Safety Data Sheet

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

1.1 Product identifier **ELEKTROLYT MG**

UFI Code ASSD-N80Q-ES3X-JQXT

1.2. Relevant identified uses of the substance or mixture and uses advised against
Professional use- Product is used for polishing of cobalt-based dental alloys.

1.3 Details of the supplier of the safety data sheet

		Production:
Manufacturer/Supplier:	INTERDENT d.o.o.	INTERDENT d.o.o.
Street:	Opekarniška cesta 26	Dol 1
Country code /Postal code/City:	SI-3000 Celje	SI-3342 Gornji Grad
Telephone:	+386(0) 425-62-00	
Fax:	+368(0) 490-62-02	

1.4 Emergency telephone number

Emergency phone:	112 (EU)
	+386(0) 425-62-00 (Mon – Fri: 8.00 – 16.00)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008:

Acute toxicity (oral)	Hazard Category 4	H302: Health harmful if swallowed.
Skin corrosion/irritation	Hazard Category 2	H315: Causes skin Irritation.
Serious eye damage/eye irritation	Hazard Category 2	H319: Causes serious eye irritation.

2.2 Label elements
Labelling according to Regulation (EC) No. 1272/2008:

Hazard pictograms:

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Signal word: WARNING

Hazard statements:
H302 Health harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statement:
Prevention:
P264 Wash your hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves, protective clothing, eye protection.

Response:
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+ P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

Disposal:
P501 Dispose of contents/containers in accordance with local regulation.

Component on the label:
Ethylene glycol, Sulfuric acid

2.3 Other hazards
PBT and vPvB evaluations are in chapter 12.5

SECTION 3: Composition / information on ingredients

3.1 Substance

See section 3.2.

3.2 Mixture

Chemical name	CAS Nr. EC-Number INDEX number	%	Classification according to EC 1272/2008	
			Hazardous class/hazardous category	Hazardous phrases
Ethane-1,2-diol (Ethylene glycol)	603-027-00-1 203-473-3 107-21-1	> 25	Acute toxicity (oral), Hazard Category 4	H302
Sulfuric acid	016-020-00-8 231-639-5 7664-93-9	5-10	Skin Irrit. 2 Eye irrit. 2	H315 H319

SECTION 4: First Aid Measures

4.1 Description of first aid measures

Common warnings:
Remove injured person from contaminated area and lay he/she on the floor. Remove contaminated clothing. In case of eyes contact, rinse the eyes with water and seek for medical attention. In case of accident seek for medical attention (if possible, show safety data sheet). Medical attention is needed in case of poisoning. Symptoms of poisoning are seen later so medical attention is needed at least 48h after accident.

Inhalation:
In case of inhalation bring injured person to fresh air. Symptoms of poisoning do not appear immediately, so medical attention is needed immediately. Bring fresh air. Free the air ways. Place and transport injured person in lateral position. If injured person does not breath then give him/her artificial breathing.

Skin contact:
Rinse skin with water and then with soap. Remove contaminated clothes.

E*ye contact:*
Rins open lids with a lot of water for 15 minutes immediately. Seek for medical attention.

Ingestion:
Rinse mouth with water. Injured person must drink 0,5L of water in small gulps – to get diluting effect. Do not induce vomiting. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No information available
Effects: No information available

4.3 Indication of any immediate medical attention and special treatment needed
Symptomatic treatment, other data not available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable:
Extinguishing dust, carbon dioxide, sprayed jet of water; in case of big fire use on alcohol resistant foam

Unsuitable:
Very voluminous sprayed jet of water

5.2 Special hazards arising from the substance or mixture
The product itself is not combustible. Vapors are heavier than air. Hazardous conflagration gases or vapors may form due to ambient fire. In the event of fire, sulfuric acid vapors, sulfur dioxide and sulfur trioxide may be released. In case of contact with light metals, hydrogen gas may form (risk of explosion).

5.3 Advice for firefighters
Special protective equipment for firefighting:
Use suitable breathing apparatus that is independent of ambient air. Use protective clothing for fire-fighting so as to avoid skin and eye contact. Stay in the danger zone only with suitable, impervious chemical protection suit.

Other instructions
Cool endangered containers with water spray jet. Suppress vapors with water spray jet. Avoid penetration of fire-fighting water in surface waters or groundwater.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Keep unprotected persons away. Increased risk of slipping due to leaking or spilt product. Provide for adequate fresh air. Formation of explosive mixtures with air possible. Keep away sources of ignition. Avoid contact with substance. Do not pick up with unprotected hands. Avoid contact with skin and eyes. Do not inhale vapors/ aerosols. Wear protective clothing in accordance with section 8 of this safety data sheet.

