analytichem

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Multi-Element Standard (13E)

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

1.1. Product identifier

Multi-Element Standard (13E)

UFI: F9S1-6315-P00W-MFR6

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

Details of the supplier of the safety data sheet

Company name:	AnalytiChem Services, Unipessoal, Lda
Street:	Rua de Júlio Dinis 676 7º
Place:	P-4050-320 Porto
Telephone:	+351 226002917
E-mail:	info@analytichem.com
Contact person:	SDS service department
E-mail:	SDS@analytichem.com
Internet:	www.analytichem.com
Responsible Department:	SDS service department

Supplier or manufacturer details

Company name:	AnalytiChem GmbH
Street:	Stempelstraße 6
Place:	D-47167 Duisburg
Telephone:	0203/5194-0 Telefax: 0203/5194-290
E-mail:	info@analytichem.de
Contact person:	SDS service department
E-mail:	SDS@analytichem.com
Internet:	www.analytichem.de
Responsible Department:	AnalytiChem: EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20 EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200 EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848 UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500 USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378 Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701 Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333

1.4. Emergency telephone number:

+353 1 901 4670 (CHEMTREC)

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
Carc. 1A; H350
Skin Corr. 1B; H314
Eye Dam. 1; H318
Skin Sens. 1; H317
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

nitric acid, arsenic acid and it salts with the exception of those specified elsewhere in this Annex, nickel dinitrate

Signal word: Danger

Pictograms:

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

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

Special labelling of certain mixtures

EUH071	Corrosive to the respiratory tract. Restricted to professional users.

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			10 - < 15 %
	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			
7631-99-4	sodium nitrate			1 - < 5 %
	231-554-3		01-2119488221-41	
	Ox. Sol. 3, Eye Irrit. 2; H272 H319			
7446-08-4	selenium dioxide			< 1 %
	231-194-7	034-002-00-8		
	Acute Tox. 3, Acute Tox. 3, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1; H331 H301 H373 H400 H410			
-	arsenic acid and it salts with the exception of those specified elsewhere in this Annex			< 1 %
	-	033-005-00-1		
	Carc. 1A, Acute Tox. 3, Acute Tox. 3, Aquatic Acute 1, Aquatic Chronic 1; H350 H331 H301 H400 H410			
13138-45-9	nickel dinitrate			< 0.1 %
	236-068-5	028-012-00-1	01-2119492333-38	
	Ox. Sol. 2, Carc. 1A, Muta. 2, Repr. 1B, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H272 H350i H341 H360D H332 H302 H315 H318 H334 H317 H372 H400 H410			

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	10 - < 15 %
	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		
7631-99-4	231-554-3	sodium nitrate	1 - < 5 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = ca. 3430 mg/kg		
7446-08-4	231-194-7	selenium dioxide	< 1 %
	inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: LD50 = 68,1 mg/kg		
-	-	arsenic acid and it salts with the exception of those specified elsewhere in this Annex	< 1 %
	inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: ATE = 100 mg/kg		
13138-45-9	236-068-5	nickel dinitrate	< 0.1 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); oral: LD50 = 361,9 mg/kg Skin Irrit. 2; H315: >= 20 - 100 Skin Sens. 1; H317: >= 0,01 - 100 STOT RE 1; H372: >= 1 - 100 STOT RE 2; H373: >= 0,1 - < 1 Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=1		

Further Information

This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation

according to Annex XIV of REACH: arsenic acid and it salts with the exception of those specified elsewhere in this Annex
This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: arsenic acid and it salts with the exception of those specified elsewhere in this Annex

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
Vomiting
Methaemoglobinaemia
Risk of serious damage to eyes.
Allergic reactions

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

No data available

SECTION 5: Firefighting measures

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 (NOx)

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.
Do not breathe vapour/aerosol.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use. Handle and open container with care.
When using do not eat, drink, smoke, sniff. Use personal protection equipment.

Provide adequate ventilation. Avoid contact with skin, eyes and clothes.
Do not breathe vapour/aerosol. Use extractor hood (laboratory).

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. 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

Corrosive to metals.
Unsuitable container/equipment material: Metal
The product develops hydrogen in an aqueous solution in contact with metals.

Hints on joint storage

national regulations

Further information on storage conditions

Keep container tightly closed.
Store in a place accessible by authorized persons only.

