

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Pelox® Pickling Paste TS-K 2000

Version number: 11.0 Revision: 2020-12-23 Replaces version of: 2020-10-19 (10) First version: 25.05.2014

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

1.1 Product identifier

Trade name Pelox® Pickling Paste TS-K 2000

Registration number (REACH) Not relevant (mixture).

CAS number not relevant (mixture)

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

Relevant identified usesPickling of welding seams and stainless steel sur-

faces

Uses advised againstDo not use for squirting or spraying

Do not use for products which come into direct

contact with the skin

1.3 Details of the supplier of the safety data sheet

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Langer Acker 22 e-mail: office@pelox.de 30900 Wedemark Website: www.pelox.de

Germany

e-mail (competent person) office@pelox.de

1.4 Emergency telephone number

As above or nearest toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification

Section	Hazard class	Category	Hazard class and category	Hazard state- ment
2.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.10	acute toxicity (oral)	3	Acute Tox. 3	H301
3.1D	acute toxicity (dermal)	2	Acute Tox. 2	H310

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Classification

Section	Hazard class	Category	Hazard class and category	Hazard state- ment
3.11	acute toxicity (inhal.)	3	Acute Tox. 3	H331
3.2	skin corrosion/irritation	1A	Skin Corr. 1A	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word danger

Pictograms

GHS05, GHS06



Hazard statements

H290 May be corrosive to metals.H301+H331 Toxic if swallowed or if inhaled.H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hear-

ing protection.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin

with water [or shower].

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

Supplemental hazard information

EUH071 Corrosive to the respiratory tract.

Hazardous ingredients for labelling hydrofluoric acid

nitric acid

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2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
nitric acid	CAS No 7697-37-2 EC No 231-714-2 Index No 007-004-00-1 REACH Reg. No 01-2119487297-23- xxxx	10 - < 25	Ox. Liq. 2 / H272 Met. Corr. 1 / H290 Acute Tox. 3 / H331 Skin Corr. 1A / H314 Eye Dam. 1 / H318	
hydrofluoric acid	CAS No 7664-39-3 EC No 231-634-8 Index No 009-003-00-1 REACH Reg. No 01-2119458860-33- xxxx	5-<10	Met. Corr. 1 / H290 Acute Tox. 2 / H300 Acute Tox. 1 / H310 Acute Tox. 2 / H330 Skin Corr. 1A / H314 Eye Dam. 1 / H318	

Name of sub- stance	CAS No	Specific Conc. Limits	M-Factors	ATE	Exposure route
nitric acid	7697-37-2	Ox. Liq. 2; H272: C ≥ 99 % Ox. Liq. 3; H272: 65 % ≤ C < 99 % Skin Corr. 1A; H314: C ≥ 20 % Skin Corr. 1B; H314: 5 % ≤ C < 20 %		3 ^{mg} / _l /4h	inhalation: va- pour

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Name of sub- stance	CAS No	Specific Conc. Limits	M-Factors	ATE	Exposure route
		Skin Irrit. 2; H315: 1 % ≤ C < 5 % Eye Dam. 1; H318: C ≥ 3 % Eye Irrit. 2; H319: 1 % ≤ C < 3 %			
hydrofluoric acid	7664-39-3	Skin Corr. 1A; H314: C ≥ 7 % Skin Corr. 1B; H314: 1 % ≤ C < 7 % Eye Dam. 1; H318: C ≥ 1 % Eye Irrit. 2; H319: 0.1 % ≤ C < 1 %		5 ^{mg} / _{kg} 5 ^{mg} / _{kg} 0.638 ^{mg} / /4h	oral dermal inhalation: va- pour

for full text of H-phrases: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Mouth to mouth resuscitation should be avoided. Use alternative methods, preferably with oxygen or compressed air driven apparatus.

In case of respiratory tract irritation, consult a physician.

Following skin contact

Rub with a gel containing calcium gluconate.

Call a physician immediately. Causes poorly healing wounds.

Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Rinse copiously with a calcium gluconate solution.

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

Following ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting.

Call a physician immediately.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate firefighting measures to the fire surroundings

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Substance or mixture corrosive to metals.

Hazardous combustion products

nitrogen oxides (NOx)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protective clothing, self-contained breathing apparatus (EN 133)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Do not get in eyes, on skin, or on clothing.

Do not breathe vapour/spray.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

Chemical protection suit.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to clean up a spill

Collect spillage.

Universal binder.

Avoid mixing with flammable or combustible substances (e.g. sawdust).

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Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes.

