

Safety Data Sheet

according to UK REACH Regulation

Standard für ICP-Methode: OT-Metalle (mit HCl angesäuert)

Revision date: 29.03.2023

Product code: 32174

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

1.1. Product identifier

Standard für ICP-Methode: OT-Metalle (mit HCl angesäuert)

UFI: 9TFK-6HQA-HQAJ-VH81

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	
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

inapplicable, this product is a mixture REACH registration number see section 3

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Skin Sens. 1; H317

Carc. 1A; H350i

STOT RE 2; H373

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

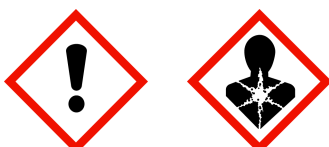
Hazard components for labelling

Cobalt(II) chloride hexahydrate

nickel dichloride

Signal word: Danger

Pictograms:



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Hazard statements

H290	May be corrosive to metals.
H317	May cause an allergic skin reaction.
H350i	May cause cancer by inhalation.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P362+P364	Take off contaminated clothing and wash it before reuse.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.

Special labelling of certain mixtures

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

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7647-01-0	Hydrochloric acid			5 - < 10 %
	231-595-7	017-002-01-X	01-2119484862-27	
	Skin Corr. 1B, STOT SE 3; H314 H335			
13446-34-9	Manganese(II) chloride tetrahydrate			< 1 %
	231-869-6		01-2119934899-15	
	Acute Tox. 3, Eye Dam. 1, STOT RE 2, Aquatic Chronic 2; H301 H318 H373 H411			
7697-37-2	nitric acid			< 1 %
	231-714-2	007-030-00-3	01-2119487297-23	
	Ox. Liq. 3, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A; H272 H290 H331 H314 EUH071			
10060-12-5	Chromtrichlorid-6-hydrat			< 1 %
	233-038-3			
	Met. Corr. 1, Acute Tox. 4, Skin Sens. 1, Aquatic Chronic 2; H290 H302 H317 H411			
7791-13-1	Cobalt(II) chloride hexahydrate			< 1 %
	231-589-4	027-004-00-5	01-2119517584-37	
	Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H350i H341 H360F H302 H334 H317 H400 H410			
7718-54-9	nickel dichloride			< 1 %
	231-743-0	028-011-00-6		
	Carc. 1A, Muta. 2, Repr. 1B, Acute Tox. 3, Acute Tox. 3, Skin Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H350i H341 H360D H331 H301 H315 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		
7647-01-0	231-595-7	Hydrochloric acid	5 - < 10 %
	Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100		
13446-34-9	231-869-6	Manganese(II) chloride tetrahydrate	< 1 %
	oral: LD50 = 2330 mg/kg		
7697-37-2	231-714-2	nitric acid	< 1 %
	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		
10060-12-5	233-038-3	Chromtrichlorid-6-hydrat	< 1 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 3250 mg/kg		
7791-13-1	231-589-4	Cobalt(II) chloride hexahydrate	< 1 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 537 mg/kg Carc. 1B; H350i: >= 0,01 - 100 Aquatic Acute 1; H400: M=10 Aquatic Chronic 1; H410: M=10		
7718-54-9	231-743-0	nickel dichloride	< 1 %
	inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: LD50 = 500 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		

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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

Irritant

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:

Hydrogen chloride (HCl)

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.

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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.
- When using do not eat, drink, smoke, sniff.
- Handle and open container with care.
- Use personal protection equipment.
- Provide adequate ventilation.
- Do not breathe vapour/aerosol.
- Avoid contact with skin, eyes and clothes.
- 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

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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

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7647-01-0	Hydrogen chloride (gas and aerosol mists)	1	2		TWA (8 h)	WEL
		5	8		STEL (15 min)	WEL
-	Nickel and its inorganic compounds (except nickel tetracarbonyl): water-soluble nickel compounds (as Ni)	-	0.1		TWA (8 h)	WEL
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	WEL

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DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7647-01-0	Hydrochloric acid			
Worker DNEL, long-term		inhalation	local	8 mg/m ³
Worker DNEL, acute		inhalation	local	15 mg/m ³
Consumer DNEL, long-term		inhalation	local	8 mg/m ³
Consumer DNEL, acute		inhalation	local	15 mg/m ³
13446-34-9	Manganese(II) chloride tetrahydrate			
Worker DNEL, long-term		inhalation	systemic	0,2 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,004 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,043 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,002 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,15 mg/kg bw/day
10060-12-5	Chromtrichlorid-6-hydrat			
Worker DNEL, long-term		inhalation	systemic	2,61 mg/m ³
Worker DNEL, acute		inhalation	systemic	2,61 mg/m ³
Worker DNEL, long-term		inhalation	local	0,31 mg/m ³
Worker DNEL, acute		inhalation	local	0,62 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,37 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	0,37 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,644 mg/m ³
Consumer DNEL, acute		inhalation	systemic	0,644 mg/m ³
Consumer DNEL, long-term		inhalation	local	0,077 mg/m ³
Consumer DNEL, acute		inhalation	local	0,154 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,185 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	0,185 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,185 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,185 mg/kg bw/day
7791-13-1	Cobalt(II) chloride hexahydrate			
Consumer DNEL, long-term		oral	systemic	0,12 mg/kg bw/day
7718-54-9	nickel dichloride			
Worker DNEL, acute		inhalation	local	1,6 mg/m ³
Consumer DNEL, acute		inhalation	systemic	8,8 mg/m ³
Consumer DNEL, acute		inhalation	local	0,1 mg/m ³
Worker DNEL, acute		inhalation	systemic	104 mg/m ³
Consumer DNEL, long-term		oral	systemic	0,02 mg/kg bw/day

