



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Standardlösung Zink 15,0 g Zn/l ZnCl2 in Salzsäure 2 mol/l

Revision date: 13.01.2023

Product code: 21926

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

1.1. Product identifier

Standardlösung Zink 15,0 g Zn/l ZnCl2 in Salzsäure 2 mol/l

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	For Hazardous Materials [or Danger	ous Goods] Incidents Spill, Leak, Fire,
number:	Exposure, or Accident Call CHEMT	REC Day or Night Within USA and Canada:
	1-800-424-9300 Outside USA and C	Canada: +1 703-741-5970 (collect calls

Further Information

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

accepted)

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 Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

Danger

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling Hydrochloric acid zinc chloride

Signal word:

Pictograms:



Hazard statements

H290

May be corrosive to metals.



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H315	Causes skin irritation.	
H318	Causes serious eye damage.	
H411	Toxic to aquatic life with long lasting effects.	
Precautionary statemer	nts	
P273	Avoid release to the environment.	
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.	
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.	
P302+P352	IF ON SKIN: Wash with plenty of soap and 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		
Ne dete evelleble		

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization Mixtures in aqueous solution

Hazardous components

CAS No	Chemical name					
	EC No	Index No	REACH No			
	Classification (Regulatio					
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				
7646-85-7	zinc chloride			1 - < 5 %		
	231-592-0	030-003-00-2	01-2119472431-44			
	Acute Tox. 4, Skin Corr. H400 H410	uatic Chronic 1; H302 H314 H335				

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

Specific Col	IC. LIIIIIS, WI-Iat		
CAS No	EC No	Chemical name	Quantity
	Specific Conc.	Limits, M-factors and ATE	
7647-01-0	231-595-7	Hydrochloric acid	5 - < 10 %
	,	H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 3; H335: >= 10 - 100	
7646-85-7	231-592-0	zinc chloride	1 - < 5 %
	dermal: LD50	= > 2000 mg/kg; oral: LD50 = 1100 mg/kg STOT SE 3; H335: >= 5 - 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

4.1. Description of first aid measures

General information

No data available



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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.

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

Irritant — skin irritation and eye damage 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

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. 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 Do not breathe dust/fume/gas/mist/vapours/spray.



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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

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

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

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

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels Keep container tightly closed. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool place.

Further information on storage conditions

Unsuitable container/equipment material: Metal

7.3. Specific end use(s)

Laboratory chemicals



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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)	
7646-85-7	Zinc chloride, fume	-	1		TWA (8 h)	
		-	2		STEL (15 min)	

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 DN	IEL, long-term	inhalation	local	8 mg/m³
Consumer DN	IEL, acute	inhalation	local	15 mg/m³
7646-85-7	zinc chloride			
Worker DNEL	., long-term	inhalation	systemic	1 mg/m³
Worker DNEL	., long-term	dermal	systemic	8,3 mg/kg bw/day
Consumer DN	IEL, long-term	inhalation	systemic	1,25 mg/m³
Consumer DN	IEL, long-term	dermal	systemic	8,3 mg/kg bw/day
Consumer DN	IEL, long-term	oral	systemic	0,83 mg/kg bw/day

PNEC values

CAS No	Substance				
Environmental compartment Value					
7646-85-7	-85-7 zinc chloride				
Freshwater 0,0206 mg/l					
Marine water	0,0061 mg/l				
Freshwater sediment 117,8 mg/kg					
Marine sediment 56					
Micro-organisms in sewage treatment plants (STP) 0,1 mg/					
Soil	35,6 mg/kg				

8.2. Exposure controls

Appropriate engineering controls

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

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

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection:



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Face protection shield goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de 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. Protective clothing acid-resistant

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

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:	clear	
Odour:	stinging	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and		No data available
boiling range:		
Flammability		
Solid/liquid:		not applicable
Gas:		not applicable
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		Х
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available



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pH-Value:	acidic					
Viscosity / kinematic:	No data available					
Water solubility:	easily soluble					
Solubility in other solvents						
not determined						
Partition coefficient n-octanol/water:	No data available					
Vapour pressure:	No data available					
Vapour pressure:	No data available					
Density (at 20 °C):	1,045 g/cm ³					
Bulk density:	No data available					
Relative vapour density:	No data available					
9.2. Other information						
Information with regard to physical hazard classe	S					
Explosive properties						
No data available						
Self-ignition temperature						
Solid:	not applicable					
Gas:	not applicable					
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: Pour point:	No data available No data available					
No data available:	no data avaliable					
	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.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Amines, permanganates, e.g. potassium permanganate, aldehydes Ignition hazard: Carbide, Fluorine Possibility of hazardous reactions: Aluminium, Formaldehyde, Metal, Alkali (lye) Danger of explosion: Alkali metals, Sulphuric acid, concentrated

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Keep away from: 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

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.

