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SAFETY DATA SHEET

according to Regulation (EU) No. 453/2010

Elektrolyte Friscolyt

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product code 51340053, 51343185, 51350076, 51350084, 59906297

Synonyms None.

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

Use of the Substance/Preparation Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification Mettler-Toledo AG
Process Analytics
Im Hackacker 15
CH-8902 Urdorf
Schweiz
Tel: +41-44-729 62 11
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Email: process.hotline@mt.com

1.4. Emergency telephone number +1-800-535 50 53 (Info Trac, 24 hrs)

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Version 6

2. Hazards identification

None.

2.1. Classification of the substance or mixture

NFPA Ratings (Scale 0-4):

HEALTH=1

FLAMMABILITY=0

REACTIVITY=0

SPECIAL=0

HMIS Ratings (Scale: 0=Minimal 1=Slight 2=Moderate

3=Serious 4=Severe):

HEALTH=1

FLAMMABILITY=0

REACTIVITY=0

PROT. EQUIPMENT=A (Safety Glasses)

In accordance with Regulation (EC) No. 1272/2008 (GHS/CLP), the product does not need to be classified nor labelled.

Classification according to EU Directives 67/548/EEC or 1999/45/EC None.

Additional information For the full text of the phrases mentioned in this Section, see Section 16.

2.2. Label elements none

2.3. Other hazards No hazards to be especially mentioned.

3. Composition/information on ingredients

Chemical characterization Mixture of glycerol and potassium chloride.

Components		GHS Classification		CAS	REACH No.
Glycerol	90% - 95%			56-81-5	
Potassium chloride	5% - 10%			7447-40-7	

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities None known.

Elektrolyte FriscoLyte

4. First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Consult a physician for severe cases.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion	Rinse mouth. Consult a physician for severe cases.
4.2. Most important symptoms and effects, both acute and delayed	If you feel unwell, seek medical advice (show the label where possible).
4.3. Indication of any immediate medical attention and special treatment needed	None known.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use dry chemical, CO₂, water spray or alcohol foam.

Extinguishing media which must not be used for safety reasons None.

5.2. Special hazards arising from the substance or mixture Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.

5.3. Advice for firefighters

Special protective equipment for firefighters Standard procedure for chemical fires. In the event of fire, wear self contained breathing apparatus. Wear protective suit.

Specific methods Water mist may be used to cool closed containers.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel Ensure adequate ventilation. Use personal protective equipment. Sweep up to prevent slipping hazard. Avoid contact with skin and eyes. Do not breathe vapours/dust.

Advice for emergency responders Handle in accordance with good industrial hygiene and safety practice.

6.2. Environmental precautions Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

6.4. Reference to other sections See chapter 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container.

7.3. Specific end use(s) No information available.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s) No data is available on the product itself.

Glycerin (CAS 56-81-5)

U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

15 mg/m³ TWA (mist, total particulate)
5 mg/m³ TWA (mist, respirable fraction)

U.S. - OSHA - Vacated PELs - TWAs

10 mg/m³ TWA (mist, total particulate)
5 mg/m³ TWA (mist, respirable fraction)

8.2. Exposure controls

Occupational exposure controls Avoid contact with skin, eyes and clothing.

Personal protection equipment

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Respirator with AP2 filter.

Hand protection

The selected protective gloves have to satisfy the specifications of

Elektrolyte Friscoylt

EU Directive 89/689/EEC and the standard EN 374 derived from it.
Nitrile rubber. Break through time: > 120 min.

Eye protection	Safety glasses with side-shields conforming to EN 166.
Skin and body protection	Long sleeved clothing.
Thermal hazards	No special measures required.
Environmental exposure controls	Prevent product from entering surface water or sewage.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Liquid.
Colour	Colourless.
Odour	None.
Odour Threshold	No information available.
pH:	~6 [5 (100 g/l, 20°C) (CAS: 56-81-5)]
Melting point/range:	18 °C (CAS: 56-81-5)
Boiling point/range:	290 °C (CAS: 56-81-5)
Flash point:	191 °C (cc) (CAS: 56-81-5)
Evaporation Rate:	No information available.
Flammability:	No information available.
Explosion limits:	2.6 - 11.3 Vol% (CAS: 56-81-5)
Vapour pressure:	0.00121 mbar (40°C) (CAS: 56-81-5)
Vapor density:	No information available.
Relative density:	1.26 (CAS: 56-81-5)
Water solubility:	completely miscible
Partition coefficient (n-octanol/water):	Log Pow: -1.76 (CAS: 56-81-5)
Autoignition temperature:	400 °C (DIN 51794) (CAS: 56-81-5)
Decomposition temperature:	>= 290 °C (CAS: 56-81-5)
Viscosity:	1412 mPa*s (20°C) (CAS: 56-81-5)
Combustion/explosion hazards:	not hazardous
Oxidizing properties:	None

