

Product name:	ELECTROLYTE D2	Page:	1/10
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## 1. IDENTIFICATION

### Product identifier

Product name: ELECTROLYTE D2  
Cat. No.40900032

Container size: 1 l

### Recommended use and restrictions on use

Application: For electrolytic preparation of metallographic specimens.

### Details of the supplier of the safety data sheet

Supplier: Struers Ltd  
7275 West Credit Avenue  
Ontario L5N 5M9 Mississauga  
Canada  
Tel:+1 (905) 8148855

Responsible for safety data sheet authoring: Responsible for safety data sheet authoring: DHI  
Any questions to the contents of this safety data sheet should be sent to:  
struers@struers.dk

### Emergency telephone number

Alberta & NWT:  
Poison & Drug Information Service (PADIS): 1-800-332-1414  
British Columbia:  
Drug and Poison Information Centre (DPIC): 604-682-5050 / 1-800-567-8911  
Ontario:  
Poison Centre: 1-800-268-9017  
Québec:  
Poison Control Centre: 1-800-463-5060

Infotrac:  
1-800-535-5053  
Struers CAN:  
+1 (905) 8148855  
(Only during office hours)

## 2. HAZARDS IDENTIFICATION

### Classification of the hazardous product

WHMIS 2015: Flammable Liquids — Category 3  
Skin Corrosion — Category 1B  
Serious Eye Damage — Category 1

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## Label elements



Danger

- H226 Flammable liquid and vapour.
- H314 Causes severe skin burns and eye damage.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- 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.
- P310 Immediately call a POISON CENTER/doctor.
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof electrical, ventilating and lighting equipment.
- P242 Use non-sparking tools.
- P243 Take action to prevent static discharges.
- P264 Wash contaminated skin thoroughly after handling.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P363 Wash contaminated clothing before reuse.
- P370 + P378 In case of fire: Use alcohol resistant foam, carbon dioxide or dry powder to extinguish.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local regulations.

## Other hazards

The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms. Be aware that symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure. Organic solvents may be absorbed into the body by inhalation and cause permanent damage to the nervous system, including the brain.

PBT/vPvB: No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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## **Mixtures**

The product contains: acid and water.

WHMIS 2015:

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>REACH Reg. No:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
25-50	7664-38-2	231-633-2	-	Phosphoric acid	Skin Corrosion Category 1B	B
15-25	64-17-5	200-578-6	-	Ethanol	Flammable Liquids Category 2 Eye Irritation Category 2	
<5	71-23-8	200-746-9	-	Propan-1-ol	Flammable Liquids Category 2 Serious Eye Damage Category 1 Specific Target Organ Toxicity Single Exposure Category 3	
25-50	7732-18-5	231-791-2	-	Water	-	
<1	57-13-6	200-315-5	-	Urea	-	

## **4. FIRST-AID MEASURES**

### **Description of first-aid measures**

**Burns:** Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

**Inhalation:** Move into fresh air and keep at rest. Be aware that symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure. Immediately call an ambulance.

**Skin contact:** Remove contaminated clothes and rinse skin thoroughly with water.

**Eye contact:** Immediately flush with plenty of water. Remove any contact lenses and open eyes wide apart. Call an ambulance and continue flushing during transportation to hospital taking along these instructions.

**Ingestion:** Immediately call a Poison Center/doctor. Rinse mouth. Do not induce vomiting. Do not drink anything without first consulting a doctor. Have these instructions at hand. (\*)

### **Most important symptoms and effects, both acute and delayed**

**Symptoms/effects:** See section 11 for more detailed information on health effects and symptoms.

### **Indication of any immediate medical attention and special treatment needed**

**Medical attention/treatments:** Treat symptomatically.

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## 5. FIRE-FIGHTING MEASURES

### Extinguishing media

Extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Cool containers exposed to heat with water spray and remove container, if no risk is involved.  
Do not use water jet as an extinguisher, as this will spread the fire.

