



Safety Data Sheet

Material Name: E-Prep 224-LB

SDS ID: EPI-0406c

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

E-Prep 224-LB

Product Use

Additive.

Manufacturer Information

Electrochemical Products Inc.
17000 West Lincoln Ave
New Berlin, WI 53151
Phone: 262-786-9330
Emergency Phone #: Chemtrec #800-424-9300 (CCN7498)
E-mail: us-sales@epi.com
www.epi.com
Fax: 262-786-9403

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity - Oral - Category 4
Skin Corrosion/Irritation - Category 1
Serious Eye Damage/Eye Irritation - Category 1

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Harmful if swallowed
Causes severe skin burns and eye damage



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Precautionary Statement(s)

Prevention

Wear protective gloves/protective clothing/eye protection/face protection

Wash thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dusts or mists

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing

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

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Immediately call a POISON CENTER or doctor

Specific treatment (see label)

Storage

Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

This product may cause irritation to the eyes. This product may cause irritation to the skin. Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	55-65
112-34-5	Diethylene glycol monobutyl ether	25-30
16872-11-0	Fluoroboric acid	4-8

Section 4 - FIRST AID MEASURES

Inhalation



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If inhaled, immediately remove the affected person to fresh air. If irritation develops or persists, seek medical attention.

Skin

Wash skin with soap and water. If irritation develops or persists, seek medical attention.

Eyes

Flush immediately with water for at least 15 minutes. Do not rub eyes. If irritation persists, get medical attention.

Ingestion

If swallowed, give milk or water to dilute. Seek medical attention immediately. Never give anything by mouth to an unconscious person. Call a physician immediately.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog.

Unsuitable Extinguishing Media

None identified.

Special Hazards Arising from the Chemical

None identified.

Hazardous Combustion Products

None identified.

Special Protective Equipment and Precautions for Firefighters

None identified.

Fire Fighting Measures

Use methods suitable to fight surrounding fire. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If possible, firefighters should control runoff water to prevent environmental contamination. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye/face protection. Do not handle before understanding all the safety precautions.

Methods and Materials for Containment and Cleaning Up

None identified.

Environmental Precautions



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Dike and contain the spill with sand and earth. Sweep up and shovel into suitable containers for disposal. Do not flush to sewer.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.

Conditions for Safe Storage, Including any Incompatibilities

Store locked up

Keep in a dry place and in closed container.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Diethylene glycol monobutyl ether	112-34-5
ACGIH:	10 ppm TWA inhaled fraction and vapor
Europe:	10 ppm TWA; 67.5 mg/m ³ TWA
	15 ppm STEL; 101.2 mg/m ³ STEL

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Local exhaust is suggested for use, where possible, in enclosed or confined spaces.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Safety glasses. It is generally recognized that contact lenses should not be worn when working with chemicals because they may contribute to the severity of an eye injury.

Skin Protection

Wear rubber gloves, long sleeved shirt and trousers.

Respiratory Protection

If ventilation is not sufficient to effectively prevent buildup of vapor/mist/fume/dust, appropriate NIOSH/MSHA respiratory protection must be provided.

Glove Recommendations

Wear rubber gloves.



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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear solution	Physical State	Liquid
Odor	Characteristic	Color	Colorless to light yellow liquid
Odor Threshold	Not available	pH	0 - 1.5
Melting Point	Not available	Boiling Point	212 °F
Freezing point	32 °F (0 °C)	Evaporation Rate	(Approx. equal to Water)
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	(Approx. equal to water)	Specific Gravity (water=1)	1.02 - 1.05
Water Solubility	Completely	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	Not available	VOC	0

Section 10 - STABILITY AND REACTIVITY

Reactivity

No known hazardous reactions.

Chemical Stability

This is a stable material.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid



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None identified.

Incompatible Materials

Avoid contact with alkalis, oxidizing and reducing materials, cyanides, sulfides and combustible materials.

Hazardous decomposition products

May liberate Boron Trifluoride and Hydrogen Fluoride. Thermal decomposition liberates toxic, corrosive fumes of Nitrogen Oxide and Hydrogen Nitrate.

Thermal decomposition products

None identified.

Section 11 - TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Water (7732-18-5)

Oral LD50Rat >90 mL/kg

Diethylene glycol monobutyl ether (112-34-5)

Oral LD50Rat 5660 mg/kg

Dermal LD50Rabbit 2700 mg/kg

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

No data available.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure



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No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Diethylene glycol monobutyl ether	112-34-5
Fish:	LC50 96 h <i>Lepomis macrochirus</i> 1300 mg/L [static]
Algae:	EC50 96 h <i>Desmodesmus subspicatus</i> >100 mg/L IUCLID
Invertebrate:	EC50 48 h <i>Daphnia magna</i> >100 mg/L IUCLID
Fluoroboric acid	16872-11-0
Fish:	LC50 96 h <i>Brachydanio rerio</i> 2600 mg/L [static]

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: Fluoboric Acid

Hazard Class: 8

UN/NA #: 1775

Packing Group: II

Required Label(s): Corrosive

TDG Information:



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Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

All components are on the U.S. EPA TSCA Inventory List. Supplier(s) of proprietary component(s) have stated that their components appear on the Canadian DSL/NDSL.

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: no **Chronic Health:** no **Fire:** no **Pressure:** no **Reactivity:** no

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Fluoroboric acid	16872-11-0	No	No	No	Yes	No

Not listed under California Proposition 65

Canada Regulations

This material is a controlled product under Canadian WHMIS regulations.

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Diethylene glycol monobutyl ether	112-34-5
	1 %

Component Analysis - Inventory

Water (7732-18-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes



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Diethylene glycol monobutyl ether (112-34-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Fluoroboric acid (16872-11-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund



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Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.