

SAFETY DATA SHEET



Product name: ELECTROLYTE A3-I Page: 1/12
Revision Date: 2019-12-05 Print date: 2019-12-05
Document No.: M0011 SDS-ID: US-EN/19.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name: ELECTROLYTE A3-I
Cat. No. 40900012 (part of 40900011)
Container size: 960 ml

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

Application: For electrolytic preparation of metallographic specimens.
Uses advised against: No specific uses advised against are identified. (*)

Details of the supplier of the safety data sheet

Supplier: Struers ApS
Pederstrupvej 84
DK-2750 Ballerup
Tel:+45 44 600 800

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

Emergency telephone number

National Capital Poison Center: 1-800-222-1222

Infotrac:
1-800-535-5053
Struers US:
1-440-871-0071

SAFETY DATA SHEET

Product name: ELECTROLYTE A3-I Page: 2/12
Revision Date: 2019-12-05 Print date: 2019-12-05
Document No.: M0011 SDS-ID: US-EN/19.0

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA 2012: Flammable Liquid Category 2
Acute Oral Toxicity Category 3
Acute Dermal Toxicity Category 3
Acute Inhalation Toxicity Category 3
Skin Irritant Category 2
Eye irritant Category 2A
Category 1 Target organ toxicant, Single Exposure

Label elements

(*)



Danger

Contains: Methanol
2-Butoxyethanol

H225 Highly flammable liquid and vapour.
H301 + H311 +H331 Toxic if swallowed, in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H370 Causes damage to organs.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.
NFPA Rating: Health:2 Fire:3 Reactivity:0 Other:-

Other hazards

The product is highly flammable, and explosive vapors/air mixtures may be formed even at normal room temperatures. Lethal dose for an adult person: approx. 30-250 ml (Methanol). Organic solvents may be absorbed into the body by inhalation, skin contact and ingestion and cause permanent damage to the nervous system, including the brain.

PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: organic solvents.

SAFETY DATA SHEET

Product name: ELECTROLYTE A3-I Page: 3/12
Revision Date: 2019-12-05 Print date: 2019-12-05
Document No.: M0011 SDS-ID: US-EN/19.0

OSHA 2012:

<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>
55-75	67-56-1	200-659-6	01-2119433307-44-0001	Methanol	Flammable Liquid Category 2 Acute Inhalation Toxicity Category 3 Acute Dermal Toxicity Category 3 Acute Oral Toxicity Category 3 Category 1 Target organ toxicant, Single Exposure	
25-45	111-76-2	203-905-0	-	2-Butoxyethanol	Acute Inhalation Toxicity Category 4 Acute Dermal Toxicity Category 4 Acute Oral Toxicity Category 4 Eye irritant Category 2A Skin Irritant Category 2	

SECTION 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 injured person into fresh air and keep person calm under observation. If necessary, seek hospital and bring these instructions. Unconscious persons must be locked on their side, head low and kept warm. CALL AN AMBULANCE. Bring along these instructions to the hospital.

Skin contact: Flush immediately with plenty of water and remove contaminated clothing. Call an ambulance, continue to rinse during transportation to hospital and bring these instructions.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water. Induce vomiting, if person is conscious. Rinse mouth again and drink 1-2 glasses of water and 40 ml ethanol (liqueur). Immediate transportation to hospital. Bring along these instructions.

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.

SAFETY DATA SHEET

Product name:	ELECTROLYTE A3-I	Page:	4/12
Revision Date:	2019-12-05	Print date:	2019-12-05
Document No.:	M0011	SDS-ID:	US-EN/19.0

SECTION 5: FIREFIGHTING 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.

Special hazards arising from the substance or mixture

Specific hazards: The product is flammable, and heating may generate vapors which may form explosive vapor/air mixtures. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Vapors may be ignited by a spark, a hot surface or an ember.