### Specific hazards arising from the hazardous product

Specific hazards: The product is flammable, and heating may generate vapors which may form explosive vapor/air mixtures.

### Advice for fire-fighters

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Protective equipment: Avoid inhalation of vapors and contact with skin and eyes. For personal protection, see section 8.

Emergency procedures: No specific recommendations. For personal protection, see section 8.

### Environmental precautions

Environmental precautions: Do not discharge into drains, water courses or onto the ground.

### Methods and material for containment and cleaning up

Spill Cleanup Methods: Absorb spillage with non-combustible, absorbent material. Flush away spillage with plenty of water.

### Reference to other items

References: For personal protection, see section 8. For waste disposal, see section 13.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Safe handling advice: Avoid inhalation of vapors and contact with skin and eyes. Observe good chemical hygiene practices.

Technical measures: Never pour water into acid/base. Dilute by slowly pouring the product into water while stirring.

Technical precautions: Local exhaust is recommended. Provide easy access to water supply or an emergency shower. Provide easy access to water supply and eye wash facilities.

### Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: Follow rules for flammable liquids.

Storage conditions: Store in a cool and well-ventilated place. Do not store near heat sources or expose to high temperatures.

### Specific end-use(s)

Specific use(s): No information available.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Other provincial OEL's may apply.

Occupational exposure limits:

<u>CAS-No.:</u>	<u>Chemical name:</u>	<u>As:</u>	<u>Exposure limits:</u>		<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
64-17-5	Ethyl alcohol	-	1000 ppm	1880 mg/m3	TWA	-	Quebec
64-17-5	Ethyl alcohol	-	1000 ppm	1880 mg/m3	TWA	-	Alberta
64-17-5	Ethanol	-	1000 ppm		STEL	-	BC
71-23-8	n-Propyl alcohol	-	200 ppm	492 mg/m3	TWA	3	Alberta
		-	400 ppm	984 mg/m3	STEL	3; 15min	
71-23-8	n-Propanol	-	100 ppm		TWA	-	BC
71-23-8	n-Propyl alcohol	-	200 ppm	492 mg/m3	TWA	Pc	Quebec
		-	250 ppm	615 mg/m3	STEL	Pc; 15min	
7664-38-2	Phosphoric acid	-		1 mg/m3	TWA	3	Alberta
		-		3 mg/m3	STEL	3; 15min	
7664-38-2	Phosphoric acid	-		1 mg/m3	TWA	-	BC
		-		3 mg/m3	STEL	-	
7664-38-2	Phosphoric acid	-		1 mg/m3	TWA	-	Quebec
		-		3 mg/m3	STEL	15min	

### Exposure controls

#### Engineering measures:

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Local exhaust is recommended. An eye wash bottle must be available at the work site.

#### Personal protection:

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

#### Respiratory equipment:

In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. Use respiratory equipment with combination filter, type A2/P2.

#### Hand protection:

Protective gloves of butyl rubber or PE/EVOH/PE-laminate are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

#### Eye protection:

Wear goggles/face shield.

#### Skin protection:

Wear apron or protective clothing in case of splashes.

#### Environmental Exposure Controls:

Not available.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<u>Form:</u>	Liquid.
<u>Colour:</u>	Colourless.
<u>Odour:</u>	Odourless.
<u>Odour threshold:</u>	Not available.
<u>pH:</u>	< 2
<u>Melting point:</u>	Not available.
<u>Boiling point:</u>	Not available.
<u>Flash point:</u>	$\geq 23 \text{ }^\circ\text{C}$ and $\leq 60 \text{ }^\circ\text{C}$
<u>Evaporation rate:</u>	Not available.
<u>Flammability (solid, gas):</u>	Not available.
<u>Explosion limits:</u>	Not available.
<u>Vapour pressure:</u>	Not available.
<u>Vapour density:</u>	Not available.
<u>Relative density:</u>	1,11
<u>Solubility:</u>	soluble in water
<u>Partition coefficient (n-octanol/water):</u>	Not available.
<u>Auto-ignition temperature (<math>^\circ\text{C}</math>):</u>	Not available.
<u>Decomposition temperature (<math>^\circ\text{C}</math>):</u>	Not available.
<u>Viscosity:</u>	Not available.
<u>Explosive properties:</u>	Not available.
<u>Oxidising properties:</u>	Not available.
<b><u>Other information</u></b>	
<u>Other data:</u>	Volatile Organic Compound (VOC): 225,3 g/l (calculated)