Do not breathe vapour/spray.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

None.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

frost

Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

Provision of sufficient ventilation.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occup	Occupational exposure limit values (Workplace Exposure Limits)										
Coun- try	Name of agent	CAS No	Identi- fier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Nota- tion	Source		
EU	nitrogen dioxide	10102-44- 0	IOELV	0.5	0.96	1	1.91		2017/164/ EU		
EU	hydrogen fluoride	7664-39-3	IOELV	1.8	1.5	3	2.5		2000/39/EC		
EU	nitric acid	7697-37-2	IOELV			1	2.6		2006/15/EC		
GB	nitrogen dioxide	10102-44- 0	WEL	0.5	0.96	1	1.91		EH40/2005		
GB	hydrogen fluoride	7664-39-3	WEL	1.8	1.5	3	2.5	F	EH40/2005		
GB	nitric acid	7697-37-2	WEL			1	2.6		EH40/2005		

Notation

F calculated as F (fluorine)

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-

minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of

8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture										
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time				
nitric acid	7697-37-2	DNEL	2.6 mg/m ³	human, inhalat- ory	worker (industry)	chronic - local ef- fects				
hydrofluoric acid	7664-39-3	DNEL	1.5 mg/m³	human, inhalat- ory	worker (industry)	chronic - system- ic effects				

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Relevant DNELs of components of the mixture									
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time			
hydrofluoric acid	7664-39-3	DNEL	1.5 μg/m³	human, inhalat- ory	worker (industry)	chronic - local ef- fects			

Relevant PNECs of components of the mixture									
Name of substance	CAS No	Endpoint	Threshold level	Environmental com- partment					
hydrofluoric acid	7664-39-3	PNEC	0.9 ^{mg} / _l	freshwater					
hydrofluoric acid	7664-39-3	PNEC	0.9 ^{mg} / _l	marine water					
hydrofluoric acid	7664-39-3	PNEC	51 ^{mg} / _l	sewage treatment plant (STP)					

PNEC

 $11 \frac{\text{mg}}{\text{kg}}$

soil

8.2 Exposure controls

Appropriate engineering controls

hydrofluoric acid

General ventilation.

Individual protection measures (personal protective equipment)

7664-39-3

Eye/face protection

Wear eye/face protection.

Recommended protective gloves (trademark/manufacturer)

Pelox® PVC acid protective gloves.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. ABEK-Hg-NO-CO-P3

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state Liquid

(pasty)

Colour Colourless

Odour Pungent

Melting point/freezing point Not determined

Boiling point or initial boiling point and boiling

range

>100 °C

Flammability Non-combustible

Lower and upper explosion limit Not applicable

Flash point Not applicable

Auto-ignition temperature Not applicable

Decomposition temperature Not relevant

pH (value) <1

Kinematic viscosity Not determined

Solubility(ies)

Water solubility Miscible in any proportion

Partition coefficient

partition coefficient n-octanol/water (log value) Not relevant

(inorganic)

Vapour pressure Not determined

Density and/or relative density

Density/ relative density 1.2 g/cm³ at 20 °C

Vapour density Not determined

Relative vapour density Not determined

Particle characteristics Not applicable

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Other safety parameters

Relative self-ignition temperature for solids Not relevant

(Fluid)

9.2 Other information

Information with regard to physical hazard

classes

Sustained combustibility No

Other safety characteristicsThere is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

In dry state:

oxidising property

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Classified as corrosive to metals.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

bases, light metals (e.g. aluminium and magnesium), glass

Release of flammable materials with:

light metals (due to the release of hydrogen in an acid/alkaline medium), glass

10.6 Hazardous decomposition products

Nitrogen oxides (NOx).

Hydrogen fluoride (HF).

SECTION 11: Toxicological information

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

Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

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Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Test data are not available for the complete mixture.

Toxic if swallowed.

Fatal in contact with skin.

Toxic if inhaled.

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
nitric acid	7697-37-2	inhalation: vapour	LC50	>2.65 ^{mg} / _l /4h	rat

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Classification procedure

The classification is based on an extreme pH value.

Serious eye damage/eye irritation

Causes serious eye damage.

Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

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Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Other information

Corrosive to the respiratory tract.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
hydrofluoric acid	7664-39-3	EC50	26 – 48 ^{mg} / _l	Trichoptera	96 h
hydrofluoric acid	7664-39-3	ErC50	43 ^{mg} / _l	algae	96 h

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
hydrofluoric acid	7664-39-3	NOEC	4 ^{mg} / _l	rainbow trout (Onco- rhynchus mykiss)	21 d
hydrofluoric acid	7664-39-3	NOEC	3.7 ^{mg} / _l	daphnia magna	21 d
hydrofluoric acid	7664-39-3	NOEC	50 ^{mg} / _l	algae	7 d

12.2 Persistence and degradability

Biodegradation

Data are not available.