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
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
7446-08-4	selenium dioxide		
Worker DNEL, long-term	inhalation	systemic	0,07 mg/m³
Worker DNEL, long-term	dermal	systemic	9,8 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,021 mg/m³
Consumer DNEL, long-term	dermal	systemic	6,02 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,00602 mg/kg bw/day
13138-45-9	nickel dinitrate		
Consumer DNEL, acute	oral	systemic	0,012 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,02 mg/kg bw/day
Worker DNEL, acute	inhalation	systemic	104 mg/m³
Worker DNEL, acute	inhalation	local	1,6 mg/m³
Consumer DNEL, acute	inhalation	systemic	8,8 mg/m³
Consumer DNEL, acute	inhalation	local	0,1 mg/m³

PNEC values

CAS No	Substance
Environmental compartment	Value
7631-99-4	sodium nitrate
Micro-organisms in sewage treatment plants (STP)	18 mg/l
7446-08-4	selenium dioxide
Freshwater	0,00374 mg/l
Freshwater (intermittent releases)	0,0077 mg/l
Marine water	0,0028 mg/l
Freshwater sediment	11,48 mg/kg
Marine sediment	8,68 mg/kg
Secondary poisoning	1,4 mg/kg
Micro-organisms in sewage treatment plants (STP)	10 mg/l
Soil	0,06 mg/kg
13138-45-9	nickel dinitrate
Freshwater	0,0071 mg/l
Freshwater (intermittent releases)	0 mg/l
Marine water	0,0086 mg/l
Freshwater sediment	109 mg/kg
Marine sediment	109 mg/kg
Secondary poisoning	0,12 mg/kg
Micro-organisms in sewage treatment plants (STP)	0,33 mg/l
Soil	29,9 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.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles

Wear eye/face protection.

Hand protection

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

By long-term hand contact
Recommended glove articles: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Recommended glove articles: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 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).

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 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:	green	
Odour:	like: Nitric acid	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		No data available

Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	0,8
Viscosity / kinematic:	No data available
Water solubility:	completely miscible

Solubility in other solvents

No data available

Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density (at 20 °C):	1,0962 g/cm³
Bulk density:	No data available
Relative vapour density:	No data available
Particle characteristics:	No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

No data available

Sustained combustibility:	No data available

Self-ignition temperature

Solid:	No data available
Gas:	No data available

Oxidizing properties

Oxidising agent

Other safety characteristics

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	0
Solid content:	0
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

Corrosive to metals.

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals.

Oxidising agent

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Alkali (lye)
The product develops hydrogen in an aqueous solution in contact with metals.
Amines, Ammonia, Alcohols, Alkali metals, Hydrogen peroxide
Copper, Combustible solids, Solvent, Alkaline earth metal, mercury (Hg).

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.

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

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

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

ATEmix calculated

ATE (oral) > 5000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 12,5 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
7697-37-2	nitric acid					
	inhalation vapour	ATE 2,65 mg/l				
7631-99-4	sodium nitrate					
	oral	LD50 mg/kg	ca. 3430	Rat	Study report (1980)	OECD Guideline 401
	dermal	LD50 mg/kg	> 5000	Rat	Study report (2000)	OECD Guideline 402
7446-08-4	selenium dioxide					
	oral	LD50 mg/kg	68,1	Rat	Indian Journal of Pharmacology 23(3):153	Method not specified GLP compliance: not
	inhalation vapour	ATE	3 mg/l			
	inhalation dust/mist	ATE	0,5 mg/l			
-	arsenic acid and it salts with the exception of those specified elsewhere in this Annex					
	oral	ATE mg/kg	100			
	inhalation vapour	ATE	3 mg/l			
	inhalation dust/mist	ATE	0,5 mg/l			
13138-45-9	nickel dinitrate					
	oral	LD50 mg/kg	361,9	Rat	Regul Toxicol and Pharmacol (doi.org/10.	OECD Guideline 425
	inhalation vapour	ATE	11 mg/l			
	inhalation dust/mist	ATE	1,5 mg/l			

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.
Following ingestion Gastric perforation
Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.
Irritating to respiratory system.
Pulmonary oedema
see also Section 4

Sensitising effects

May cause an allergic skin reaction. (nickel dinitrate)

Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer. (arsenic acid and it salts with the exception of those specified elsewhere in this Annex ; nickel dinitrate)
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

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

There are no data available on the mixture itself.