Advice for firefighters

Protective equipment for fire-fighters: Use air-supplied respirator, gloves and protective goggles.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Do not smoke or use open fire, or other sources of ignition. Avoid inhalation of vapors and contact with skin and eyes. For personal protection, see section 8.

For emergency responders: No specific recommendations. For personal protection, see section 8.

Environmental precautions

Environmental precautions: Avoid discharge into water courses or onto the ground.

Methods and material for containment and cleaning up

Spill Cleanup Methods: Remove sources of ignition. Cover large spillages with foam. Dam and absorb spillages with sand, earth or other non-combustible material. Do not use sawdust or other combustible material.

Reference to other sections

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

SAFETY DATA SHEET

Product name:	ELECTROLYTE A3-I	Page:	5/12
Revision Date:	2019-12-05	Print date:	2019-12-05
Document No.:	M0011	SDS-ID:	US-EN/19.0

SECTION 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: Do not smoke or use open fire or other sources of ignition. Wash hands before breaks and before smoking, eating or drinking.

Technical precautions: Provide easy access to water supply or an emergency shower.

Conditions for safe storage, including any incompatibilities

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

Storage conditions: Store in locked poison cupboard/room. Store in a cool and well-ventilated place. Avoid contact with oxidizing agents. Keep away from food, drink and animal feeding stuffs.

Specific end use(s)

Specific use(s): No information available.

SAFETY DATA SHEET

Product name: ELECTROLYTE A3-I Page: 6/12
Revision Date: 2019-12-05 Print date: 2019-12-05
Document No.: M0011 SDS-ID: US-EN/19.0

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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>
67-56-1	Methyl alcohol	-	200 ppm	260 mg/m3	TWA	-	OSHA
111-76-2	2-Butoxyethanol	-	50 ppm	240 mg/m3	TWA	Skin	OSHA
111-76-2	2-Butoxyethanol	-	20 ppm		TWA	A3; BEI	ACGIH
67-56-1	Methanol	-	200 ppm		TWA	Skin; BEI	ACGIH
		-	250 ppm		STEL	Skin; BEI; 15min	

Notes: Skin: Danger of cutaneous absorption. (ACGIH)
Skin: Skin absorption. (OSHA)
A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans.

Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Provide access to washing facilities including soap, skin cleanser and fatty cream.

Personal protection: Personal protection equipment should be chosen according to the ANSI 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 gas filter, type AX.

Hand protection: Wear protective gloves. Butyl rubber gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. 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: Risk of splashes: Wear goggles/face shield.

Skin protection: Wear apron or protective clothing in case of splashes.

Hygiene measures: Wash hands after handling.

Environmental Exposure Controls: Not available.

SAFETY DATA SHEET

Product name: ELECTROLYTE A3-I
Revision Date: 2019-12-05
Document No.: M0011

Page: 7/12
Print date: 2019-12-05
SDS-ID: US-EN/19.0

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form: Liquid.

Color: Clear.

Odor: odor of alcohol

Odor threshold: Not available.

pH: Not available.

Melting point: Not available.

Boiling point: 65°C

Flash point: 10°C

Evaporation rate: Not available.

Flammability (solid, gas): Not available.

Explosion limits: 5,5-26,5 %

Vapor pressure: Not available.

Vapor density: Not available.

Relative density: 0,82

Solubility: Miscible with water.

Partition coefficient (n-octanol/water): Not available.

Auto-ignition temperature (°F): Not available.

Decomposition temperature (°F): Not available.

Viscosity: Not available.

Explosive properties: Not available.

Oxidizing properties: Not available.

Other information

Other data: Volatile Organic Compound (VOC): 800 g/l (calculated)

SAFETY DATA SHEET

Product name: ELECTROLYTE A3-I
Revision Date: 2019-12-05
Document No.: M0011

Page: 8/12
Print date: 2019-12-05
SDS-ID: US-EN/19.0

SECTION 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: Avoid exposing to heat and contact with strong oxidizing substances.