6.2 Environmental precautions

Do not allow to enter subsoil/earth. Do not allow to enter sewer system / surface waters / groundwater.

6.3 Methods and material for containment and cleaning up
Wear rubber gloves. Neutralize with diluted caustic soda or by throwing on lime, lime sand or soda. Collect with liquid-binding material (e.g. sand, clay mineral, diatomaceous earth, vermiculite, universal binder). Put leaky receptacles, residues and contaminated material in identified and sealable containers. If necessary, clean again and air thoroughly. Disposal as waste in accordance with section 13 of this safety data sheet. Before cleaning, the product overflowing needs to be neutralized with lime.

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
Keep containers tightly sealed. Use only in well ventilated areas. Avoid contact with eyes and skin. Do not inhale gas/smoke/vapor/aerosol. Do not eat, drink or smoke during work. In case of accident shower bad for rinsing eyes must be installed nearby.

7.2 Conditions for safe storage, including any incompatibilities
Keep under lock and key. Keep containers tightly sealed and store in a cool, dry and well-ventilated place. Suitable material for containers/equipment: material, solvent-resistant. The floor should be tight, have no joints and be non-absorbent. The product is not combustible. Keep away from ignition sources – do not smoke.

7.3. Specific end use(s)
Product is designed for electrolyte polishing in dental laboratory. When electrolyte is wasted, put it into original package. Use protecting equipment in accordance with point 8.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Council Directive 98/24/EC with all implementations and amendments
Official Gazette RS, No. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18, 78/19

Ingredients with limit values that have to be considered and measured in the working place	
Ethylene glycol	
MV	Current exposure: 104 mg/m^3, 40 ppm Long-term exposure: 52 mg/m^3, 20 ppm Y, BAT

Oral	**DNEL**	500 mg/kg ATE
The substance has the property of easier absorption through the skin. The substance poses no risk to the embryo if the exposure limits and BAT values are observed.		
Sulfuric acid- mist		
MV	Current exposure: 0,05 (I) mg/m^3 Long-term exposure: 0,05 (I) mg/m^3 Y, EU, mist	

*I – inhalable fraction

8.2 Exposure controls
Personal protective equipment in accordance with Regulation (EU) 2016/425 and list of harmonized standards for personal protection equipment 2018/C 209/03.

Common protection and hygienic measures:
Avoid contact with skin, eyes and clothes. Contaminated clothes took of immediately. Do not breath vapor, aerosol or gases. Do not eat, drink or smoke during work. Wash hands before meal and after meal.

Respiratory protection:
Not necessary if proper use. In case of higher concentration on work use of full mask (EN 136:1998) or half mask (EN 140:1999/AC:2000) with respiratory protection filter A2 (Organic gases) or E2 (acid gases) (EN 14387:2004+A1:2008).

Hand protection:

Use solvent-resistant safety gloves with following mark , that are made from material resistant on liquid (nitride or butyl rubber) with at least 10 cm long sleeve. Letter L stands for acid resistance. When using Elektrolyte MG in dental laboratory you can use nitrile gloves Tybe B, EN 374, without long sleeve.

Eye protection:
When preparing Elektrolyt MG solution, use full head protection mask resistant to acid. When using prepared Elektrolyt MG in dental laboratory use safety glasses with side protection resistant to acid according to EN 166. When wearing corrective glasses in a dental laboratory, no additional protective glasses are required. Tightly sealing safety goggles with lenses made of safety glass- EN 166:2001.

Body protection:
Wear protecting clothes (EN13034:2005+A1:2009, EN ISO 6350:2005 and tightly closed shoes (EN ISO 20345:2012). If you come in contact with the ingredients or the product, take off contaminated clothes and wash them.