Persistence

No data available.

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12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
hydrofluoric acid	7664-39-3	53 - 58	

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 2

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Completely emptied packages can be recycled.

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

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number

ADR/RID/ADN	2922
IMDG-Code	2922
ICAO-TI	2922

14.2 UN proper shipping name

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ADR/RID/ADN CORROSIVE LIQUID, TOXIC, N.O.S.

IMDG-Code CORROSIVE LIQUID, TOXIC, N.O.S.

ICAO-TI Corrosive liquid, toxic, n.o.s.

Technical name (hazardous ingredients) hydrofluoric acid, nitric acid

14.3 Transport hazard class(es)

ADR/RID/ADN 8

(6.1)

IMDG-Code 8

(6.1)

ICAO-TI 8

(6.1)

14.4 Packing group

ADR/RID/ADN II

IMDG-Code II

ICAO-TI II

14.5 Environmental hazards -

14.6 Special precautions for user

14.7 Maritime transport in bulk according to IMO -

instruments

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) Additional information

Proper shipping name UN2922, CORROSIVE LIQUID, TOXIC, N.O.S., (con-

tains: hydrofluoric acid, nitric acid), 8 (6.1), II, (E)

Classification code CT1

Danger label(s) 8+6.1



Special provisions (SP) 274, 802(ADN)

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

Transport category (TC) 2

Tunnel restriction code (TRC) E

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Hazard identification No 86

Emergency Action Code 2X

International Maritime Dangerous Goods Code (IMDG) Additional information

Marine pollutant -

Danger label(s) 8+6.1



Special provisions (SP) 274

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

EmS F-A, S-B

Stowage category B

International Civil Aviation Organization (ICAO-IATA/DGR) Additional information

Danger label(s) 8+6.1



Special provisions (SP)

Excepted quantities (EQ)

E2

Limited quantities (LQ)

0,5 L

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Name of substance	Name acc. to inventory	CAS No	Restriction
Pelox® Pickling Paste TS-K 2000	this product meets the criteria for classi- fication in accordance with Regulation No 1272/2008/EC		R3

Legend

R3 1. Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
- 2. Articles not complying with paragraph 1 shall not be placed on the market.
- 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or per-

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Legend

fume, or both, if they:

- can be used as fuel in decorative oil lamps for supply to the general public, and,
- present an aspiration hazard and are labelled with R65 or H304,
- 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
- 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
- (a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil or even sucking the wick of lamps may lead to life-threatening lung damage'; (b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
- (c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
- 6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
- 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

Seveso Directive

2012/18/EU (Seveso III)				
No	Dangerous substance/hazard categories Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes	
H2	acute toxic (cat. 2 + cat. 3, inhal.)	50	200	41)

Notation

- 41) category 2, all exposure routes
 - category 3, inhalation exposure route

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Water Framework Directive (WFD)

None of the ingredients are listed.

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Regulation 98/2013/EU on the marketing and use of explosives precursors

Not all ingredients are listed.

Explosives precursors which are subject to restrictions					
Name of substance	CAS No	Type of registration	Remarks	Limit value	Upper limit value for the pur- pose of li- censing under Article 5(3)
nitric acid	7697-37-2	Annex I		3 % w/w	10 % w/w

Legend

annex I

Substances which shall not be made available to members of the general public on their own, or in mixtures or substances including them, except if the concentration is equal to or lower than the limit values set out below

Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier. Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1 Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
2.2		Precautionary statements: change in the listing (table)
3.2		Hazardous ingredients: change in the listing (table)
14.8	Proper shipping name: UN2922, CORROSIVE LIQUID, TOXIC, N.O.S., (contains: hydrofluoric acid, nitric acid), 8 (6.1), I, (C/D)	Proper shipping name: UN2922, CORROSIVE LIQUID, TOXIC, N.O.S., (contains: hydrofluoric acid, nitric acid), 8 (6.1), II, (E)

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Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
2006/15/EC	Commission Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC
2017/164/EU	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	European Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/In- land Waterways (ADR/RID/ADN)
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-li- cence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye

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Abbr.	Descriptions of used abbreviations
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
Met. Corr.	Substance or mixture corrosive to metals
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
Ox. Liq.	Oxidising liquid
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

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Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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