



Safety Data Sheet

Material Name: E-Prep 270 B

SDS ID: EPI-0434c

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

E-Prep 270 B

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
Acute Toxicity - Inhalation - Vapor - Category 2
Skin Corrosion/Irritation - Category 1
Serious Eye Damage/Eye Irritation - Category 1
Specific Target Organ Toxicity - Single Exposure - Category 1 (respiratory system)
Specific Target Organ Toxicity - Single Exposure - Category 3
Specific Target Organ Toxicity - Repeated Exposure - Category 1 (respiratory system,teeth)
Specific Target Organ Toxicity - Repeated Exposure - Category 2 (lungs)

GHS Label Elements**Symbol(s)****Signal Word**



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Danger

Hazard Statement(s)

Harmful if swallowed

Fatal if inhaled

Causes severe skin burns and eye damage

Causes damage to organs

May cause respiratory irritation

Causes damage to organs through prolonged or repeated exposure

May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Use only outdoors or in a well-ventilated area

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

Do not breathe dust/fume/gas/mist/vapours/spray

Wear respiratory protection

Wash thoroughly after handling

Do not eat, drink or smoke when using this product

Response

If exposed: Call a POISON CENTER or doctor/physician

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 is urgent (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Disposal

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

Other Hazards

Inhalation of mists or vapors may produce upper airway edema, wheezing, pulmonary edema, pneumonitis and respiratory failure. This product may be severely irritating or corrosive to the eyes. This product is severely irritating or corrosive to the skin. If swallowed, can cause burns or irritation of mucous membranes of the mouth, throat, esophagus and stomach. Swallowing the solution can cause death.



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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	50-55
7664-38-2	Phosphoric acid	20-25
7647-01-0	Hydrochloric acid	15-20
7697-37-2	Nitric acid	2-8
Trade Secret	Surfactant	0.5-1

Section 4 - FIRST AID MEASURES

Inhalation

If inhaled, immediately remove the affected person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen if qualified personnel are available.

Skin

Immediately flush skin with lots of running water for 15 minutes. Remove contaminated clothing and shoes. Wash before reuse. Get immediate medical attention.

Eyes

Object is to flush material out immediately then seek medical attention. Washing eyes within one (1) minute is essential to achieve maximum effectiveness. Immediately flush with lots of running water for 30 minutes, lifting the upper and lower eye lids occasionally. Get immediate medical attention.

Ingestion

If swallowed, get immediate medical attention! DO NOT INDUCE VOMITING! Give large quantities of water. Never give anything by mouth to an unconscious person. Aspiration hazard: If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog.

Unsuitable Extinguishing Media

None identified.



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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.

Methods and Materials for Containment and Cleaning Up

None identified.

Environmental Precautions

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 in a well-ventilated place. Keep container tightly closed

Store locked up

Store in a dry place. Store in a closed container.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Phosphoric acid	7664-38-2
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ACGIH:	1 mg/m ³ TWA
	3 mg/m ³ STEL
NIOSH:	1 mg/m ³ TWA
	3 mg/m ³ STEL
	1000 mg/m ³ IDLH
Europe:	1 mg/m ³ TWA
	2 mg/m ³ STEL
OSHA (US):	1 mg/m ³ TWA
Mexico:	1 mg/m ³ TWA LMPE-PPT
	3 mg/m ³ STEL [LMPE-CT]
Hydrochloric acid	7647-01-0
ACGIH:	2 ppm Ceiling
NIOSH:	5 ppm Ceiling; 7 mg/m ³ Ceiling
	50 ppmIDLH
Europe:	5 ppm TWA; 8 mg/m ³ TWA
	10 ppm STEL; 15 mg/m ³ STEL
OSHA (US):	5 ppmCeiling; 7 mg/m ³ Ceiling
Mexico:	5 ppmCeiling; 7 mg/m ³ Ceiling
Nitric acid	7697-37-2
ACGIH:	2 ppm TWA
	4 ppm STEL
NIOSH:	2 ppmTWA; 5 mg/m ³ TWA
	4 ppmSTEL; 10 mg/m ³ STEL
	25 ppmIDLH
Europe:	1 ppm STEL; 2.6 mg/m ³ STEL
OSHA (US):	2 ppmTWA; 5 mg/m ³ TWA



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Mexico:	2 ppmTWA LMPE-PPT; 5 mg/m ³ TWA LMPE-PPT
	4 ppmSTEL [LMPE-CT]; 10 mg/m ³ STEL [LMPE-CT]

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. Use a NIOSH-approved respirator if exposure limits are exceeded.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical goggles and / or face shield. It is generally recommended 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. Use body protection appropriate for task (e.g., Tyvek suit, rubber apron).

