

according to Regulation (EC) No 1907/2006

Eisen(III)-chlorid-Standardlösung 300 g FeCl3/I Standardlösung für METROHM

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

1.1. Product identifier

Eisen(III)-chlorid-Standardlösung 300 g FeCl3/I Standardlösung für METROHM

UFI: PK81-J3QH-N00C-J03D

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 Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

Iron(III) chloride hexahydrate

Hydrochloric acid

Signal word: Danger



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Pictograms:





Hazard statements

H290 May be corrosive to metals.H302 Harmful if swallowed.H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing and eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

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.

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	Classification (Regulation (EC) No 1272/2008)			
10025-77-1	Iron(III) chloride hexahydrate			40 - < 45 %	
	231-729-4		01-2119497998-05		
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1; H302 H315 H318 H317				
7647-01-0	Hydrochloric acid			1 - < 5 %	
	231-595-7	017-002-01-X	01-2119484862-27		
	Skin Corr. 1B, STOT SE 3; H314 H335				

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. L	imits, M-factors and ATE	
10025-77-1	231-729-4	Iron(III) chloride hexahydrate	40 - < 45 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 500 mg/kg		
7647-01-0	231-595-7	231-595-7 Hydrochloric acid	
	Skin Corr. 1B; H314: >= 25 - 100		

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



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4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water

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

In case of skin irritation, consult a physician.

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.

Call a physician immediately.

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

Gastrointestinal complaints

Vomiting

Cardiac arrhythmias

Circulatory collapse

Liver and kidney damage

Risk of serious damage to eyes.

Irritant

Cough

Dyspnoea

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:

Hydrochloric gas

5.3. Advice for firefighters

Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

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

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.



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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

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, Keep container tightly closed.

Use personal protection equipment. Avoid contact with skin, eyes and clothes.

Provide adequate ventilation. Do not breathe vapour.

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.



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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.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Unsuitable container/equipment material: Metal Keep container tightly closed.

Further information on storage conditions

Store in a dry place.

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)	

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
10025-77-1	Iron(III) chloride hexahydrate			
Worker DNEL,	long-term	dermal	systemic	2,8 mg/kg bw/day
Consumer DN	EL, long-term	dermal	systemic	1,4 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,28 mg/kg bw/day
Consumer DN	EL, acute	oral	systemic	20 mg/kg bw/day
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

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 vapour.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles

Hand protection

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



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By long-term hand contact

Trade name/designation KCL 741 Dermatril® L Suitable 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 Suitable 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: colourless

Odour. No data available Odour threshold: No data available

Test method

Melting point/freezing point: No data available No data available Boiling point or initial boiling point and

boiling range:

Flammability: No data available Lower explosion limits: No data available No data available Upper explosion limits:

No data available BS 2000 Flash point: No data available

Decomposition temperature: No data available pH-Value: acidic Viscosity / kinematic: No data available Water solubility: No data available

(at 20 °C)

Solubility in other solvents No data available

Auto-ignition temperature:



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Dissolution rate: No data available No data available Partition coefficient n-octanol/water: Dispersion stability: No data available Vapour pressure: No data available Vapour pressure: No data available Density (at 20 °C): 1,2308 g/cm³ 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

Solid: No data available
Gas: No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

Solvent separation test:

Solvent content:

O Solid content:

No data available

No data available

No data available

Sublimation point:

Softening point:

No data available

No data available

Pour point:

No data available

No data available

No data available:

Viscosity / dynamic:

Flow time:

No data available

No data available

Further Information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

Alkali metals Ethylene oxide Alkali (lye)

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

metals

10.6. Hazardous decomposition products

In case of fire may be liberated: SECTION 5: Firefighting measures



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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 preparation/mixture itself.

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1232 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	
10025-77-1	Iron(III) chloride hexahyd	Iron(III) chloride hexahydrate					
	oral	LD50 5 mg/kg	500	Rat	Study report (2004)	OECD Guideline 423	
	dermal	LD50 >	> 2000	Rat	Study report (2004)	OECD Guideline 402	

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

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

Sensitising effects

May cause an allergic skin reaction. (Iron(III) chloride hexahydrate)

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.

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 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.



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Further information

Gastrointestinal complaints

Vomiting

Cardiac arrhythmias

Circulatory collapse

Liver and kidney damage

Risk of serious damage to eyes.

Irritant

Cough

Dyspnoea

SECTION 12: Ecological information

12.1. Toxicity

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

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		

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
10025-77-1	Iron(III) chloride hexahydrate	_	Fish, Oreochromis mossambicus	Indian Journal of 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

There are no data available on the mixture itself.

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 allow to enter into surface water or drains.

Contaminated packaging

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

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

SECTION 14: Transport information

14.1. UN number or ID number: UN 2582

14.2. UN proper shipping name: FERRIC CHLORIDE SOLUTION

14.3. Transport hazard class(es): 8 Ш 14.4. Packing group: Hazard label: 8 Classification code: C1 Limited quantity: 5 I Excepted quantity: F1 Transport category: 3 Hazard No: 80 Tunnel restriction code: Ε

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 2582

14.2. UN proper shipping name: FERRIC CHLORIDE SOLUTION

14.3. Transport hazard class(es):814.4. Packing group:IIIHazard label:8Classification code:C1Limited quantity:5 LExcepted quantity:E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 2582

14.2. UN proper shipping name: FERRIC CHLORIDE SOLUTION

14.3. Transport hazard class(es):814.4. Packing group:IIIHazard label:8Special Provisions:223Limited quantity:5 LExcepted quantity:E1EmS:F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 2582

14.2. UN proper shipping name: FERRIC CHLORIDE SOLUTION

14.3. Transport hazard class(es):814.4. Packing group:IIIHazard label:8Special Provisions:A3 A803Limited quantity Passenger:1 LPassenger LQ:Y841Excepted quantity:E1

IATA-packing instructions - Passenger:852IATA-max. quantity - Passenger:5 LIATA-packing instructions - Cargo:856IATA-max. quantity - Cargo:60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.



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14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

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

Information according to Directive

2012/18/EU (SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC).

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,7,8,9,12.

Abbreviations and acronyms

Met. Corr: Substance or mixture corrosive to metals

Acute Tox: Acute toxicity Skin Corr: Skin corrosion Skin Irrit: Skin irritation Eye Dam: Eye damage Skin Sens: Skin sensitisation

STOT SE: Specific target organ toxicity - single exposure

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. 4; H302	Calculation method				
Skin Irrit. 2; H315	Calculation method				
Eye Dam. 1; H318	Calculation method				
Skin Sens. 1; H317	Calculation method				

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
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.
 H335 May cause respiratory irritation.

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.



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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.)