8.2.2 Control of environment protection
Common instructions: Do not wash rinse with fresh water or to drainage system. If the aquaducte or drainage system is contaminated, inform competent authorities immediately.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid	
Colour	Colourless	
Odour	Odourless	
Aqueus solubility	Mixed without restriction	
pH	1 (100% solution)	
Vapour pressure	0,13 g/m^3 (20°C)	
Density	1,2 g/mL (20°C)	
Individual substances		
	Ethane-1,2-diol	**Sulfuric acid**
Molecular mass	n.a.	n.a.
Dynamic viscosity	21 mPas (20°C)	23 mPas (20°C)
Melting temperature	-12,4°C	-10°C
Boiling point	197°C	295-315°C
Inflammation point	410°C	n.a.
Flash point	111°C	n.a.
Explosion limits	3,2 vol % - lower	n.a.
	53 vol % - upper	n.a.
Vapour pressure	0,08 hPa (20°C)	< 0,01 hPa (20°C)
Relative density	n.a.	n.a.
Density	1,11 g/cm3 (20°C)	1,84 g/cm3 (20°C)
pH	n.a.	< 1
Solubility in water	1,000 g/l (20°C)	soluble (20°C) – heat loosen
Solubility in ethanol	n.a.	soluble
Division coefficient water/n-octanol	n.a.	n.a.
Soluble/qualitative	Soluble in polar solutions	n.a.
Thermal decomposition	n.a.	n.a.
Oxidant properties	non oxidant	non oxidant

9.2 Other information
No additional information relevant to safe use.

SECTION 10: Stability and reactivity

10.1 Reactivity
Not reactive under normal conditions and proper use.

10.2 Chemical stability
Stable under normal conditions and proper use.

10.3 Possibility of hazardous reaction
No hazardous reactions by proper use and proper storage and handling.

10.4 Conditions to avoid
Do not heat. No other data available.

10.5 Incompatible materials
Strong oxidants. Alkaline compositions.

10.6 Hazardous decomposition products
No decomposition known by proper use. Decomposition products in event of fire: sulfuric dioxide, sulfur trioxide, carbon monoxide (see section 5).

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
The product has a harmful and irritating effect on the mucous membranes of the eyes and skin. Sensitizing effects are not known. Swallowing larger amounts may cause intoxication and acid burns in mouth / stomach / gastrointestinal area. Harmful if swallowed. Irritates eyes and skin.

Individual substances**:**
Chemical name: Ethylene glycol
Acute toxicity:
Harmful if swallowed.

Important LD/LC50 values for classification	
Oral 4820	5840 mg/kg (rat)
Dermal LD50	9530 mg/kg (rabbit)

Primary irritation:
Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: Not classified
CMR effects (carcinogenicity, mutagenicity and reproductive toxicity):
Germ cell mutagenicity: Not classified
Carcinogenicity: Data not available.
Reproductive toxicity: Not classified.
STOT-single exposure: Not classified as STOT – single exposure.
STOT-repeated exposure: Not classified as STOT – repeated exposure.
Aspiration hazard: Not classified as aspiration hazard.

Chemical name: Sulfuric acid
Acute toxicity: Based on available data, the classification criteria are not met.

Important LD/LC50 values for classification	
Oral 4820	2140 mg/kg (rat)

Primary irritation:
Skin corrosion/irritation: Severe skin burns.
Serious eye damage/irritation: Serious eye damage.
Respiratory or skin sensitization: Not classified
CMR effects (carcinogenicity, mutagenicity and reproductive toxicity):
Germ cell mutagenicity: Not classified
Carcinogenicity: Data not available.
Reproductive toxicity: Not classified.
STOT-single exposure: Not classified as STOT – single exposure.
STOT-repeated exposure: Not classified as STOT – repeated exposure.
Aspiration hazard: Not classified as aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity
Data for Sulfuric acid:
Toxicity of water
LC50/96 h > 16 mg/l (fish)
LC50/48 h > 100 mg/l (Daphnia magna)
LC50/72 h > 100 mg/l (algae)

.
12.2 Persistence and degradability
Data for ethylene glycol
Ethylene glycol is easily biodegradable 90-100%. (active mud; connected to: chemical need for oxygen; Time of exposure: 10d) (OECD 301 A)

Data for sulfuric acid
Methods for biological degradability could not be used for organic compound.

12.3 Bioaccumulative potential
Data for ethylene glycol
No bioaccumulation expected

Data for sulfuric acid
Low possibility for bio accumulation.

12.4 Mobility in soil
Data for ethylene glycol: The substance from the surface of the earth will not evaporate into the atmosphere. Adsorption to solid soil phase is not expected.

Data for sulfuric acid: Adverse effects due to the decrease in pH of soil.

12.5 Results of PBT and vPvB assessment
The results apply to ethylene glycol: This substance is not considered to be persistent, bio accumulative or toxic (PBT). Also is not considered to be very persistent and very bio accumulative.

12.6 Endocrine disrupting properties
No data available.

12.7 Other adverse effect
Do not rinse in surface water or sanitary sewer system.

SECTION 13: Disposal consideration

13.1 Waste treatment methods
Directive 2008/98/EC, Official Gazette RS 37/15, 69/15

Methods of disposal: Remove disposal in accordance with local legislation.

