



Safety Data Sheet

Material Name: E-Prep 221

SDS ID: EPI-0402c

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

E-Prep 221

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 - Inhalation - Vapor - Category 4
Skin Corrosion/Irritation - Category 1
Serious Eye Damage/Eye Irritation - Category 1
Carcinogenicity - Category 1A
Hazardous to the Aquatic Environment - Acute - Category 3

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

Danger

Hazard Statement(s)



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Harmful if inhaled
Causes severe skin burns and eye damage
May cause cancer
Harmful to aquatic life

Precautionary Statement(s)

Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Wash thoroughly after handling
Avoid release to the environment
Do not breathe dusts or mists

Response

IF exposed or concerned: Get medical advice/attention
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

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.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	60-75



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7722-84-1	Hydrogen peroxide	12-18
7664-93-9	Sulfuric acid	10-20

Section 4 - FIRST AID MEASURES

Inhalation

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.



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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 locked up

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

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Hydrogen peroxide	7722-84-1
ACGIH:	1 ppm TWA
NIOSH:	1 ppmTWA; 1.4 mg/m ³ TWA
	75 ppmIDLH
OSHA (US):	1 ppmTWA; 1.4 mg/m ³ TWA
Mexico:	1 ppmTWA LMPE-PPT; 1.5 mg/m ³ TWA LMPE-PPT
	2 ppmSTEL [LMPE-CT]; 3 mg/m ³ STEL [LMPE-CT]
Sulfuric acid	7664-93-9
ACGIH:	0.2 mg/m ³ TWAthoracic fraction



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NIOSH:	1 mg/m ³ TWA
	15 mg/m ³ IDLH
Europe:	0.05 mg/m ³ TWA (taking into account potential limitations and interferences which take place in the presence of other Sulphur compounds) mist
OSHA (US):	1 mg/m ³ TWA
Mexico:	1 mg/m ³ TWA LMPE-PPT

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.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, slightly yellow solution	Physical State	Liquid
Odor	Characteristic	Color	Pale yellow
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



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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)	1.125 - 1.16
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

Measures to limit air emissions.

Incompatible Materials

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

Hazardous decomposition products

Component may form peroxides of unknown stability. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Sulfur oxides. Carbon monoxide. Carbon dioxide.

Thermal decomposition products

Component may form peroxides of unknown stability. Hazardous combustion products may include carbon monoxide, carbon dioxide and hydrocarbon fragments.

Section 11 - TOXICOLOGICAL INFORMATION



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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

Hydrogen peroxide (7722-84-1)

Oral LD50Rat 1518 mg/kg

Dermal LD50Rabbit 2000 mg/kg

Inhalation LC50Rat 2 g/m³ 4 h

Sulfuric acid (7664-93-9)

Oral LD50Rat 2140 mg/kg

Inhalation LC50Rat 510 mg/m³ 2 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

Hydrogen peroxide	7722-84-1
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 71 [1999]; Supplement 7 [1987]; Monograph 36 [1985](Group 3 (not classifiable))
DFG:	Category 4 (no significant contribution to human cancer)
Sulfuric acid	7664-93-9
ACGIH:	A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists)
IARC:	Monograph 54 [1992] (Occupational exposure to mists and vapors from sulfuric acid and other strong inorganic acids) (Group 1 (carcinogenic to humans))
DFG:	Category 4 (no significant contribution to human cancer)
OSHA:	Present



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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.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Hydrogen peroxide	7722-84-1
Fish:	LC50 96 h Pimephales promelas 16.4 mg/L; LC50 96 h Lepomis macrochirus 18 - 56 mg/L [static]; LC50 96 h Oncorhynchus mykiss 10 - 32 mg/L [static]
Invertebrate:	EC50 48 h Daphnia magna 18 - 32 mg/L [static] EPA
Sulfuric acid	7664-93-9
Fish:	LC50 96 h Brachydanio rerio >500 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: Corrosive Liquid, Oxidizing, n.o.s.

Hazard Class: 8



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UN/NA #: 3093

Packing Group: II

Required Label(s): corrosive,oxidizing

TDG Information:

Shipping Name: Corrosive Liquid, Oxidizing, n.o.s.

Hazard Class: 8

UN#: 3093

Packing Group: II

Required Label(s): corrosive,oxidizing

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.

Hydrogen peroxide	7722-84-1
SARA 302:	1000 lb TPQ concentration >52%)
OSHA (safety):	7500 lb TQ >=52% by weight)
SARA 304:	1000 lb EPCRA RQ concentration >52%)
Sulfuric acid	7664-93-9
SARA 302:	1000 lb TPQ
SARA 313:	1 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
CERCLA:	1000 lbfinal RQ; 454 kgfinal RQ
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
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Hydrogen peroxide	7722-84-1	Yes	Yes	Yes	Yes	Yes
Sulfuric acid	7664-93-9	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 products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Hydrogen peroxide	7722-84-1
	1 %
Sulfuric acid	7664-93-9
	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

Hydrogen peroxide (7722-84-1)

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

Sulfuric acid (7664-93-9)

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: 2 Fire: 0 Reactivity: 1

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

NFPA Ratings

Health: 2 Fire: 0 Reactivity: 1

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.