



according to Regulation (EC) No 1907/2006

Multielement-Standardlösung 4

Revision date: 21.08.2023 Product code: 19182 Page 1 of 12

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

1.1. Product identifier

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UFI: FV3Q-V1NU-H00V-GFCR

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

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 For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire,

number: 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 Skin Irrit. 2; H315 Eye Dam. 1; H318 Carc. 1A; H350 STOT SE 3; H335 Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

Hydrochloric acid diarsenic trioxide

Signal word: Danger



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Pictograms:







Hazard statements

H290 May be corrosive to metals.
H315 Causes skin irritation.
H318 Causes serious eye damage.

H350 May cause cancer.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
P273 Avoid release to the environment.

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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Relevant ingredients

CAS No	Chemical name				
	EC No	Index No	REACH No		
	Classification (Regulation	on (EC) No 1272/2008)			
7647-01-0	Hydrochloric acid			15 - < 20 %	
	231-595-7	017-002-01-X	01-2119484862-27		
	Skin Corr. 1B, STOT SE	3; H314 H335			
7697-37-2	nitric acid			1 - < 5 %	
	231-714-2	007-030-00-3	01-2119487297-23		
	Ox. Liq. 3, Met. Corr. 1,				
7783-00-8	selenious acid	< 1 %			
	231-974-7	034-002-00-8			
	Acute Tox. 3, Acute Tox H400 H410				
1327-53-3	diarsenic trioxide	< 1 %			
	215-481-4	033-003-00-0			
	Carc. 1A, Acute Tox. 2, H400 H410				

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



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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity		
	Specific Conc.	Limits, M-factors and ATE			
7647-01-0	231-595-7	Hydrochloric acid	15 - < 20 %		
	· · · · · · · · · · · · · · · · · · ·	H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 3; H335: >= 10 - 100			
7697-37-2	231-714-2	nitric acid	1 - < 5 %		
	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				
7783-00-8	231-974-7	selenious acid	< 1 %		
	inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: ATE = 100 mg/kg				
1327-53-3	215-481-4	diarsenic trioxide	< 1 %		
	oral: ATE = 5 mg/kg				

Further Information

No data available

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air.

Call a physician immediately.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

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.

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

Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk.

Call a physician immediately.

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

Causes burns.

Irritant

Cough

Dyspnoea

Vomitino

Risk of serious damage to eyes.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media





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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:

Hydrogen chloride (HCI)

Metal oxide smoke, toxic

5.3. Advice for firefighters

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

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

Avoid contact with skin, eyes and clothes.

Additional information

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.

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.

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





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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use.

When using do not eat, drink, smoke, sniff.

Handle and open container with care.

Use personal protection equipment.

Use extractor hood (laboratory).

Provide adequate ventilation.

Do not breathe vapour/aerosol.

Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. 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. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

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. Unsuitable container/equipment material: Metal.

Hints on joint storage

national regulations

Further information on storage conditions

Keep container tightly closed.

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/m³	fib/cm³	Category	Origin
7647-01-0	Hydrogen chloride	5	8		TWA (8 h)	
		10	15		STEL (15 min)	
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	



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DNEL/DMEL values

CAS No	Substance				
DNEL type		Exposure route	Effect	Value	
7647-01-0	Hydrochloric acid				
Worker DNEL, long-term		inhalation	local	8 mg/m³	
Worker DNEL, acute		inhalation	local	15 mg/m³	
Consumer DNEL, long-term		inhalation	local	8 mg/m³	
Consumer DNEL, acute		inhalation	local	15 mg/m³	

8.2. Exposure controls

Appropriate engineering controls

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

Skin protection

Wear suitable protective clothing.

Respiratory protection

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

The entrepeneur 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.