Further information

There are no data available on the 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
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
7631-99-4	sodium nitrate						
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Oncorhynchus mykiss	Study report (2000)	OECD Guideline 203
	Acute crustacea toxicity	EC50	3581 mg/l	48 h	Daphnia magna	J. Water Pollut. Control Fed. 37(9):1308	no data
	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
7446-08-4	selenium dioxide						
	Acute fish toxicity	LC50	3,3 mg/l	96 h	Morone saxatilis	Publication (1992)	other: ASTM methods for acute testing
	Acute algae toxicity	ErC50	44,24 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1992)	OECD Guideline 201
	Acute crustacea toxicity	EC50	0,55 mg/l	48 h	Daphnia magna	Environmental Toxicology and Chemistry 1	other: EPA-660/3-75-009: Methods for Acu
	Fish toxicity	NOEC	0,01 mg/l	258 d	Lepomis macrochirus	Environmental Toxicology and Chemistry 1	Year long study investigating the effect
	Algae toxicity	NOEC	0,995 mg/l	10 d	Anabaena flos-aquae	Archives of Environmental Contamination	10-d experiment on the toxicity of selen
	Crustacea toxicity	NOEC	0,07 mg/l	28 d	Daphnia magna	Department of Entomology, Fisheries and	OECD Guideline 211
	Acute bacteria toxicity	EC50	> 3200 mg/l ( )	3 h	activated sludge of a predominantly domestic sewag	Study report (2012)	OECD Guideline 209
13138-45-9	nickel dinitrate						
	Acute fish toxicity	LC50	15,3 mg/l	96 h	Oncorhynchus mykiss	Aquatic Toxicology 63 (2003) 65-82 (2003	other: not reported

	Acute algae toxicity	ErC50 mg/l	0,237	72 h	Ankistrodesmus falcatus	Publication (2009)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	0,2663	48 h	Ceriodaphnia dubia	Study report (2004)	other: American society of testing and m
	Fish toxicity	NOEC mg/l	0,057	32 d	Pimephales promelas	Water Resources Research Institute. Kent	other: ASTM 1980, E-729
	Algae toxicity	NOEC	0,6 mg/l	14 d	Anabaena cylindrica	Environ. Pollut. (Series A). 25(4):241-2	other: not reported
	Crustacea toxicity	NOEC mg/l	0,04	42 d	Daphnia magna	Wat. Res. 24(7):845-852 (1990)	Chronic exposure to sublethal concentrat
	Acute bacteria toxicity	EC50	33 mg/l ( )	0,5 h	Activated sludge	Journal of Hazardous Materials. B139:332	ISO 8192

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

BCF

CAS No	Chemical name	BCF	Species	Source
7446-08-4	selenium dioxide	755	periphyton	Environmental Pollut
13138-45-9	nickel dinitrate	23	Spirodela polyrhiza	Ecotoxicology and en

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.

Further information

Do not allow to enter into surface water or drains.

Discharge into the environment must be avoided.

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.
Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)".

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 2031
14.2. UN proper shipping name:	NITRIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C1
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2031
14.2. UN proper shipping name:	NITRIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C1
Limited quantity:	1 L
Excepted quantity:	E2

Marine transport (IMDG)

14.1. UN number or ID number:	UN 2031
14.2. UN proper shipping name:	NITRIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Special Provisions:	-
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 2031
14.2. UN proper shipping name:	NITRIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Special Provisions:	A212
Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E0
IATA-packing instructions - Passenger:	Forbidden
IATA-max. quantity - Passenger:	Forbidden
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

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):

arsenic acid and it salts with the exception of those specified elsewhere in this Annex

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 27, 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): 3 - highly hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,6,7,8,9,11,12,13,14,15.

Abbreviations and acronyms

Ox. Liq. 3: Oxidising liquids, hazard category 3
Ox. Sol. 2: Oxidising solids, hazard category 2
Met. Corr. 1: Corrosive to metals, hazard category 1
Acute Tox. 3: Acute toxicity, hazard category 3
Skin Corr. 1A: Skin corrosion, sub-category 1A
Skin Irrit. 2: Skin irritation, hazard category 2
Eye Dam. 1: Serious eye damage, hazard category 1
Eye Irrit. 2: Eye irritation, hazard category 2
Resp. Sens. 1: Respiratory sensitisation, hazard category 1
Skin Sens. 1: Skin sensitisation, hazard category 1
Muta. 2: Germ cell mutagenicity, hazard category 2
Carc. 1A: Carcinogenicity, hazard category 1A
Repr. 1B: Reproductive toxicity, hazard category 1B
STOT RE 1: Specific target organ toxicity - repeated exposure, hazard category 1
Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1

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
Carc. 1A; H350	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H350i	May cause cancer by inhalation.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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

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 information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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