

Safety Data Sheet

according to UK REACH Regulation

Kroll

Revision date: 28.03.2022

Product code:

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

1.1. Product identifier

Kroll

UFI: JKHP-3QA3-SUG2-099S

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
Acute Tox. 4; H302
Acute Tox. 4; H312
Skin Corr. 1; 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 ... %
Hydrofluoric acid ... %

Signal word: Danger

Pictograms:



Hazard statements

H290 May be corrosive to metals.
H302+H312 Harmful if swallowed or in contact with skin.

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H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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

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			
7664-39-3	Hydrofluoric acid ... %			0.3 - < 0.5 %
	231-634-8	009-003-00-1	01-2119458860-33	
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Skin Corr. 1A; H310 H330 H300 H314			

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		
7664-39-3	231-634-8	Hydrofluoric acid ... %	0.3 - < 0.5 %
	inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); inhalation: LC50 = (1610) ppm (gases); dermal: ATE = 5 mg/kg; oral: ATE = 5 mg/kg Skin Corr. 1A; H314: >= 7 - 100 Skin Corr. 1B; H314: >= 1 - < 7 Eye Irrit. 2; H319: >= 0,1 - < 1		

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).

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Remove contaminated, saturated clothing immediately.

After inhalation

In case of inhaling spray mists, consult a doctor immediately and show him box or label.

Provide fresh air. If victim is at risk of losing consciousness, position and transport on their side.

After contact with skin

Remove contaminated clothing immediately and dispose off safely. After contact with skin, wash immediately with: Water. Immediately apply calcium gluconate gel (2.5% strength) and rub gently. If unavailable: Apply wet envelopes with 10% calcium gluconate solution. Seek medical advice immediately.

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. If eye irritation persists: Get medical advice/attention.

After ingestion

Do NOT induce vomiting. Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect).

Never give anything by mouth to an unconscious person or a person with cramps. In all cases of doubt, or when symptoms persist, seek medical advice.

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

Hydrofluoric acid (HF): Eyes: Irritation, ischaemia, edema of the stroma and subsequent vascularization into the cornea (persistence lasting several weeks), corneal opacity Skin: slight irritative immediate action (nevertheless, F. can penetrate deeply and damage subcutaneous tissue); Pallor or erythema, swelling; Later possibly formation of blisters, blackening of the tissue under fingernails; Deep pain (within 20 min. To approx. 24 h); Possible local resorptive effects: carpal tunnel syndrome, non-purulent tendon synovitis, flexor-tendo contractures; Systemic effects possible with large area / sustained contact or skin Inhalation: serious effects may only be expected after exposure to aerosols or vapors of hot solutions: strong mucous membrane irritation, tear secretion, upper respiratory tract pain, obstruction, dyspnoea, haemorrhage, toxic pulmonary edema; Resorptivwirkungen Ingestion: severe irritation to burned mucous membranes, haemorrhages in the digestive tract, abdominal pain, nausea, emesis, diarrhea; Rapid entry of systemic effects Absorption: metabolic disorder (hypocalcaemia / hyperkalemia, hypomagnesemia), cardiac dysfunction (tachycardia, ventricular fibrillation, blood pressure drop), muscular / nervous system (unconsciousness / coma, tremor, tetaniform convulsions).

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

Hydrofluoric acid has a strong local and systemic toxicity. 10% Hydrofluoric Acid (F) can primarily cause relatively small stimuli, which can easily lead to an underestimation of the still high risk. In any case, careful decontamination, treatment and follow-up are required. After short-term skin contact with 10% F. and in time (immediately) started decontamination, the multiple daily intake of calcium gluconate gel as therapy may be sufficient. Injection of the contaminated areas or deep injections or even an intraarterial application of calcium gluconate are, inter alia, not mandatory After inhalation of vapors / aerosols, give oxygen as soon as possible. In addition, the inhalation of a 2.5-3% calcium gluconate soln. In physiological saline solution via a nebulizer.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

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

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

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

- Remove all sources of ignition. Remove persons to safety. Provide adequate ventilation.
- Do not breathe gas/fumes/vapour/spray.
- Wear personal protection equipment. (See 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

- Conditions to avoid: generation/formation of aerosols
- 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.
- Clear contaminated areas thoroughly.

6.4. Reference to other sections

- See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Avoid exposure.
- Personal protection equipment (refer to chapter 8)
- Provide adequate ventilation as well as local exhaustion at critical locations.
- Use extractor hood (laboratory).

Advice on protection against fire and explosion

- No special fire protection measures are necessary.

Advice on general occupational hygiene

- When using do not eat, drink or smoke.

Further information on handling

- Always close containers tightly after the removal of product. Keep/Store only in original container.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Keep container tightly closed and in a well-ventilated place. Keep in a cool place.
- Unsuitable materials for Container: Metalle und Legierungen. Glass.
- Make sure spills can be contained (e.g. sump pallets or kerbed areas).

Hints on joint storage

- Do not store together with: Explosives. Gas. Oxidizing liquids. Oxidizing solids. Self-reactive substances and

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mixtures. Organic peroxides. Ammonium nitrate. Combustible toxic substances. Non-combustible toxic substances. Radioactive substances. Infectious substances.

Further information on storage conditions

Keep container dry.

