



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

E-Pik 217

Product Use

Copper Etchant and Activator.

Details of the supplier of the safety data sheet

Electrochemical Products Inc.

17000 West Lincoln Ave

New Berlin, WI 53151

Phone: 262-786-9330

Emergency Phone #: NCEC (#EPI-29003) +1 202 464 2554, +44 1865 407333

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.

Skin Corrosion/Irritation - Category 1

Serious Eye Damage/Eye Irritation - Category 1

GHS Label Elements

Symbol(s)



Signal Word

DANGER.

Hazard Statement(s)

Causes severe skin burns and eye damage.

Precautionary Statement(s)

Prevention

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

Wash thoroughly after handling.

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.



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

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

Causes severe eye, skin and respiratory tract irritation. Ingestion of this preparation is unlikely. However, ingestion may produce gastrointestinal irritation and disturbances. Inhalation may cause nose bleeds and irritation of the upper respiratory passages with coughing and discomfort.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7681-38-1	Sodium bisulfate	75-95
Surfactant	Surfactant	0.5-2
70693-62-8	Potassium peroxymonosulfate sulfate (K ₅ H ₃ (SO ₃ (O ₂)) ₂ (SO ₄) ₂)	10

Section 4 - FIRST AID MEASURES

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin

Immediately flush skin with lots of running water for 30 minutes. Remove contaminated clothing and shoes. Wash before reuse. Get immediate medical attention.

Eyes

Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

Ingestion

If swallowed, give milk or water to dilute. Seek medical attention immediately. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.

Note to Physicians

None identified.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Water. Do not use carbon dioxide or other gas-filled fire extinguishers; they will have no effect on decomposing persulfates.

Special Hazards Arising from the Chemical



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

Will release oxygen when heated, intensifying a fire. Acidic mist may be present; self contained breathing apparatus should be used.

Hazardous Combustion Products

When heated over 570°, sulfur dioxide and sulfur trioxide are formed.

Fire Fighting Measures

Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

Firefighters should avoid inhaling any combustion products.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this SDS. Isolate area. Keep unnecessary personnel away.

Methods and Materials for Containment and Cleaning Up

Sweep up solid. Flush liquid spills with low pressure water. Contain the discharged material, if this is without risk.

Environmental Precautions

Comply with Federal, State, and local regulations. Solutions greater than 3% by weight have a pH < 2.0, and may be a RCRA hazardous waste upon disposal due to the acidic pH characteristic of the solution. If approved, flush to sewer or waste treatment plant. Large quantities should be neutralized with soda ash.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Avoid getting this material into contact with your eyes. Wash thoroughly after handling. Avoid the formation of airborne dusts. Keep container tightly closed and store at room temperature.

Conditions for Safe Storage, Including any Incompatibilities

Store locked up.

Keep the container tightly closed in original container and in a cool, well-ventilated place. Keep away from incompatible materials.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

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

Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical goggles; face shield (if splashing is possible).

Skin Protection

Use of protective coveralls and long sleeves is recommended. Use of an impervious apron is recommended.

Respiratory Protection

Respirators: A NIOSH approved air-purifying respirator with an appropriate particulate cartridge or canister may be used under circumstances where airborne concentrations are expected to exceed exposure limits.



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

Glove Recommendations

Use of impervious gloves is recommended. Wear chemical impervious gloves.

Protective Materials

Eye wash fountain and emergency showers are recommended in the workplace. Use good industrial hygiene practices in handling this material.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to Off White powder.	Physical State	Powder
Odor	Odorless.	Color	White to off-white.
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	Not available	Flammability (solid, gas)	Not available
Autoignition Temperature	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	Complete	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Kinematic viscosity	Not available
Solubility (Other)	Not available	Density	Not available
VOC	0	Molecular Weight	Not available

Section 10 - STABILITY AND REACTIVITY

Reactivity

See section on incompatibility.

Chemical Stability

This is a stable material. Stable when handled and stored as indicated.

Possibility of Hazardous Reactions

Will not occur.



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

Conditions to Avoid

Avoid contact with extreme heat.

Incompatible Materials

The mixture of this product with compounds containing halides or active halogens (bromine, chlorine, iodine) can cause the release of the respective halogen gas, if moisture is present. Avoid these gases (bromine and chlorine) because they are very irritating to eyes and lungs even at low concentrations. Never mix concentrated product with dry or concentrated bromine-containing chemicals, such as bromates, bromides, or any concentrated bromine pool chemicals. Mixing concentrated product with dry or concentrated chlorine-containing chemicals, such as hypochlorites ("Hypo" for pools), sodium dichloroisocyanurate (dichlor), sodium triisocyanurate (trichlor) or with sodium chloride (salt), may cause the release of chlorine gas. Mixing with cyanides can cause release of hydrogen cyanide gas. Mixing with heavy metal salts such as those of cobalt, nickel, copper, or manganese can cause decomposition with release of oxygen and heat.

Hazardous decomposition products

Decomposes when heated or dampened, releasing oxygen and heat of decomposition.

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:

Sodium bisulfate (7681-38-1)

Oral LD50 Rat 2490 mg/kg

Potassium peroxydisulfate (K₂S₂O₈) (7727-81-3)

Oral LD50 Rat 1204 mg/kg

Dermal LD50 Rabbit >11000 mg/kg

Inhalation LC50 Rat >14 mg/L 1 h

Product Toxicity Data

Acute Toxicity Estimate

Dermal	0 0
Oral	0 0

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.



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

Tumorigenic Data

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

Sodium bisulfate	7681-38-1
Invertebrate:	EC50 48 h Daphnia magna 190 mg/L IUCLID
Potassium peroxydisulfate (K ₂ S ₂ O ₈)	70693-62-8
Fish:	LC50 96 h Brachydanio rerio >32 mg/L [semi-static]

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste material in accordance with all applicable Federal, State or provincial and local environmental regulations. See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. Decomposes and releases toxic gases if heated. High heat can cause decomposition.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: Corrosive Solid, Acidic, Inorganic, n.o.s.(Monopersulfate Compound)

Hazard Class: 8

UN/NA #: UN3260

Packing Group: III

Required Label(s): Corrosive

TDG Information:

Shipping Name: Corrosive Solid, Acidic, Inorganic, n.o.s.(Monopersulfate Compound)

Hazard Class: 8



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

UN#: UN3260

Packing Group: III

Required Label(s): Corrosive

International Bulk Chemical Code

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this product's 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.

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

Skin Corrosion/Irritation; Serious Eye Damage/Eye Irritation

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.

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

Sodium bisulfate	7681-38-1
	1 %

Component Analysis - Inventory

Sodium bisulfate (7681-38-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Surfactant (Surfactant)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
No	No	No	No	No	No	No	No	No	No	No	No	No	No	No



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

Potassium peroxymonosulfate sulfate ($K_5H_3(SO_3(O_2))_2(SO_4)_2$) (70693-62-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	No	Yes	Yes	No	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 3 Fire: 0 Reactivity: 1

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

NFPA Ratings

Health: 3 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; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); 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; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); 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; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; 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; MX - Mexico; Ne - Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; 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; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit



Safety Data Sheet

Material Name: E-Pik 217

SDS ID: EPI-0386c

Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

Reasonable care has been taken in the preparation of this information; however, the manufacturer makes no warranty whatsoever including the warranty of merchantability, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental, consequential, or other such damages resulting from its use or misuse..