Safety Data Sheet

according to Regulation (EC) No 1907/2006

Elektrolyt 1524 1000 and 1524 2000

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

1.1. Product identifier

Elektrolyt 1524 1000 and 1524 2000

Further trade names

1524 1000 Elektrolyt 2 l
1524 2000 Elektrolyt 10 l

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

Use of the substance/mixture

For polishing chrome-cobalt alloys. Solution is ready for use.

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name:	Renfert GmbH	
Street:	Untere Giesswiesen 2	
Place:	D-78247 Hilzingen	
Telephone:	+49 7731 8208-0	Telefax: +49 7731 8208-70
e-mail:	info@renfert.com	
Internet:	www.renfert.com	

Supplier

Company name:	Ivoclar Vivadent Ltd New Zealand	
Street:	12 Omega St	
Place:	GB Rosedale, Auckland	
Telephone:	+64 9 914 9999	Telefax: +64 9 914 9990
Internet:	www.ivoclarvivadent.co.nz	

1.4. Emergency telephone number:

0800 764 766 (National Poison Centre)
Poisons Hotline (24 hours / 7 days)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Specific target organ toxicity - repeated exposure: STOT RE 2
Hazard Statements:
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

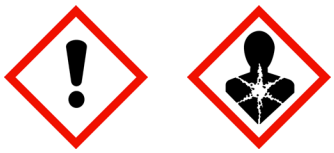
Regulation (EC) No. 1272/2008

Hazard components for labelling

ethane-1,2-diol

Signal word: Warning

Pictograms:



Hazard statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H373	May cause damage to kidneys through prolonged or repeated exposure by swallowing.

Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P337+P313	If eye irritation persists: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Electrolyte solution

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
107-21-1	ethane-1,2-diol			> 80%
	203-473-3		01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			
7664-93-9	Sulphuric acid			10 - < 30 %
	231-639-5	016-020-00-8	01-2119458838-20	
	Skin Corr. 1A; H314			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off contaminated clothing and wash it before reuse .
Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure.

After inhalation

Provide fresh air.
In case of respiratory tract irritation, consult a physician.

After contact with skin

IF ON SKIN: Wash with plenty of soap and water.
In case of skin irritation, consult a physician.

After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

If eye irritation persists: Get medical advice/attention.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Call a physician immediately.
When in doubt or if symptoms are observed, get medical advice.

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.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water, Dry extinguishing powder, Foam, Carbon dioxide (CO_2)

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Sulphur oxides, Carbon monoxide

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
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

Avoid contact with eyes and skin.
Use personal protection equipment.
Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

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

Handle and open container with care.
Avoid contact with eyes and skin. Use personal protection equipment.
When using do not eat, drink or smoke.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container.
Keep container tightly closed in a cool, well-ventilated place.

Hints on joint storage

Do not store together with: Alkali (lye)

Further information on storage conditions

Protect against: Humidity

7.3. Specific end use(s)

Please refer to our internet website for more information: www.renfert.com

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

8.2. Exposure controls

Appropriate engineering controls

Safe handling: see section 7

Protective and hygiene measures

Avoid contact with skin, eyes and clothes.
Wash hands before breaks and after work .
Keep away from food, drink and animal feedingstuffs.

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
Suitable material: Butyl caoutchouc (butyl rubber), NBR (Nitrile rubber), FKM (fluoro rubber)
Thickness of the glove material: mind. 0,5 mm
Breakthrough time: > 480 min
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.
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.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Use only in well-ventilated areas.
Usually no personal respirative protection necessary.
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:	colourless
Odour:	odourless

pH-Value (at 20 °C):	1
Changes in the physical state	
Melting point:	not determined
Initial boiling point and boiling range:	197 °C
Flash point:	> 100 °C
Flammability	
Solid:	not applicable
Gas:	not applicable
Explosive properties	
not explosive according to EU A.14	
Lower explosion limits:	3,2 vol. %
Upper explosion limits:	15,3 vol. %
Ignition temperature:	410 °C
Auto-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
Vapour pressure: (at 20 °C)	< 1 hPa
Density (at 20 °C):	1,19 - 1,22 g/cm³
Water solubility:	miscible
Partition coefficient:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Evaporation rate:	not determined

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Violent reaction with: Alkali (lye)
Reactions with metals, with evolution of hydrogen.

10.4. Conditions to avoid

No special measures are necessary.

10.5. Incompatible materials

Violent reaction with: Alkali (lye)

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 579,4 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethane-1,2-diol				
	oral	LD50 7712 mg/kg	Rat	IUCLID	
7664-93-9	Sulphuric acid				
	oral	LD50 2140 mg/kg	Ratte	IUCLID	

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

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

May cause damage to organs through prolonged or repeated exposure. (ethane-1,2-diol)

Aspiration hazard

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

Further information

The product has not been tested. The statement is derived from the properties of the single components.

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
107-21-1	ethane-1,2-diol					
	Acute fish toxicity	LC50 72860 mg/l	96 h	Pimephales promelas (fathead minnow)		
	Acute algae toxicity	ErC50 > 6500 mg/l	96 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna (Big water flea) .B120934	OECD 202	
7664-93-9	Sulphuric acid					
	Acute fish toxicity	LC50 42 mg/l	96 h	Gambusia affinis		
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia pulex (water flea)		

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.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethane-1,2-diol	-1,36

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.

12.6. Other adverse effects

No information available.

Further information

The product has not been tested. The statement is derived from the properties of the single components. Do not allow uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

Contaminated packaging

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

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 2796

14.2. UN proper shipping name: SULPHURIC ACID with not more than 51 % acid

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8

Marine transport (IMDG)

14.1. UN number: UN 2796

14.2. UN proper shipping name: SULPHURIC ACID with not more than 51 % acid

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8

Marine pollutant: no

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 2796

14.2. UN proper shipping name: SULPHURIC ACID with not more than 51 % acid

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Further information: see section 6, 7, 8

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

Classified as Hazardous according to the criteria of the National Occupational Health and Safety Commission (NOHSC) approved criteria for the classifying hazardous substances [NOHSC: 1008] 3rd edition.
Standard for the Uniform Scheduling of Medicines and Poisons.
Carcinogen classification under WHS Regulation 2011, Schedule 10.
Notification status in accordance with section 3 and current national legislation.
HSNO Approval: HSR006385, HSR001588
EPA NZ Classes of hazardous properties:
Classification 6.1E (All) Acutely toxic
Classification 6.4A Irritating to the eye
Classification 6.9A (All) Toxic to human target organs or systems
Classification 6.9A (O) Toxic to human target organs or systems
Classification 9.3C Harmful to terrestrial vertebrates
Classification 6.3A Substances that are irritating to the skin
Classification 8.1A Substances that are corrosive to metals
Classification 9.1D (All) Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action
Classification 9.1D (F)
Classification 9.1D (C)

SECTION 16: Other information

Abbreviations and acronyms

PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LD50: lethal dose, 50%
LC50: lethal concentration, 50%
EC50: half maximal effective concentration
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement concernant le transport international ferroviaire de marchandises Dangereuses (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
ICAO: International Civil Aviation Organization

MARPOL: International Convention for the Prevention of Marine Pollution from Ships
VOC: volatile organic compound(s)

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

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H373	May cause damage to kidneys through prolonged or repeated exposure by swallowing.
H373	May cause damage to organs through prolonged or repeated exposure.

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. Restricted to professional users.

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