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Consumer DNEL, acute	oral	systemic	0,012 mg/kg bw/day
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PNEC values

CAS No	Substance	Value
Environmental compartment		
13446-34-9	Manganese(II) chloride tetrahydrate	
Freshwater		0,013 mg/l
Freshwater (intermittent releases)		0,03 mg/l
Marine water		0 mg/l
Freshwater sediment		0,011 mg/kg
Marine sediment		0,001 mg/kg
Micro-organisms in sewage treatment plants (STP)		20,4 mg/l
Soil		14,8 mg/kg
10060-12-5	Chromtrichlorid-6-hydrat	
Freshwater		0,025 mg/l
Freshwater (intermittent releases)		0,02 mg/l
Marine water		0,008 mg/l
Freshwater sediment		0,091 mg/kg
Marine sediment		0,03 mg/kg
Secondary poisoning		3,99 mg/kg
Micro-organisms in sewage treatment plants (STP)		25,6 mg/l
Soil		4,979 mg/kg
7791-13-1	Cobalt(II) chloride hexahydrate	
Freshwater		0,0006 mg/l
Marine water		0,00236 mg/l
Freshwater sediment		9,5 mg/kg
Marine sediment		9,5 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,37 mg/l
Soil		10,9 mg/kg
7718-54-9	nickel dichloride	
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

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Eye/face protection

goggles

Wear eye/face protection.

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.

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: 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.

Respiratory protection

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

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:	No data available	
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

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Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	0
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):	1,02 g/cm ³
Relative density:	No data available
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
Sustaining combustion:	No data available
Self-ignition temperature	No data available
Solid:	No data available
Gas:	No data available
Oxidizing properties	No data available

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:	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)

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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 GB CLP Regulation

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
13446-34-9	Manganese(II) chloride tetrahydrate				
	oral	LD50 mg/kg 2330	Mouse	Indian Journal of Pharmacology, 23(3): 1	In all tests trace metal salts were diss
7697-37-2	nitric acid				
	inhalation vapour	ATE 2,65 mg/l			
10060-12-5	Chromtrichlorid-6-hydrat				
	oral	LD50 mg/kg 3250	Rat	Am. Ind. Hyg. Assoc. J., 1969, 30:5, 470	OECD Guideline 401
	dermal	LD50 mg/kg > 2000	Rat	Publication (2005)	OECD Guideline 402
7791-13-1	Cobalt(II) chloride hexahydrate				
	oral	LD50 mg/kg 537	Rat	Revista Española de Fisiología, 39: 291	OECD Guideline 401
	dermal	LD50 mg/kg > 2000	Rat	Study report (2007)	OECD Guideline 402
7718-54-9	nickel dichloride				
	oral	LD50 mg/kg 500	Rat	Regul Toxicol and Pharmacol (doi.org/10.	OECD Guideline 425
	inhalation vapour	ATE 3 mg/l			
	inhalation dust/mist	ATE 0,5 mg/l			

Irritation and corrosivity

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

Sensitising effects

May cause an allergic skin reaction. (Chromtrichlorid-6-hydrat; Cobalt(II) chloride hexahydrate; nickel dichloride)

Carcinogenic/mutagenic/toxic effects for reproduction

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May cause cancer by inhalation. (Cobalt(II) chloride hexahydrate; nickel dichloride)
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

May cause damage to organs through prolonged or repeated exposure. (nickel dichloride)

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.

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.