Pulmonary oedema

CAS No	Chemical name							
	Exposure route	Dose		Species	Source	Method		
7646-85-7	zinc chloride							
		LD50 mg/kg	1100		Vet Hum Toxicol. 30(3): 224-228 (1988)	OECD Guideline 401		
		LD50 mg/kg	> 2000	Rat	Study report (1999)	OECD Guideline 402		

Irritation and corrosivity

Causes skin irritation.

Causes serious eye damage.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

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

Other information

There are no data available on the mixture itself.

Further information

Irritant — skin irritation and eye damage Cough Dyspnoea



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SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

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			
7646-85-7	zinc chloride							
	Acute fish toxicity	LC50 mg/l	0,439	96 h	Cottus bairdii	Environm; Toxic; & Chemistry, vol 24, nr	lab-designed dose-response test	
	Acute crustacea toxicity	EC50 mg/l	1,22	48 h	Daphnia magna	Publication (1995)	other: US EPA/600/4-85/01 3: methods for	
	Fish toxicity	NOEC mg/l	0,172	30 d	Cottus bairdi	Environm. Tox & Chem. Vol 24, Nr 6, 1515	lab-designed dose-response test	
	Algae toxicity	NOEC mg/l	1,071	16 d	Macrocystis pyrifera	Mar Environ Res 26(2):113-134 (1988)	16-d and 2-d toxicity test to early life	
	Crustacea toxicity	NOEC mg/l	0,031	50 d	Daphnia magna	Aquatic Toxicologhy 12,273-290 (1988)	chronic tests were performed for an exte	
	Acute bacteria toxicity	(EC50	5,2 mg/l)		activated sludge of a predominantly domestic sewag	Water research volume 17, nr10, 1363-136	OECD Guideline 209	

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
7646-85-7	zinc chloride	96,05	Danio rerio	Chemosphere 128:125-

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. The substance in the mixture does 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

Discharge into the environment must be avoided.

Further information

Do not empty into drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods



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Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Send to a physico-chemical treatment facility under observation of official regulations. Do not empty into drains.

Contaminated packaging

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

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

SECTION 14: Transport information

Land transport (ADR/RID)

Lanu 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, zinc chloride)
<u>14.3. Transport hazard class(es):</u>	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C1
Special Provisions:	274
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 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid, zinc chloride)
14.3. Transport hazard class(es):	8
14.4. Packing group:	ll
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	1 L
Excepted 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, zinc chloride)
<u>14.3. Transport hazard class(es):</u>	8
14.4. Packing group:	ll
Hazard label:	8
Special Provisions:	274
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 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid,
	zinc chloride)
14.3. Transport hazard class(es):	8
14.4. Packing group:	ll



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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			
14.5. Environmental hazards				
ENVIRONMENTALLY HAZARDOUS:	Yes			
Danger releasing substance:	zinc chloride			
SECTION 15: Regulatory information				
15.1. Safety, health and environmental regul	ations/legislation specific for the substance or mixture			
EU regulatory information				
Restrictions on use (REACH, annex XVII):				
Entry 3, Entry 75				
Information according to 2012/18/EU	Not subject to 2012/18/EU (SEVESO III)			
(SEVESO III):				
National regulatory information				
Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juve work protection guideline' (94/33/EC).	enile		
Water hazard class (D):	3 - highly hazardous to water			
SECTION 46: Other information				

SECTION 16: Other information

Changes

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

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service LC50: Lethal concentration, 50% LD50: Lethal dose, 50%

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Dam. 1; H318	Calculation method
Aquatic Chronic 2; H411	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.



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H315	Causes skin irritation.	
H318	Causes serious eye damage.	
H335	May cause respiratory irritation.	
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.	
Further Information		

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