

**Safety Data Sheet**

according to UK REACH Regulation

**Conzelmann Elektrolyt 3 in 1**

Revision date: 23.08.2024

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Elektrolyt 3in1

UFI: 3T2V-K98S-0W2Q-48UP

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

Metal surface treatment products, including galvanic and electroplating products

**1.3. Details of the supplier of the safety data sheet**

Company name: Conzelmann Schweißhandelsgesellschaft mbH  
Street: Siemensstrasse 9  
Place: D-89331 Burgau  
Telephone: +49 (0) 8222/41388-0  
E-mail: office@conzelmann-gmbh.de  
Contact person: Zentrale

**1.4. Emergency telephone****number:** +49(0)551-19240 (GIZ-Nord, 24h)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Met. Corr. 1; H290

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****Hazard components for labelling**

oxalic acid

**Signal word:** Danger**Pictograms:****Hazard statements**

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

**Precautionary statements**

P234 Keep only in original packaging.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
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.

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P406

Store in a corrosion-resistant container with a resistant inner liner.

#### 2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Chemical characterization

inorganic acids

##### Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
5949-29-1	Citric acid monohydrate			20 - < 25 %
	201-069-1		01-2119457029-42	
	Eye Irrit. 2; H319			
144-62-7	oxalic acid			1 - < 5 %
	205-634-3		01-2119534576-33	
	Acute Tox. 4, Acute Tox. 4, Eye Dam. 1; H312 H302 H318			

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	
5949-29-1	201-069-1	Citric acid monohydrate	20 - < 25 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = 5400 mg/kg	
144-62-7	205-634-3	oxalic acid	1 - < 5 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = >375 mg/kg	

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

##### After inhalation

Provide fresh air.

##### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

##### 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.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting.

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

No information available.

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

Treat symptomatically.

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**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**Water spray jet, Water mist, Foam, Dry extinguishing powder, Carbon dioxide (CO<sub>2</sub>)**Unsuitable extinguishing media**

Full water jet

**5.2. Special hazards arising from the substance or mixture**

Non-flammable.

In case of fire may be liberated: Phosphorus oxides

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Cover drains. Before discharge into sewage plants the product normally needs to be neutralised.

**6.3. Methods and material for containment and cleaning up****Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13 &amp; Section 15: Regulatory Information (non-mandatory)

**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. Do not breathe gas/fumes/vapour/spray.

Wear suitable protective clothing, gloves and eye/face protection. When using do not eat, drink or smoke.

Wash hands before breaks and after work.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**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.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

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

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adequate ventilation as well as local exhaustion at critical locations.

Suitable floor material: acid-resistant

Suitable container/equipment material: acid-resistant, Refined steel, Polyolefins

Unsuitable container/equipment material: Steel, Aluminium, Zinc

#### Hints on joint storage

Do not store together with: alkali.

#### Further information on storage conditions

storage temperature 5 - 35 °C

#### 7.3. Specific end use(s)

Metal surface treatment products, including galvanic and electroplating products

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
144-62-7	Oxalic acid	-	1		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL

#### PNEC values

CAS No	Substance	Value
5949-29-1	Citric acid monohydrate	
	Freshwater	440 mg/l
	Freshwater sediment	34,6 mg/kg
	Marine sediment	3,46 mg/kg
	Soil	33,1 mg/kg

### 8.2. Exposure controls



#### Appropriate engineering controls

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

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

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Suitable eye protection: goggles, Eye glasses with side protection (EN 166).

##### Hand protection

Suitable gloves type Butyl caoutchouc (butyl rubber), PVC (polyvinyl chloride).

 Thickness of the glove material  $\geq 0,5$  mm

 Breakthrough time:  $\geq 8$  h

Tested protective gloves must be worn EN ISO 374

##### Skin protection

Wear suitable protective clothing. Rubber boots, Protective apron

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**Respiratory protection**

In case of inadequate ventilation wear respiratory protection. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device (full mask or mouthpiece) with filter: P2

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	farblos	
Odour:	odourless	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		not determined
Flammability:		not applicable not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		not determined
Decomposition temperature:		not determined
pH-Value (at 20 °C):		2,3 (10 g/l)
Water solubility:		easily soluble
Solubility in other solvents		not determined
Partition coefficient n-octanol/water:		not determined
Vapour pressure:		not determined
Density (at 20 °C):		1,08 +/- 0,03 g/cm <sup>3</sup>
Relative vapour density:		not determined

**9.2. Other information****Information with regard to physical hazard classes**

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidizing.

**Other safety characteristics**

Evaporation rate:

not determined

Solid content:

not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Corrosive to metals. Possibility of hazardous reactions.

Reacts with : alkali

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

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**10.4. Conditions to avoid**

none

**10.5. Incompatible materials**

Aluminium, Steel, Zinc.

Keep away from: Base, Peroxides.

**10.6. Hazardous decomposition products**

No known hazardous decomposition products.

**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.

**ATEmix calculated**

ATE (oral) 11364 mg/kg; ATE (dermal) 25000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
5949-29-1	Citric acid monohydrate				
	oral	LD50 mg/kg 5400	Rat		
	dermal	LD50 mg/kg >2000	Rat		
144-62-7	oxalic acid				
	oral	LD50 mg/kg >375	Rat		
	dermal	LD50 mg/kg >2000	Rat		

**Irritation and corrosivity**

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

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

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

**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.

**Additional information on tests**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**SECTION 12: Ecological information**
**12.1. Toxicity**

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

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The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3).

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
5949-29-1	Citric acid monohydrate					
	Acute fish toxicity	LC50 mg/l	440-760	96 h	Leuciscus idus (golden orfe)	OECD 203
	Acute crustacea toxicity	EC50	120 mg/l	48 h	Daphnia magna (Big water flea)	

**12.2. Persistence and degradability**

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
5949-29-1	Citric acid monohydrate				
	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	97%	28		
	Readily biodegradable (according to OECD criteria).				

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
5949-29-1	Citric acid monohydrate	-1,72
144-62-7	oxalic acid	<1

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No information available.

**Further information**

Avoid release to the environment.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Wash with plenty of water. Completely emptied packages can be recycled.

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**SECTION 14: Transport information**
**Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 3265  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Oxalsäure, Zitronensäure)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8



Classification code: C3  
 Special Provisions: 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 Transport category: 3  
 Hazard No: 80  
 Tunnel restriction code: E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 3265  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Oxalsäure, Zitronensäure)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8



Classification code: C3  
 Special Provisions: 274  
 Limited quantity: 5 L  
 Excepted quantity: E1

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 3265  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Oxalic acid, Citric Acid)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8



Special Provisions: 223 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 EmS: F-A, S-B  
 Segregation group: 1 - acids

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 3265



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**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Oxalic acid, Citric Acid)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8



Special Provisions: A3 A803  
 Limited quantity Passenger: 1 L  
 Passenger LQ: Y841  
 Excepted quantity: E1  
 IATA-packing instructions - Passenger: 852  
 IATA-max. quantity - Passenger: 5 L  
 IATA-packing instructions - Cargo: 856  
 IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No information available.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**Other applicable information**

Hazchem code: 2X

### 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

**Additional information**

Regulation (EC) No. 648/2004 [Detergents regulation].

**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

**15.2. Chemical safety assessment**

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

### SECTION 16: Other information

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**Abbreviations and acronyms**

Met. Corr: Corrosive to metals

Acute Tox: Acute toxicity

Eye Dam: Eye damage

Eye Irrit: Eye irritation

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 GB CLP Regulation**

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Eye Dam. 1; H318	Calculation method

**Relevant H and EUH statements (number and full text)**

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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