

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 1 of 14

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...

UFI: HPAE-M2AS-V00A-MAKC

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

Reagents and laboratory chemicals

Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

**1.3. Details of the supplier of the safety data sheet**

Company name: AnalytiChem GmbH

ACD

Street: Stempelstraße 6

Place: D-47167 Duisburg

Telephone: 0203/5194-0

Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit

Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de

Responsible Department: Abteilung Produktsicherheit

**1.4. Emergency telephone number:**

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

**Further Information**

This product is a mixture. REACH Registration Number see section 3.

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Met. Corr. 1; H290

Acute Tox. 2; H330

Acute Tox. 2; H310

Acute Tox. 3; H301

Skin Corr. 1A; H314

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Hazard components for labelling**

nitric acid 40,11 %

hydrofluoric acid 3,65 %

**Signal word:** Danger

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 2 of 14

## Pictograms:



## Hazard statements

H290	May be corrosive to metals.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H301	Toxic if swallowed.
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/hearing 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.

## Special labelling of certain mixtures

EUH071	Corrosive to the respiratory tract.
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**2.3. Other hazards**

No data available

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

## Chemical characterization

Mixtures in aqueous solution

## Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7697-37-2	nitric acid			40 - < 45 %
	231-714-2	007-030-00-3	01-2119487297-23	
	Ox. Liq. 3, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1; H272 H290 H331 H314 H318 EUH071			
7664-39-3	Hydrofluoric acid ... %			1 - < 5 %
	231-634-8	009-003-00-1	01-2119458860-33	
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Skin Corr. 1A, Eye Dam. 1; H310 H330 H300 H314 H318			

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

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 3 of 14

**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	40 - < 45 %
		inhalation: ATE 2,65 mg/l (vapours) 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 ... %	1 - < 5 %
		inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); inhalation: LC50 = 2240 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**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

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

fast help required

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

Call a physician immediately.

**After inhalation**

Provide fresh air.

Call a physician immediately.

**After contact with skin**

Remove contaminated, saturated clothing immediately.

Wash immediately with:

Ca-Gluconate solution

Water

Call a physician immediately.

**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.

**After ingestion**

Rinse mouth immediately and drink plenty of water.

Adverse human health effects and symptoms: Gastric perforation.

Call a physician immediately.

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

Irritant — skin irritation and eye damage

Causes burns.

Cough

Dyspnoea

Risk of serious damage to eyes.

Vomiting

Methaemoglobinaemia

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

It is recommended to consult a doctor with experience in the treatment of lesions caused by hydrofluoric acid

**SECTION 5: Firefighting measures**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 4 of 14

**5.1. Extinguishing media****Suitable extinguishing media**

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

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

Hydrogen fluoride

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

**Additional information**

Suppress gases/vapours/mists with water spray jet.

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

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

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

Corrosive to metals.

**For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

Clean contaminated articles and floor according to the environmental legislation.

**6.3. Methods and material for containment and cleaning up****For containment**

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

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

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 5 of 14

Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**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**

If handled uncovered, arrangements with local exhaust ventilation have to be used.  
Read label before use. Handle and open container with care.  
When using do not eat, drink, smoke, sniff. Keep container tightly closed.  
Use personal protection equipment. Use extractor hood (laboratory).  
Provide adequate ventilation.  
Avoid contact with skin, eyes and clothes.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs. Make available sufficient washing facilities  
Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

**Further information on handling**

Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary.  
Take off immediately all contaminated clothing and wash it before reuse.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

**Hints on joint storage**

national regulations

**Further information on storage conditions**

Store in a dry place.  
Unsuitable container/equipment material: Metal, Glass

**7.3. Specific end use(s)**

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
7664-39-3	Hydrogen fluoride (as F)	1.8	1.5		TWA (8 h)	
		3	2.5		STEL (15 min)	
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	

# Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...