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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		
13446-34-9	Manganese(II) chloride tetrahydrate					
	Acute fish toxicity	LC50 49,9 mg/l	96 h	Salmo trutta	Federal aid Project #F-243, Colorado Div	A flow-through toxicity test using a mod
	Acute algae toxicity	ErC50 61 mg/l	72 h	Desmodesmus subspicatus	Study report (2010)	OECD Guideline 201
	Acute crustacea toxicity	EC50 9,8 mg/l	48 h	Daphnia magna	Journal of the Fisheries Research Board	The toxicity of manganese chloride to Da
	Fish toxicity	NOEC 0,55 mg/l	65 d	Salvelinus fontinalis	Federal aid project #F-243R-5, , Colorad	OECD Guideline 210
	Crustacea toxicity	NOEC 0,02 mg/l	14 d	other aquatic mollusc: Crassostrea gigas	Bull. Environ. Contam. T oxicol. 31, 344-35	The effects of up to eight elements, inc
	Acute bacteria toxicity	(EC50 > 1000 mg/l)	3 h	activated sludge of a predominantly domestic sewage	Study report (2010)	OECD Guideline 209
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
10060-12-5	Chromtrichlorid-6-hydrat					
	Acute fish toxicity	LC50 11,2 mg/l	96 h	Oncorhynchus mykiss	Prog. Fish-Cult. 39: 150, 1977 (1977)	other: Committee on Methods for Toxicity
	Acute algae toxicity	ErC50 0,397 mg/l	96 h	Scenedesmus capricornutum	referenced in EPA, Ambient water quality	EPA OTS 797.1050
	Acute crustacea toxicity	EC50 3,24 mg/l	48 h	Daphnia sp.	Journal of Water Resource and Protection	OECD Guideline 202
	Fish toxicity	NOEC 0,048 mg/l	72 d	steelhead trout	Publication (1984)	OECD Guideline 210
	Crustacea toxicity	NOEC 0,7 mg/l	21 d	Daphnia magna	Publication (1989)	OECD Guideline 211
7791-13-1	Cobalt(II) chloride hexahydrate					
	Acute fish toxicity	LC50 54,1 mg/l	96 h	Pimephales promelas	Study report (2009)	other: ASTM guideline
	Acute algae toxicity	ErC50 71,314 mg/l	96 h	Dunaliella tertiolecta	Study report (2010)	other: American Society for Testing and

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	Acute crustacea toxicity	EC50 mg/l	42,7	48 h	Aeolosoma sp.	Study report (2008)	Newman, J.P., Jr. 1975. The effects of h
	Fish toxicity	NOEC mg/l	0,21	34 d	Pimephales promelas	Study report (2009)	other: This study was conducted accordin
	Algae toxicity	NOEC mg/l	0,0018	7 d	Champia parvula	Study report - model refit from original	other: EPA 821-R- 02-014, Method 1009.0
	Crustacea toxicity	NOEC mg/l	0,1697	14 d	Aeolosoma sp.	Study report (2008)	other: Newman, J.P., Jr. 1975. The effec
	Acute bacteria toxicity	(EC50 mg/l)	120	0,5 h	Activated sludge	Study report (2010)	OECD Guideline 209
7718-54-9	nickel dichloride						
	Acute fish toxicity	LC50 mg/l	15,3	96 h	Oncorhynchus mykiss	Aquatic Toxicology 63 (2003) 65-82 (2003	other: not reported
	Acute algae toxicity	ErC50 mg/l	0,263	72 h	Spermatozopsis exsultans	Publication (2009)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 0,2	48 h	Ceriodaphnia dubia	Environmental Toxicology and Chemistry.	other: comparable to USEPA, Methods for
	Fish toxicity	NOEC mg/l	0,04	8 d	Danio rerio	Arch. Environ. Contam. Toxicol. 21:126-1	other: Swedish Standard SS 02 81 93
	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	0,09	21 d	Daphnia magna	Water Res. 23(4):501-510 (1989)	other: DIN 38412, Part II
	Acute bacteria toxicity	(EC50 mg/l)	33	0,5 h	Activated sludge	Journal of Hazardous Materials. B139:332	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
10060-12-5	Chromtrichlorid-6-hydrat	115	AMERICAN EASTERNOYSTER	Publication (1969)
7791-13-1	Cobalt(II) chloride hexahydrate	23	Asterias rubens	Marine Pollution Bul
7718-54-9	nickel dichloride	39	Chlorella salina	J. Mar. Biol. Ass. U

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 UK REACH.

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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)

<u>14.1. UN number or ID number:</u>	UN 1789
<u>14.2. UN proper shipping name:</u>	HYDROCHLORIC ACID
<u>14.3. Transport hazard class(es):</u>	8
<u>14.4. Packing group:</u>	II
Hazard label:	8
Classification code:	C1
Special Provisions:	520
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	UN 1789
<u>14.2. UN proper shipping name:</u>	HYDROCHLORIC ACID
<u>14.3. Transport hazard class(es):</u>	8
<u>14.4. Packing group:</u>	II
Hazard label:	8
Classification code:	C1
Special Provisions:	520
Limited quantity:	1 L
Excepted quantity:	E2

Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	UN 1789
<u>14.2. UN proper shipping name:</u>	HYDROCHLORIC ACID
<u>14.3. Transport hazard class(es):</u>	8
<u>14.4. Packing group:</u>	II

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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 1789
14.2. UN proper shipping name: HYDROCHLORIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
 Hazard label: 8
 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

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):
 Substances of very high concern, SVHC (REACH, article 59):
 Cobalt(II) chloride hexahydrate

Restrictions on use (REACH, annex XVII):
 Entry 3, Entry 27, Entry 75

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): 2 - obviously hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 3,4,5,6,7,8,9,10,11,12,13,15.

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method
Carc. 1A; H350i	Calculation method
STOT RE 2; H373	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.

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H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360D	May damage the unborn child.
H360F	May damage fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs (brain) through prolonged or repeated exposure if inhaled.
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.
H411	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 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 hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)