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
7664-39-3	Hydrogen fluoride (as F)	1.8	1.5		TWA (8 h)	WEL
		3	2.5		STEL (15 min)	WEL
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
Consumer DNEL, long-term		inhalation	local	1,3 mg/m ³
Consumer DNEL, acute		inhalation	local	1,3 mg/m ³
7664-39-3	Hydrofluoric acid ... %			
Worker DNEL, acute		inhalation	systemic	2,5 mg/m ³
Worker DNEL, acute		inhalation	local	2,5 mg/m ³
Worker DNEL, long-term		inhalation	systemic	1,5 mg/m ³
Worker DNEL, long-term		inhalation	local	0,0015 mg/m ³
Consumer DNEL, acute		inhalation	systemic	0,03 mg/m ³
Consumer DNEL, acute		oral	systemic	0,01 mg/kg bw/day
Consumer DNEL, acute		inhalation	local	1,25 mg/m ³
Consumer DNEL, long-term		oral	systemic	0,01 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,03 mg/m ³
Consumer DNEL, long-term		inhalation	local	0,2 mg/m ³

PNEC values

CAS No	Substance	Value
7664-39-3	Hydrofluoric acid ... %	
Freshwater		0,9 mg/l
Marine water		0,9 mg/l
Micro-organisms in sewage treatment plants (STP)		51 mg/l
Soil		11 mg/kg

8.2. Exposure controls

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Appropriate engineering controls

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

Use extractor hood (laboratory).

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection. BS/EN 166

Hand protection

Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of glove material: 0,4 mm

Breakthrough time \geq 8 h

Butyl rubber. - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm

Breakthrough time \geq 8 h

PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

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.

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

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.

Skin protection

Suitable protective clothing: Lab apron.

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 and aerosol or mist formation

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

This material and its container must be disposed of in a safe way.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	stinging

Changes in the physical state

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Melting point/freezing point: No information available.
 Boiling point or initial boiling point and boiling range: ~100 °C
 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

not explosive.

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 (at 20 °C): 0

Viscosity / dynamic: not determined

Viscosity / kinematic: No information available.

Flow time: No information available.

Water solubility: No information available.

Solubility in other solvents

not determined

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

Vapour pressure: not determined
 (at 20 °C)

Vapour pressure: No information available.
 (at 50 °C)

Density (at 20 °C): not determined

Bulk density: No information available.

Relative vapour density: No information available.

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion: No data available

Oxidizing properties
 Not oxidizing.

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

No information available.

10.2. Chemical stability

Stable under normal storage and handling conditions.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

Oxidizing agents, strong. Reducing agents, strong.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

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

Toxicocinetics, metabolism and distribution

No data available

Acute toxicity

Harmful if swallowed.

Harmful in contact with skin.

ATEmix calculated

ATE (oral) 1315,8 mg/kg; ATE (dermal) 1315,8 mg/kg

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	
7664-39-3	Hydrofluoric acid ... %				
	oral	ATE 5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			
	inhalation (1 h) gas	LC50 (1610) ppm	Rat	IUCLID	

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.

Nitric acid:

No evidence for: Carcinogenicity

No evidence for: Developmental toxicity/teratogenicity (NOEL = 400 ppm)

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No evidence for: Reproductive toxicity: (NOEL = 700 ppm)

No evidence for: In-vitro mutagenicity

HF:

No evidence for: In-vitro mutagenicity

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.

Nitric acid:

Subchronic inhalative toxicity NOAEC = 2,15 ppm (Rat) Literature information: ECHA Dossier

HF: NOAEC: 1 ppm

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

12.1. Toxicity

The product has not been tested.

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	
7664-39-3	Hydrofluoric acid ... %					
	Acute algae toxicity	ErC50 81 mg/l	96 h	Skeletonema costatum	ECHA dossier	
	Acute crustacea toxicity	EC50 mg/l 26-48	48 h	trichoptera aquatic larvae	ECHA Dossier	

12.2. Persistence and degradability

The product has not been tested.

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 %.

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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

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 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (Hydrofluoric acid. Nitric acid.)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8



Classification code:	C9
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (Hydrofluoric acid. Nitric acid.)
14.3. Transport hazard class(es):	8

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14.4. Packing group:

Hazard label:

III

8



Classification code:

C9

Special Provisions:

274

Limited quantity:

5 L

Excepted quantity:

E1

Marine transport (IMDG)

14.1. UN number or ID number:

UN 1760

14.2. UN proper shipping name:

CORROSIVE LIQUID, N.O.S. (Hydrofluoric acid. Nitric acid.)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



Marine pollutant:

NO

Special Provisions:

223, 274

Limited quantity:

5 L

Excepted quantity:

E1

EmS:

F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:

UN 1760

14.2. UN proper shipping name:

CORROSIVE LIQUID, N.O.S. (Hydrofluoric acid. Nitric acid.)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



Special Provisions:

A3 A803

Limited quantity Passenger:

1 L

Passenger LQ:

Y841

Excepted quantity:

E1

IATA-packing instructions - Passenger:

852

IATA-max. quantity - Passenger:

5 L

IATA-packing instructions - Cargo:

856

IATA-max. quantity - Cargo:

60 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

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EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

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

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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): 1 - slightly hazardous to water

15.2. Chemical safety assessment

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

nitric acid ... %

Hydrofluoric acid ... %

SECTION 16: Other information

Changes

Rev. 1,00; Initial release 28.03.2022

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

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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
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H312	Calculation method
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data

Relevant H and EUH statements (number and full text)

H272 May intensify fire; oxidiser.
 H290 May be corrosive to metals.
 H300 Fatal if swallowed.
 H302 Harmful if swallowed.
 H302+H312 Harmful if swallowed or in contact with skin.
 H310 Fatal in contact with skin.
 H312 Harmful 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.
 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.)