Thermal hazards

No data available

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: yellow Odour. odourless Odour threshold: No data available

Melting point/freezing point: not determined Boiling point or initial boiling point and No data available

boiling range: Flammability: not applicable Lower explosion limits: not determined Upper explosion limits: not determined Flash point: X Auto-ignition temperature: No data available Decomposition temperature: not determined pH-Value:





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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:

Vapour pressure:

Vapour pressure:

No data available

1.100 g/cm³

Relative density:

Bulk density:

No data available

No data available

Relative vapour density:

Particle characteristics:

No data available

No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

No data available

Sustaining combustion: No data available

Self-ignition temperature

Solid: not applicable
Gas: not applicable

Oxidizing properties Not oxidising.

Other safety characteristics

Evaporation rate: not determined
Solvent separation test: No data available
Solvent content: 0
Solid content: 0

Sublimation point:

Softening point:

No data available

No data available

No data available

No data available

No data available:

Viscosity / dynamic:

Flow time:

No data available

No data available

Further Information
Corrosive to metals.

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)

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Cellulose

Metal

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



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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

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
7697-37-2	nitric acid					
	inhalation vapour	ATE 2,65	mg/l			
7783-00-8	selenious acid					
	oral	ATE mg/kg	100			
	inhalation vapour	ATE	3 mg/l			
	inhalation dust/mist	ATE	0,5 mg/l			
1327-53-3	diarsenic trioxide					
	oral	ATE	5 mg/kg			

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

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

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer. (diarsenic trioxide)

Germ cell mutagenicity: Based on available data, the classification criteria are not met. Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation. (Hydrochloric acid)

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 preparation/mixture itself.

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

There are no data available on the preparation/mixture itself.

Practical experience

There are no data available on the preparation/mixture itself.



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11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the preparation/mixture itself.

Other information

There are no data available on the preparation/mixture itself.

Further information

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name							
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method	
7647-01-0	Hydrochloric acid							
	Acute fish toxicity	LC50	862 mg/l	96 h	Leuciscus idus			
7697-37-2	nitric acid							
	Acute fish toxicity	LC50 mg/l	1559	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 mg/l	> 419		several benthic diatoms; see results	Marine Biology 43:307-315 (1977)	Ten cultures of benthic diatoms were iso	
	Acute bacteria toxicity	EC50 mg/l ()	> 1000	3 h	Activated sludge	Study report (2008)	OECD Guideline 209	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

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. There are no data available on the mixture itself.

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

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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.



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Do not empty into drains.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. 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 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid)

14.3. Transport hazard class(es): 14.4. Packing group: Ш Hazard label: 8 Classification code: C₁ **Special Provisions:** 274 Limited quantity: 1 I Excepted quantity: E2 Transport category: 2 Hazard No: 80 Tunnel restriction code: Ε

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Classification code:C1Special Provisions:274Limited quantity:1 LExcepted quantity:E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid)

14.3. Transport hazard class(es): 8 14.4. Packing group: Ш Hazard label: 8 Special Provisions: 274 Limited quantity: 1 I Excepted quantity: F2 EmS: F-A. S-B Segregation group: 1 - acids

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3264

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid)

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Special Provisions:A3 A803Limited quantity Passenger:0.5 LPassenger LQ:Y840Excepted quantity:E2

IATA-packing instructions - Passenger: 851
IATA-max. quantity - Passenger: 1 L
IATA-packing instructions - Cargo: 855





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IATA-max. quantity - Cargo: 30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: 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

Authorisations (REACH, annex XIV):

diarsenic trioxide

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 19, Entry 75

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

This product is regulated 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): 3 - highly hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Ox. Liq: Oxidising liquid

Met. Corr: Substance or mixture corrosive to metals

Acute Tox: Acute toxicity Skin Corr: Skin corrosion Skin Irrit: Skin irritation Eye Dam: Eye damage Carc: Carcinogenicity

STOT SE: Specific target organ toxicity - single exposure STOT RE: Specific target organ toxicity - repeated exposure

Aquatic Acute: Acute aquatic hazard Aquatic Chronic: Chronic aquatic hazard

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%



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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.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eve damage.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H350 May cause cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.

EUH071 Corrosive to the respiratory tract.

Further Information

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.)