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.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear liquid	Physical State	Liquid
Odor	Characteristic	Color	Colorless
Odor Threshold	Not available	pH	<1
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



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Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	(Approx. equal to water)	Specific Gravity (water=1)	1.17 - 1.3
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

Hazardous polymerization will not occur under normal conditions of storage and use. This product may react with aluminum, zinc, and tin to generate flammable hydrogen gas. Also reacts with Cyanides, Sulfides, and Carbides.

Chemical Stability

This is a stable material.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid contact with strong oxidizers, strong acids and strong bases. Cyanides. Zinc. Do not store in sunlight. Do not store above 120°F (49°C).

Incompatible Materials

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

Hazardous decomposition products

Oxides of Carbon, Nitrogen and Phosphorous may be emitted if product burns.

Thermal decomposition products

Oxides of Carbon, Nitrogen and Phosphorous may be emitted if product burns.

Section 11 - TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

Component Analysis - LD50/LC50



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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

Phosphoric acid (7664-38-2)

Oral LD50Rat 1530 mg/kg

Dermal LD50Rabbit 2740 mg/kg

Inhalation LC50Rat >850 mg/m³ 1 h

Hydrochloric acid (7647-01-0)

Oral LD50Rat 238 - 277 mg/kg

Dermal LD50Rabbit >5010 mg/kg

Inhalation LC50Rat 1.68 mg/L 1 h

Nitric acid (7697-37-2)

Inhalation LC50Rat 67 ppm 4 h

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

Hydrochloric acid	7647-01-0
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 54 [1992](Group 3 (not classifiable))

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration hazard

No data available.



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Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components

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: Corrosive Liquid, n.o.s., (Contains: Phosphoric Acid, Nitric Acid, Hydrochloric Acid)

Hazard Class: 8

UN/NA #: 1760

Packing Group: II

Required Label(s): corrosive

TDG Information:

Shipping Name: Corrosive Liquid, n.o.s., (Contains: Phosphoric Acid, Nitric Acid, Hydrochloric Acid)

Hazard Class: 8

UN#: 1760

Packing Group: II

Required Label(s): corrosive

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Phosphoric acid	7664-38-2
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CERCLA:	5000 lbfinal RQ; 2270 kgfinal RQ
Hydrochloric acid	7647-01-0
SARA 302:	500 lb TPQ gas only)
SARA 313:	1 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
CERCLA:	5000 lbfinal RQ; 2270 kgfinal RQ
OSHA (safety):	5000 lb TQ; 5000 lb TQ anhydrous)
SARA 304:	5000 lb EPCRA RQ gas only)
Nitric acid	7697-37-2
SARA 302:	1000 lb TPQ
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lbfinal RQ; 454 kgfinal RQ
OSHA (safety):	500 lb TQ >=94.5% by weight)
SARA 304:	1000 lb EPCRA RQ

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
Phosphoric acid	7664-38-2	Yes	Yes	Yes	Yes	Yes
Hydrochloric acid	7647-01-0	Yes	Yes	Yes	Yes	Yes
Nitric acid	7697-37-2	Yes	Yes	Yes	Yes	Yes

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



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products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Phosphoric acid	7664-38-2
	1 %
Hydrochloric acid	7647-01-0
	1 %
Nitric acid	7697-37-2
	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

Phosphoric acid (7664-38-2)

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

Hydrochloric acid (7647-01-0)

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

Nitric acid (7697-37-2)

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



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Health: 3 Fire: 0 Reactivity: 0

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

NFPA Ratings

Health: 3 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 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.