Revision: 07.03.2025

Product code: 27205

Page 6 of 14

**Biological limit values**

CAS No	Substance	Parameter	Value	Test material	Sampling time
7664-39-3	Hydrogen fluoride	Fluoride	3 mg/L	Urine	End of shift

**DNEL/DMEL values**

CAS No	Substance			
DNEL type	Exposure route		Effect	Value
7664-39-3	Hydrofluoric acid ... %			
Worker DNEL, long-term	inhalation		systemic	1,5 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation		systemic	2,5 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation		local	1,5 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation		local	2,5 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation		systemic	0,03 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation		systemic	0,03 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation		local	0,2 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation		local	1,25 mg/m <sup>3</sup>
Consumer DNEL, long-term	oral		systemic	0,01 mg/kg bw/day
Consumer DNEL, acute	oral		systemic	0,01 mg/kg bw/day

**PNEC values**

CAS No	Substance	
Environmental compartment	Value	
7664-39-3	Hydrofluoric acid ... %	
Freshwater	0,89 mg/l	
Marine water	0,089 mg/l	
Freshwater sediment	3,38 mg/kg	
Marine sediment	0,338 mg/kg	
Micro-organisms in sewage treatment plants (STP)	51 mg/l	
Soil	10,6 mg/kg	

**8.2. Exposure controls****Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Suitable eye protection:  
Face protection shield  
goggles.

**Hand protection**

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 7 of 14

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.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 897 Butoject®

Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 720 Camapren®

Suitable material: CR (polychloroprene, chloroprene rubber) 0,65 mm

Wearing time with occasional contact (splashes): > 240 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet <(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Skin protection**

Wear suitable protective clothing.

Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

In case of inadequate ventilation wear respiratory protection.

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	colourless	
Odour:	stinging	
Odour threshold:	No data available	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 8 of 14

Flash point:	X
Auto-ignition temperature:	No data available
Decomposition temperature:	not determined
pH-Value:	acidic
Viscosity / kinematic:	No data available
Solubility in other solvents not determined	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	1,239 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	not determined
Particle characteristics:	No data available

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties

No data available

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

The product is: oxidising, Oxidising.

**Other safety characteristics**

Evaporation rate:

not determined

Solid content:

not determined

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:

No data available

Flow time:

No data available

**Further Information**

No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Corrosive to metals.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Alkali (lye)

Corrosive to metals.

The product develops hydrogen in an aqueous solution in contact with metals.

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 9 of 14

**10.4. Conditions to avoid**

Radiant heat.

**10.5. Incompatible materials**

Metal

Glass

The product develops hydrogen in an aqueous solution in contact with metals.

**10.6. Hazardous decomposition products**

In case of fire may be liberated:

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

Fatal if inhaled.

Fatal in contact with skin.

Toxic if swallowed.

Obtain special instructions before use.

**ATEmix calculated**

ATE (oral) 137,0 mg/kg; ATE (dermal) 137,0 mg/kg; ATE (inhalation vapour) 13,70 mg/l; ATE (inhalation dust/mist) 1,370 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7697-37-2	nitric acid				
	inhalation vapour	ATE 2,65 mg/l			
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 2240 ppm	Rat	Study report (1990)	OECD Guideline 403

**Irritation and corrosivity**

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/eye irritation: Causes serious eye damage.

Corrosive to the respiratory tract.

**Sensitising 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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 10 of 14

**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.

**Information on likely routes of exposure**

There are no data available on the mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience**

There are no data available on the mixture itself.

**11.2. Information on other hazards****Endocrine disrupting properties**

There are no data available on the mixture itself.

