

Cloeren Technology Elektrolyt CT D2

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Revision date: 11/30/2022 Version: 4.0

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

1.1. Product identifier

Product form	: Mixture
Trade name	: Elektrolyt CT D2
Product code	: AetzM022

: AetzM022

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

1.2.1. Relevant identified uses

Main use category Use of the substance/mixture : Professional use : Sample preparation for metallography

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cloeren Technology GmbH In Petersholz 44 DE-41844 Wegberg Germany T 02432/8902510 - F 02432/8902519 info@cloeren.de - www.cloeren.de

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Germany	Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) Universitätsmedizin Göttingen - Georg- August-Universität	Robert-Koch Straße 40 37075 Göttingen	+49 (0) 551 19240	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture		
Classification according to Regulation (EC) No. 1272/2008 [CL	P]	
Flammable liquids, Category 3	H226	
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314	
Serious eye damage/eye irritation, Category 1	H318	

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

Labelling according to Regulation (EC) No.

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Causes severe skin burns and eye damage. Causes serious eye damage.

2.2. Label elements

Hazard pictograms (CLP)

. 1272/2008	[CLP]	
:		
	GHS02	GHS05

Signal word (CLP) Hazard statements (CLP) : Danger

: H226 - Flammable liquid and vapour.

H314 - Causes severe skin burns and eye damage.

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Precautionary statements (CLP)	 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof electrical, ventilating, lighting equipment. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405 - Store locked up. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
2.3. Other hazards	

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Other information

: Hazardous components for labeling: Phosphoric acid.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures Comments

: Mixture of the substances listed below with harmless additives

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
phosphoric acid	CAS-No.: 7664-38-2 EC-No.: 231-633-2 EC Index-No.: 015-011-00-6	15 – 30	Skin Corr. 1B, H314
Ethanol	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5 REACH-no: 2119457610-43	15 – 30	Flam. Liq. 2, H225 Eye Irrit. 2, H319
2-Propanol	CAS-No.: 67-63-0 EC-No.: 200-661-7 EC Index-No.: 603-117-00-0	1 – 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

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

SECTION 4: First aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	 Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

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4.2. Most important symptoms and e	ffects, both acute and delayed
Symptoms/effects after skin contact Symptoms/effects after eye contact Symptoms/effects after ingestion	Burns.Serious damage to eyes.Burns.
4.3. Indication of any immediate med	lical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
5.2. Special hazards arising from the subs	tance or mixture
Fire hazard Hazardous decomposition products in case of fire	Flammable liquid and vapour.Toxic fumes may be released.
5.3. Advice for firefighters	
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equip	oment and emergency procedures	
6.1.1. For non-emergency personnel		
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.	
6.1.2. For emergency responders		
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".	
6.2. Environmental precautions		
Avoid release to the environment.		
6.3. Methods and material for containment	and cleaning up	
Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.	
Other information	: Dispose of materials or solid residues at an authorized site.	
6.4. Reference to other sections		

For further information refer to section 13.

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Precautions for safe handling	: Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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7.2. Conditions for safe storag	e, including any incompatibilities
Technical measures Storage conditions	Ground/bond container and receiving equipment.Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Ethanol (64-17-5)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Ethanol
AGW (OEL TWA) [1]	380 mg/m³
AGW (OEL TWA) [2]	200 ppm
Peak exposure limitation factor	2(II)
Remark	DFG;Y
Regulatory reference	TRGS900
2-Propanol (67-63-0)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Propan-2-ol
AGW (OEL TWA) [1]	500 mg/m³
AGW (OEL TWA) [2]	200 ppm
Peak exposure limitation factor	2(II)
Remark	DFG;Y
Regulatory reference	TRGS900

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Safety glasses

8.2.2.2. Skin protection

Skin and body protection: Wear suitable protective clothing

Hand protection:

The glove material must be impermeable and resistant to the product / the substance / the be preparation. Selection of the glove material taking into account the penetration times, permeation rates and the Degradation. Recommendation: uvex u-chem 3000 (DIN EN 374) Material: nitrile rubber Material thickness: 0.5 mm Value for the permeation:> 120 min (level 4) Recommendation: uvex u-fit strong N2000 (DIN EN 374) Material: nitrile rubber Material: nitrile rubber Material thickness: 0.2 mm Value for the permeation:> 30 min (level 2)

8.2.2.3. Respiratory protection

Respiratory protection: Ensure adequate ventilation or use a fume cupboard. No respiratory protection is required with normal use.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: alcohol.
Odour threshold	: Not available
Melting point	: 0°C
Freezing point	: Not available
Boiling point	: 100 °C
Flammability	: Not applicable
Explosive properties	: The product is not explosive, but the formation of explosive vapor / air mixtures is possible.
Oxidising properties	: Not self-igniting.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 36 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available

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pH Viscosity, kinematic Solubility Partition coefficient n-octanol/water (Log Kow) Vapour pressure Vapour pressure at 50 °C Density Relative density Relative vapour density at 20 °C	 Not available Not available soluble in water. Not available Not available Not available 1.138 g/cm³ Not available Not available Not available
Relative vapour density at 20 °C Particle characteristics	: Not available : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information		
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008		
Acute toxicity (dermal)	Not classified Not classified Not classified	
Ethanol (64-17-5)		
LD50 oral rat	15010 mg/kg bodyweight	
LD50 oral	8300 mg/kg bodyweight	
2-Propanol (67-63-0)		
LD50 oral rat	5840 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)	
Skin corrosion/irritation :	Causes severe skin burns.	
Ethanol (64-17-5)		
рН	≈ 7	

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Serious eye damage/irritation	Causes serious eye damage.
Ethanol (64-17-5)	
рН	≈7
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
2-Propanol (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	Not classified
Ethanol (64-17-5)	
NOAEL (subchronic, oral, animal/male, 90 days)	< 9700 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
NOAEL (subchronic, oral, animal/female, 90 days)	 > 9400 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
Aspiration hazard	Not classified
Ethanol (64-17-5)	
Viscosity, kinematic	1.506 mm ² /s
11.2. Information on other hazards	

No additional information available

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general:Hazardous to the aquatic environment, short-term:(acute):Hazardous to the aquatic environment, long-term:(chronic):Not rapidly degradable	Before neutralisation, the product may represent a danger to aquatic organisms. Not classified Not classified
Ethanol (64-17-5)	
LC50 - Fish [1]	14.2 g/l Test organisms (species): Pimephales promelas
NOEC (chronic)	9.6 mg/l Test organisms (species): Daphnia magna Duration: '9 d'
2-Propanol (67-63-0)	
LC50 - Fish [1]	10000 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	9640 mg/l Test organisms (species): Pimephales promelas
12.2. Persistence and degradability	
No additional information available	
12.3. Bioaccumulative potential	
No additional information available	
12.4. Mobility in soil	

No additional information available

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12.5. Results of PBT and vPvB assessment	
No additional information available	
12.6. Endocrine disrupting properties	
No additional information available	
12.7. Other adverse effects	
No additional information available	
SECTION 13: Disposal considerations	

13.1. Waste treatment methods

Waste treatment methods

Additional information

Dispose of contents/container in accordance with licensed collector's sorting instructions.
 Flammable vapours may accumulate in the container.

SECTION 14: Transport information

ADR	IMDG	ΙΑΤΑ	ADN	RID
14.1. UN number or ID n	umber			
UN 2920	UN 2920	UN 2920	UN 2920	UN 2920
14.2. UN proper shippin	g name			·
CORROSIVE LIQUID, FLAMMABLE, N.O.S.	CORROSIVE LIQUID, FLAMMABLE, N.O.S.	Corrosive liquid, flammable, n.o.s.	CORROSIVE LIQUID, FLAMMABLE, N.O.S.	CORROSIVE LIQUID FLAMMABLE, N.O.S
Transport document descr	iption	· · · · · · · · · · · · · · · · · · ·		
UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (), 8 (3), II, (D/E)	UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S., 8 (3), II	UN 2920 Corrosive liquid, flammable, n.o.s., 8 (3), II	UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S., 8 (3), II	UN 2920 CORROSIV LIQUID, FLAMMABLE N.O.S., 8 (3), II
14.3. Transport hazard o	class(es)	· · · · · · · · · · · · · · · · · · ·		
8 (3)	8 (3)	8 (3)	8 (3)	8 (3)
14.4. Packing group				
II	II	II	II	II
14.5. Environmental haz	ards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary informatio	n available			
14.6. Special precaution	s for user			
Dverland transport Classification code (ADR) Special provisions (ADR) Limited quantities (ADR) Excepted quantities (ADR)	: CF : 27 : 11 : E2	4		

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Packing instructions (ADR)	· 0001 IBC02
Packing instructions (ADR) Mixed packing provisions (ADR)	: P001, IBC02 : MP15
Portable tank and bulk container instructions (ADR)	: T11
Portable tank and bulk container instructions (ADK)	: TP2, TP27
(ADR)	. IFZ, IFZ <i>I</i>
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: 2 : S2
Hazard identification number (Kemler No.)	: 83
Orange plates	
	83 2920
	2920
Turnel restriction code (ADD)	
Tunnel restriction code (ADR)	: D/E
Towns of her see	
Transport by sea	. 074
Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1L
Excepted quantities (IMDG)	: E2 : P001
Packing instructions (IMDG) IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T11
· · · · · ·	
Tank special provisions (IMDG)	: TP2, TP27 : F-E
EmS-No. (Fire) EmS-No. (Spillage)	: S-C
Stowage category (IMDG)	: C
Stowage and handling (IMDG)	: SW1, SW2
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.
Air transport	
•	· E2
PCA Excepted quantities (IATA)	: E2 · Y840
PCA Excepted quantities (IATA) PCA Limited quantities (IATA)	: Y840
PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA)	: Y840 : 0.5L
PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA)	: Y840 : 0.5L : 851
PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA)	: Y840 : 0.5L : 851 : 1L
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PCA Excepted quantities (IATA) PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA) PCA packing instructions (IATA) PCA max net quantity (IATA) CAO packing instructions (IATA) CAO max net quantity (IATA) ERG code (IATA) Inland waterway transport Classification code (ADN)	: Y840 : 0.5L : 851 : 1L : 855 : 30L : 8F : CF1
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Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 83

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no REACH substances with Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

Germany

Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK) Hazardous Incident Ordinance (12. BImSchV)	 WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1). Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

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Abbreviations and acronyms:		
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
ΙΑΤΑ	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	
РВТ	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disrupting properties	

Full text of H- and EUH-statements:	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:		
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H336	May cause drowsiness or dizziness.	
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B	
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis	

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.