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## 10. STABILITY AND REACTIVITY

### Reactivity

Reactivity: No data available.

### Chemical stability

Stability: Stable under normal temperature conditions.

### Possibility of hazardous reactions

Hazardous Reactions: No data available.

### Conditions to avoid

Conditions/materials to avoid: Heating. Strong oxidising substances and strong bases.

### Incompatible materials

Incompatible materials: No information available.

### Hazardous decomposition products

Hazardous decomposition products: When water is added, the product reacts with a number of metals forming hydrogen gas, which may form explosive vapor/air mixtures.

## 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

Acute Toxicity (Oral): Based on available data the classification criteria are not met.

Acute Toxicity (Dermal): Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation): Based on available data the classification criteria are not met.

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

Serious eye damage/irritation: Causes serious eye damage.

Respiratory or skin sensitization: Based on available data the classification criteria are not met.

Germ cell mutagenicity: Based on available data the classification criteria are not met.

Carcinogenicity: Based on available data the classification criteria are not met.  
National Toxicology Program (NTP): No.  
IARC Not Listed.

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.

Inhalation: Vapors are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung edema. Vapours of organic solvents have narcotic effect and may cause headache, fatigue, dizziness and nausea.

Ingestion: Corrosive. Even small amounts may cause serious damage.

Specific effects: Frequent inhalation of even small concentrations may cause irritability, fatigue and memory failure and eventually permanent damage to the nervous system, including the brain.

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Ecotoxicity: The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

### Persistence and degradability

Degradability: The degradability of the product has not been stated.

### Bioaccumulative potential

Bioaccumulative potential: No data available on bioaccumulation.

### Mobility in soil

Mobility: No data available.

### Results of PBT and vPvB assessment

PBT/vPvB: No information available.

### Other adverse effects

Other adverse effects: No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

Waste from residues: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Waste is classified as hazardous waste.

Contaminated packaging: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

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## 14. TRANSPORT INFORMATION

The product is covered by international regulation on the transport of dangerous goods (IMDG, IATA).

### UN number

UN-No: 2920

### UN proper shipping name

Proper Shipping Name: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (Phosphoric acid, Ethanol)

Additional IMDG information:

EmS: F-E, S-C

MFAG: 1

Segregation Group: Alkali

### Transport hazard class(es)

Class: 8 (3)

### Packing group

PG: II

### Environmental hazards

Marine pollutant: No.

Environmentally Hazardous substance: No.

### Special precautions for user

Special precautions: None known.

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk: Not relevant

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations specific to the product

Special provisions: This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.  
DSL: All chemicals included in the product are DSL listed or exempt.

National regulation: Hazardous Products Regulations, with amendments.  
Alberta: Occupational Health and Safety Code 2009.  
Quebec: Regulation respecting the quality of the work environment, with amendments (2013-12-13).  
Ontario: Control of Exposure to Biological or Chemical Agents R.R.O. 1990, Reg. 833, with amendments (2016).  
British Columbia: Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, with amendments (2015).

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## 16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 4.

The (\*) indicates the changes made with respect to the previous version.

Approved by DHI.

Allan Vorup

### Additional information:

Classification according to WHMIS 2015:  
Calculation method.

The classification as corrosive has been made based on the pH value of the product.

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The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.  
[www.dhigroup.com](http://www.dhigroup.com).

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