**Other information**

Adverse human health effects and symptoms

gastric perforation

Pulmonary oedema

Inhalation effect: Damage to the respiratory tract.

see also Section 4

**Further information**

It is recommended to consult a doctor with experience in the treatment of lesions caused by hydrofluoric acid

**SECTION 12: Ecological information****12.1. Toxicity**

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

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 11 of 14

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7697-37-2	nitric acid					
	Acute fish toxicity	LC50 1559 mg/l	96 h	Topeka shiner	Environmental Toxicology and Chemistry,	other: ASTM E729-26
	Fish toxicity	NOEC 268 mg/l	30 d	juvenile Topeka shiner and with juvenile Fathead m	Study report (2009)	Growth tests estimated the test chemical
	Algae toxicity	NOEC > 419 mg/l	10 d	several benthic diatoms; see results	Marine Biology 43:307-315 (1977)	Ten cultures of benthic diatoms were iso
	Acute bacteria toxicity	EC50 > 1000 mg/l ( )	3 h	Activated sludge	Study report (2008)	OECD Guideline 209
7664-39-3	Hydrofluoric acid ... %					
	Acute fish toxicity	LC50 299 mg/l	96 h	Salmo trutta	REACH Registration Dossier	other: U.S Environmental Protection Agen
	Acute algae toxicity	ErC50 43 mg/l	96 h	various algae species	REACH Registration Dossier	Methods not detailed in the review.
	Crustacea toxicity	NOEC 3,7 mg/l	21 d	Daphnia magna	REACH Registration Dossier	The publication is a review article of v
	Acute bacteria toxicity	EC50 2930 mg/l ( )	3 h	Activated sludge	REACH Registration Dossier	ISO 8192

**12.2. Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**BCF**

CAS No	Chemical name	BCF	Species	Source
7664-39-3	Hydrofluoric acid ... %	53 - 58	not specified	REACH Registration D

**12.4. Mobility in soil**

There are no data available on the mixture itself.

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

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

**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.

**12.7. Other adverse effects**

Harmful effect due to pH shift.  
Forms corrosive mixtures with water even if diluted.  
Discharge into the environment must be avoided.

**Further information**

Avoid release to the environment.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 12 of 14

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

**Contaminated packaging**

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

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 2922
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, TOXIC, N.O.S. (nitric acid, Hydrofluoric acid)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8+6.1
Classification code:	CT1
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	86
Tunnel restriction code:	E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 2922
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, TOXIC, N.O.S. (nitric acid, Hydrofluoric acid)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8+6.1
Classification code:	CT1
Special Provisions:	274 802
Limited quantity:	1 L
Excepted quantity:	E2

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 2922
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, TOXIC, N.O.S. (Nitric acid, Hydrofluoric acid)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8+6.1
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	UN 2922
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, TOXIC, N.O.S. (Nitric acid, Hydrofluoric acid)

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 13 of 14

<b>14.3. Transport hazard class(es):</b>	8	
<b>14.4. Packing group:</b>	II	
Hazard label:	8+6.1	
Special Provisions:	A3 A803	
Limited quantity Passenger:	0.5 L	
Passenger LQ:	Y840	
Excepted quantity:	E2	
IATA-packing instructions - Passenger:		851
IATA-max. quantity - Passenger:		1 L
IATA-packing instructions - Cargo:		855
IATA-max. quantity - Cargo:		30 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Oxidising substances. strongly corrosive.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**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, Entry 75

Marketing and use of explosives precursors (Regulation (EU) 2019/ 1148):

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 9.

according to Regulation (EC) No 1907/2006

**Titanium pickling pure HNO<sub>3</sub>/HF/H<sub>2</sub>O 54 parts by volume of nitric acid 65% 10 parts by volume of...**

Revision: 07.03.2025

Product code: 27205

Page 14 of 14

**Abbreviations and acronyms**

Ox. Liq. 3: Oxidising liquids, hazard category 3  
Met. Corr. 1: Corrosive to metals, hazard category 1  
Acute Tox. 1: Acute toxicity, hazard category 1  
Skin Corr. 1A: Skin corrosion, sub-category 1A  
Eye Dam. 1: Serious eye damage, hazard category 1  
ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 2; H330	
Acute Tox. 2; H310	Calculation method
Acute Tox. 3; H301	Calculation method
Skin Corr. 1A; 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.  
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.  
EUH071 Corrosive to the respiratory tract.

**Further Information**

Provide appropriate information, instructions and training to users

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