Incompatible materials

Incompatible materials: No information available.

Hazardous decomposition products

Hazardous decomposition products: When heated, vapors/gases hazardous to health may be formed.

SAFETY DATA SHEET

Product name:	ELECTROLYTE A3-I	Page:	9/12
Revision Date:	2019-12-05	Print date:	2019-12-05
Document No.:	M0011	SDS-ID:	US-EN/19.0

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity (Oral): Toxic if swallowed.

Acute Toxicity (Dermal): Toxic in contact with skin.

Acute Toxicity (Inhalation): Toxic if inhaled.

Skin Corrosion/Irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

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 Cancer Review: Group 3 for 2-Butoxyethanol.
OSHA: No.

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

STOT - Single exposure: Causes damage to organs.

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 may irritate throat and respiratory system and cause coughing. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. In serious cases, unconsciousness and permanent damage to the nervous system, including the brain, and liver may be seen.

Skin contact: Contains components which may penetrate the skin.

Ingestion: Even small amounts (30-250 ml methanol) may be fatal. Symptoms are stomach ache, nausea, vomiting, dullness, visual disorder and blindness. Furthermore, ingestion may lead to the same symptoms as when inhaled. Note: Ethanol acts against methanol poisoning.

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. The product contains butoxyethanol which is suspected of having harmful long-term effects on the kidneys and nervous system. In serious cases absorption of methanol in the body may lead to damage to the eyesight.

SAFETY DATA SHEET

Product name:	ELECTROLYTE A3-I	Page:	10/12
Revision Date:	2019-12-05	Print date:	2019-12-05
Document No.:	M0011	SDS-ID:	US-EN/19.0

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity: The product is not expected to be hazardous to the environment.

Persistence and degradability

Degradability: The product is easily biodegradable.

Bioaccumulative potential

Bioaccumulative potential: The product is not bioaccumulating.

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.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues: Dispose of waste and residues in accordance with local authority requirements.
Waste is classified as hazardous waste.

EWC-code: 16 05 08
READY-TO-USE MIXTURE:
EWC-code: 16 05 06

Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.

SAFETY DATA SHEET

Product name:	ELECTROLYTE A3-I	Page:	11/12
Revision Date:	2019-12-05	Print date:	2019-12-05
Document No.:	M0011	SDS-ID:	US-EN/19.0

SECTION 14: TRANSPORT INFORMATION

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

UN number

UN-No: 1992

UN proper shipping name

Proper Shipping Name: FLAMMABLE LIQUID, TOXIC, N.O.S.
(Methanol)

Additional IMDG information:

EmS: F-E, S-D

MFAG: 19

Transport hazard class(es)

Class: 3 (6.1)

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.

SECTION 15: REGULATORY INFORMATION

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

Special provisions: As a general rule, persons under 18 years of age are not allowed to work with this product. Users must be carefully instructed in the proper work procedure, the dangerous properties of the product and the necessary safety instructions.
TSCA: Listed.

California Proposition 65: Methanol

National regulation:

Europe/USA:

This Material Safety Data Sheet has been prepared according to the EU-regulation.

The Code of Federal Regulation, Title 29, part 1910. Occupational Safety and Health Standards, Air contaminants (OSHA), with amendments.

NIOSH Pocket Guide to Chemical Hazards.

SAFETY DATA SHEET

Product name:	ELECTROLYTE A3-I	Page:	12/12
Revision Date:	2019-12-05	Print date:	2019-12-05
Document No.:	M0011	SDS-ID:	US-EN/19.0

SECTION 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: 1, 2, 8. The (*) indicates the changes made with respect to the previous version.

Approved by DHI.



Abbreviations and acronyms used in the safety data sheet: PBT = Persistent, Bioaccumulative and Toxic.
vPvB = very Persistent and very Bioaccumulative.

Additional information: Classification according to HCS 2012:
Calculation method.

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.
