

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

1.1 Product identifier

Product name ELECTROSOLV 230
CAS-No. -
Product code GN1454

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

Identified uses Chemical for analysis and production.

1.3 Details of the supplier of the safety data sheet

Company RCI LABSCAN LIMITED.
24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number (662) 613-7911-4
Fax number (662) 613-7915

1.4 Emergency Telephone Number

Emergency phone (662) 613-7911-4

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Specific target organ toxicity - single exposure (Category 1), Eyes, H370
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.
H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled
H370 Causes damage to organs (eyes).

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.

P260	Do not breathe fume/gas/mist/vapours/spray.
P264	Wash hand thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P316	IF SWALLOWED: Get emergency medical help immediately.
P302 + P352	IF ON SKIN: Wash with plenty water.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P316	IF exposed or concerned: Get emergency medical help immediately.
P330	Rinse mouth.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

2.3 Other hazards None

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixture

Component	CAS-No	Formula	Concentration (Weight %)	Classification
Methanol	67-56-1	CH ₃ OH	99.5	Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), Eyes, H370
1,3-Butanediol	107-88-0	C ₄ H ₁₀ O ₂	<1mg/mL	Eye irritation (Category 2), H319

For the full text of the H-Statements mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. If signs of poisoning appear, treat as for inhalation. Wash contaminated clothing before reuse. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable

instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11.

4.3 Indication of any immediate medical attention and special treatment needed

After swallowing, make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call in physician, mentioning methanol ingestion. If breathing stops. Mouth to mouth respiration or mechanical ventilation.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Extinguish with carbon dioxide, dry chemical, foam or water spray. In the event of fire, cool tanks with water spray.

5.2 Special hazards arising from the substance or mixture

Vapors may form explosive mixture with air at ambient temperature. Flash back possible over considerable distance.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

5.4 Further information

Standard procedure for chemical fires. Take measures to prevent electrostatic charging. Prevent firefighting water from entering surface water or groundwater.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Remove all sources of ignition. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, advise police.

6.3 Methods and materials for containment and cleaning up

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel or chemical absorbent pads). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

6.4 Reference to other sections

For disposal see **Section 13**.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible materials. Store in original container. Electrical equipment should be protected to the appropriate standard.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL) (Methanol)

Application Area	Health Effects	Exposure	Value
Worker	Acute Local effects	Inhalation	260 mg/m ³
Worker	Acute Systemic effects	Inhalation	260 mg/m ³
Worker	Acute Systemic effects	Skin contact	40 mg/kg Body weight
Worker	Long-term Local effects	Inhalation	260 mg/m ³
Worker	Long-term Systemic effects	Inhalation	260 mg/m ³
Worker	Long-term Systemic effects	Skin contact	40 mg/kg Body weight
Consumer	Acute Local effects	Inhalation	50 mg/m ³
Consumer	Acute Systemic effects	Ingestion	8 mg/kg Body weight
Consumer	Acute Systemic effects	Inhalation	50 mg/m ³
Consumer	Acute Systemic effects	Skin contact	8 mg/kg Body weight
Consumer	Long-term Local effects	Inhalation	50 mg/m ³
Consumer	Long-term Systemic effects	Ingestion	8 mg/kg Body weight
Consumer	Long-term Systemic effects	Inhalation	50 mg/m ³
Consumer	Long-term Systemic effects	Skin contact	8 mg/kg Body weight

Predicted No Effect Concentration (PNEC) (Methanol)

Compartment	Value
Fresh water	154 mg/l
Fresh water sediment	570.4 mg/kg
Marine water	15.4 mg/l
Sewage treatment plant	100 mg/l
Soil	23.5 mg/kg

8.2 Exposure controls

Appropriate engineering controls

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Individual protection measures (Personal protective equipment, PPE)

Eye/face protection

Goggles giving complete protection to eyes.

Skin protection

Chemical resistant apron / flame retardant antistatic protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from butyl rubber material.
- Splash contact wears gloves from viton material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter AX (EN 371).

Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties (Methanol)

Appearance: From	Liquid
: Color	Colorless
Odor	Characteristic
Odor Threshold	Not Available
pH	Not Available
Melting point/range	-98°C
Boiling point/range	64.5°C
Flash point	11 °C (closed cup)
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	5.5 %(V)
upper	36.5 %(V)
Vapor Pressure	128 hPa at 20°C
Relative vapor density	1.1
Density	0.790 g/ml at 20°C
Water solubility	Soluble at 20°C
Partition coefficient (n-octanol/water)	log Pow: -0.77
Auto-Ignition temperature	455 °C
Decomposition Temperature	Not Available
Viscosity	0.597 mPa.s at 20°C
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and reactivity

10.1 Reactivity

Hygroscopic. Highly flammable.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Risk of explosion in contact with strong oxidizing agents, alkali metals, nitric acid, sulfuric acid, nitric oxides, hydrogen peroxide, barium perchlorate, lead chlorate, lead perchlorate, chromosulfuric acid, dichloro hexoxide, magnesium powder, sodium hypochloride, perchloric acid, permanganic acid and zinc diethyl. The substance can react dangerously with halogens, oxidizing agents, reducing agents, acids, acetyl bromide, alkylaluminium solutions, beryllium hydride, chloroform/lye, chromium(VI)-oxide, cyanuric chloride, alkaline-earth metals, magnesium splinters, phosphorus trioxide, Raney- nickel/hydrogenation and acid anhydrides.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Acid halides, alkali metals, alkaline earth, metals, oxidizing agent, nitrogen oxides, reducing agents, acids.
 Unsuitable working materials: Various plastics, aluminium, zinc alloys.

10.6 Hazardous decomposition products

Carbon monoxides, Carbon dioxides, (Hazardous decomposition products from under fire condition).

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Mixture****Acute toxicity (Methanol)**

LD₅₀ (oral, rat): 5628 mg/kg

LD_{LO} (oral, human): 143 mg/kg

LC₅₀ (inhalation, rat): 85.26 mg/l/4 h

Acute oral toxicity

Absorption: Symptoms nausea, vomiting, headache, dizziness, inebriation, impaired vision, blindness
 (Irreversible damage of the optical nerve).

Acute inhalation toxicity

Irritation symptoms in the respiratory tract.

Skin corrosion/irritation

Slow absorption.

Serious eye damage/eye irritation

Slight irritations, mucosal irritations.

Respiratory or skin sensitization

Sensitization test: guinea pig is negative.

Germ cell mutagenicity

Bacterial mutagenicity; Salmonella typhimurium is negative.

Carcinogenicity

Noncarcinogenic in animal experiments.

Reproductive toxicity

Not Available

Teratogenicity

Not Available

Specific target organ toxicity (STOT) - single exposure

Causes damage to organs (Eyes).

Specific target organ toxicity (STOT) - repeated exposure

Not Available

Aspiration hazard

Not Available

Further information

Systemic effects: nausea, vomiting, headache, dizziness, inebriation, impaired vision, blindness acidosis, drop in blood pressure, agitation, spasms, narcosis and coma.

SECTION 12: Ecological information

Mixture

12.1 Toxicity (Methanol)

Toxicity to fish	LC ₅₀ L. macrochirus: 15400 mg/l/96h
Toxicity to daphnia and other aquatic invertebrates	EC ₅₀ Daphnia magna: >10000 mg/l/48h
Toxicity to algae	IC ₅ Sc.quadricauda: 8000 mg/l/8d
Toxicity to bacteria	EC ₅ Ps. Putida: 6600 mg/l/16d

12.2 Persistence and degradability

Biodegradability	99%/30 d, Readily biodegradable.
Biochemical Oxygen Demand (BOD)	600-1120 mg/g
Chemical Oxygen Demand (COD)	1420 mg/g
Theoretical oxygen demand	1,500 mg/g

12.3 Bioaccumulative potential

Partition coefficient (n-octanol/water)	log Pow: -0.77
	No bioaccumulation is to be expected (log P o/w <1)

12.4 Mobility in soil

Not Available

12.5 Other adverse effects

Do not allow to enter waters, waste water or soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION 14: Transport information

Land Transport (ADR/RID)

UN Number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, 1,3-BUTANEDIOL)
Transport hazard class(es)	3 (6.1)
Packing group	II
Environmental hazards	No
Special precautions for user	Yes

Sea transport (IMDG)

UN Number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, 1,3-BUTANEDIOL)
Transport hazard class(es)	3 (6.1)

Packing group	II
Marine pollutant	No
Special precautions for user	Yes
EmS	F-E S-D

Air transport (IATA)

UN Number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, 1,3-BUTANEDIOL)
Transport hazard class(es)	3 (6.1)
Packing group	II
Environmental hazards	No
Special precautions for user	No

River transport (AND/ADNR)

(Not examined)

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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

Not Available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3**

H225	Highly flammable liquid and vapour.
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled
H370	Causes damage to organs.

Recommended restrictions

Take notice of labels and safety data sheets for the working. Chemicals Take necessary action to avoid static electricity discharge.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany, Source: IFA for Databases on hazardous substances (GESTIS).

Further information

Contact to RCI Labscan Limited.

Revision Date

01/06/2022

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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.