9.2. Other information

10. Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	Hygroscopic. Stable under recommended storage conditions.
10.3. Possibility of hazardous	No information available.

Elektrolyte Friscoylt

reactions

10.4. Conditions to avoid	To avoid thermal decomposition, do not overheat. Vapour/air-mixtures are explosive at intense warming.
10.5. Incompatible materials	Halogenated compounds. Strong oxidizing agents. Peroxides. Nitrous acid and other nitrosating agents.
10.6. Hazardous decomposition products	None under normal use.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity	No data is available on the product itself. Glycerin (CAS 56-81-5) Dermal LD50 Rat 21900 mg/kg Oral LD50 Rat 12600 mg/kg Potassium chloride (CAS 7447-40-7) Oral LD50 Rat 2600 mg/kg
Skin corrosion/irritation	No skin irritation.
Serious eye damage/eye irritation	No eye irritation.
Respiratory / Skin Sensitisation	None.
Carcinogenicity	No data available.
Germ cell mutagenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity (single exposure)	Inhalation of vapours may cause irritation of the respiratory system with very susceptible persons.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.
Information on likely routes of exposure	dermal
Symptoms related to the physical, chemical and toxicological characteristics	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Other information	The product contains no substances which at their given concentration, are considered to be hazardous to health.

Elektrolyte FriscoLyte

12. Ecological information

12.1. Toxicity	No data is available on the product itself.
Glycerin (CAS 56-81-5)	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	96 h LC50 Oncorhynchus mykiss: 51 - 57 mL/L [static]
Ecotoxicity - Water Flea - Acute Toxicity Data	24 h EC50 Daphnia magna: >500 mg/L
Potassium chloride (CAS 7447-40-7)	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data	96 h LC50 Lepomis macrochirus: 1060 mg/L [static] 96 h LC50 Pimephales promelas: 750-1020 mg/L [static]
Ecotoxicity - Water Flea - Acute Toxicity Data	48 h EC50 Daphnia magna: 825 mg/L 48 h EC50 Daphnia magna: 83 mg/L [Static]
Ecotoxicity - Freshwater Algae - Acute Toxicity Data	72 h EC50 Desmodesmus subspicatus: 2500 mg/L
12.2. Persistence and degradability	CAS: 56-81-5 Readily biodegradable (63 % / 14 day(s)). OECD Test Guideline 301 C.
12.3. Bioaccumulative potential	CAS: 56-81-5 Due to the distribution coefficient n-octanol/water, accumulation in organisms is possible.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
12.6. Other adverse effects	No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of as unused product.

14. Transport information

ADR/RID	Not required.
IMO	Not required.
ICAO	Not required.
Further Information	Not classified as dangerous in the meaning of transport regulations.

Elektrolyte FriscoLyte

15. Regulatory information

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

Regulatory Information

NFPA Ratings (Scale 0-4):
HEALTH=1
FLAMMABILITY=0
REACTIVITY=0
SPECIAL=0

HMIS Ratings (Scale: 0=Minimal 1=Slight 2=Moderate
3=Serious 4=Severe):
HEALTH=1
FLAMMABILITY=0
REACTIVITY=0
PROT. EQUIPMENT=A (Safety Glasses)

In accordance with Regulation (EC) No. 1272/2008 (GHS/CLP), the product does not need to be classified nor labelled.

15.2. Chemical safety assessment

Not required.

16. Other information

Key or legend to abbreviations and acronyms

None.

Key literature references and sources for data

Information taken from reference works and the literature. Sources of key data used to compile the Safety Data Sheet: BGI Gestis.

Classification procedure

Calculation method.

Full text of phrases referred to under sections 2 and 3

None.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification.