep away from heat.

Keep away from sources of ignition. - No smoking.

10.5. Incompatible materials

Materials to avoid: Hazardous substances that release flammable gases when in contact with water. Organic peroxides. Alkali metals. Oxidizing agents.

10.6. Hazardous decomposition products

Can be released in case of fire: Nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicokinetics, metabolism and distribution

No information available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7697-37-2	nitric acid ... %				
	inhalation vapour	ATE 2,65 mg/kg			
	inhalation (4 h) gas	LC50 2500 ppm	Rat	ECHA Dossier	

Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Specific effects in experiment on an animal

No information available.

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11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

12.1. Toxicity

No information available.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7697-37-2	nitric acid ... %					
	Acute crustacea toxicity	EC50	2.5 mg/l	48 h	Ceriodaphnia spec	ECHA Dossier

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7697-37-2	nitric acid ... %	-0,21

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

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

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1 %.

12.6. 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.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1 %.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

110105 WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY; wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising); pickling acids; hazardous waste

List of Wastes Code - used product

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110105 WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY; wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising); pickling acids; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 2031
14.2. UN proper shipping name: NITRIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Classification code: C1
 Limited quantity: 1 L
 Excepted quantity: E2
 Transport category: 2
 Hazard No: 80
 Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 2031
14.2. UN proper shipping name: NITRIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Classification code: C1
 Limited quantity: 1 L
 Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 2031
14.2. UN proper shipping name: NITRIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Marine pollutant: NO

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Special Provisions: -
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-A, S-B
 Segregation group: 1 - acids

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 2031
14.2. UN proper shipping name: NITRIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8



Special Provisions: A212
 Limited quantity Passenger: Forbidden
 Passenger LQ: Forbidden
 Excepted quantity: E0
 IATA-packing instructions - Passenger: Forbidden
 IATA-max. quantity - Passenger: Forbidden
 IATA-packing instructions - Cargo: 855
 IATA-max. quantity - Cargo: 30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Safe handling: see section 7
 Personal protection equipment: see section 8

14.7. Maritime transport in bulk according to IMO instruments

not relevant

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Safety Data Sheet according to UK-REACH Regulation

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

UK REACH Appendix XVII, No (mixture): 3

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): - - non-hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

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nitric acid ... %

SECTION 16: Other information

Changes

Rev. 1,00; 06.04.2022, Initial release

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures

DNEL: Derived No Effect Level

d: day(s)

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency

EWC: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

h: hour

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect concentration

NLP: No-Longer Polymers

N/A: not applicable

OECD: Organisation for Economic Co-operation and Development

PNEC: predicted no effect concentration

PBT: Persistent bioaccumulative toxic

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

REACH: Registration, Evaluation, Authorisation of Chemicals

SVHC: substance of very high concern

TRGS: Technische Regeln für Gefahrstoffe

UN: United Nations

VOC: Volatile Organic Compounds

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method

Relevant H and EUH statements (number and full text)

- H272 May intensify fire; oxidiser.
- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.

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H318	Causes serious eye damage.
H331	Toxic if inhaled.
EUH071	Corrosive to the respiratory tract.

Further Information

Classification according to GHS [UK CLP] - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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