Removing of residues: Separate residues. Because of pollution risk, remove residues and disposals as industrial disposal or hazardous disposals. (Ur. l. RS 84/98, 45/00 in 13/03).

Contaminated packaging: Keep waste separate. Because of possible pollution, remove as industrial waste or hazardous waste (Ur. L. RS 104/00, 12/02).

Classification number of the waste: 11 01 05* - acidic pickling solutions

SECTION 14: Transport Information

	ADR/RID	IMDG	IATA
14.1 UN number	UN 3264		

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14.2 UN proper shipping name	corrosive liquid, acidic, inorganic, n.o.s.		
14.3 Transport hazard class(es)			
Class	8		
Classification code	C1	/	/
Hazard label	8	/	/
Hazard identification	80	/	/
Tunnel code	(E)	/	/
EmS number	/	8-15	/
14.4 Packing group	III		
14.5 Environmental hazards	Non hazardous		
14.6 Special precautions for user	No special precautions		
14.7 Maritime transport in bulk according to IMO instruments	The goods aren't transported in bulk		

SECTION 15: Regulatory information

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

The product is classified and labeled in accordance with EC Directives 1907/2006 and 1272/2008 and their amendments and corresponding Slovenian national legislation (Regulation on the Implementation of Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, Official Gazette of the Republic of Slovenia, No. 56/10).

15.2 Chemical safety assessment

No data available from component's supplier.

SECTION 16: Other information

Revision:

Version 08 issued in July 2025 in accordance with EC 1907/2006 (Commission Regulation (EU) 2015/830) and EC 1272/2008.

Revision in accordance to changes in COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Legend of abbreviations:
ADR – European agreement concerning the international carriage of dangerous goods by road
CAS – Chemical Abstracts Service
CLP – Classification, Labeling and Packaging
CMR – Carcinogenic, Mutagenic or toxic for Reproduction
DNEL - Derived no-effect level
EC_{50}: Half maximal effective concentration
EmS – Emergency Schedule
GHS – Globally Harmonised System of Classification and Labeling of Chemicals
IATA – International Air Transport Association
IUCLID – International Uniform Chemical Information Database
IMDG – International Maritime Dangerous Goods Code
LC_{50}: Lethal concentration, 50%
LD_{50}: Median lethal dose; the dose causing 50% lethality
MARPOL – International convention for the prevention of pollution from ships
NOEC - No-observed-effect concentration
NOAEL – No-observed-adverse-effect level
NTP- National Toxicology Program
OEL - Occupational exposure limit
OECD - Organisation for Economic Co-operation and Development
PBT – Persistent Bioaccumulative Toxic
PNEC: Predicted no-effect concentration
Ppm – parts per million
REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals
RTECS – The Registry of Toxic Effects of Chemical Substances
RID – Regulation concerning the international carriage of dangerous goods by rail
vPvB – very Persistent and very Bioaccumulative

References:
- Regulation (EC) No. 1907/2006 (REACH), as amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Commission Directive 2009/161/EU
- Safety Data Sheet of the raw material manufacturer
- Martindale: The Extra Pharmacopoeia, 13th edition
- Website: https://chem.echa.europa.eu/
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- Regulation on the Implementation of the EU Regulation on Personal Protective Equipment (Official Gazette of the Republic of Slovenia, No. 33/18)
- List of Harmonised Standards for Personal Protective Equipment (C 412 / 11.12.2015, with all amendments and supplements)
- Occupational Safety and Health Act (Official Gazette of the Republic of Slovenia, No. 43/2011)
- Waste Regulation (Official Gazette of the Republic of Slovenia, No. 77/22 and 113/23)

- Packaging and Packaging Waste Regulation (Official Gazette of the Republic of Slovenia, No. 54/21, 208/21, 44/22 – ZVO-2 and 120/22)
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- Decision on the Publication of Annexes A and B to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- Dangerous Goods Regulations (DGR) for Air Transport (IATA)
- International Maritime Dangerous Goods (IMDG) Code
- Rules on the Protection of Workers from Risks Related to Exposure to Chemical Agents at Work (Official Gazette of the Republic of Slovenia, No. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18, 78/19, 72/21, 29/24)

Disclaimer of expressed and implied warranties:
The information contained in the safety data sheet have been translated from the manufacturer, revised in accordance with the Slovenian legislation. Guidelines for the safe use, handling, disposal, storage and transportation and cannot be used as a guarantee. The information relates only to the specific product and is not suitable for combining with other materials or for use in another process as described in the instructions.