



Safety Data Sheet

Material Name: E-Brite 50/50 Ready To Plate

SDS ID: EPI-0025

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

E-Brite 50/50 Ready To Plate

Product Use

Silver. Plating Additive.

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.

Hazardous to the Aquatic Environment - Acute - Category 1

Hazardous to the Aquatic Environment - Chronic - Category 1

GHS Label Elements

Symbol(s)



Signal Word

Warning

Hazard Statement(s)

Very toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

Prevention

Avoid release to the environment.

Response



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Collect spillage.

Storage

None needed according to classification criteria.

Disposal

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

Other Hazards

This product may be harmful or fatal if it is swallowed. Contact with this material will cause burns to the skin, eyes and mucous membranes. May cause argyria, a blue-grey discoloration of the skin, eyes, and mucous membranes.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	60-90
7761-88-8	Silver nitrate	1-3

Section 4 - FIRST AID MEASURES

Inhalation

If inhaled, remove to fresh air. Get medical attention. Get medical attention even if symptoms of irritation are mild or quickly subside as lung injury may have occurred.

Skin

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control centre immediately. Wash contaminated clothing before re-use. Destroy or thoroughly clean contaminated shoes.

Eyes

Immediately flush the contaminated eye(s) with water for at least 60 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. Contact a physician or poison control center immediately. Continue flushing the eye(s) until the physician advises to stop. If necessary, continue flushing during transport to an emergency care facility.

Ingestion

If swallowed, DO NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person. Notes to physician: Symptoms: The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis.



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Note to Physicians

If swallowed, DO NOT induce vomiting. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person. Notes to physician: Symptoms: The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use any extinguishing media appropriate for the surrounding fires. Flush with plenty of water. Do not allow this material to drain into sewers/water supplies.

Unsuitable Extinguishing Media

None identified.

Special Hazards Arising from the Chemical

None identified.

Hazardous Combustion Products

Decomposition of this product may emit oxides of nitrogen and carbon monoxide.

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

Environmental Precautions

Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps. Block any potential routes to water systems.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Wash thoroughly after handling. Avoid getting this material into contact with your skin and eyes.

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria.

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



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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components

EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health Surveillance Measures

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

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 safety glasses with side shields (or chemical goggles).

Skin Protection

Use impervious gloves when handling. Additional protection, including impervious boots, apron, or coveralls, should be worn as needed.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: full-face positive pressure air-supplied. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: full-face positive pressure air-supplied. If respirators are used, a program should be instituted to assure compliance with applicable federal, state, commonwealth, provincial, or local laws and regulations.

Glove Recommendations

Use chemical resistant 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	Colorless Clear Solution	Physical State	Liquid
Odor	Odorless	Color	Colorless Clear Solution



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Odor Threshold	Not available	pH	9 - 9.6
Melting Point	Not available	Boiling Point	220 °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 temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	(Approx. equal to water)	Specific Gravity (water=1)	1.08 - 1.12
Water Solubility	Completely	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	Not available	VOC	0
Molecular Weight	Not available		

Section 10 - STABILITY AND REACTIVITY

Reactivity

Will not occur.

Chemical Stability

This is a stable material.

Possibility of Hazardous Reactions

Hazardous polymerisation does not occur.

Conditions to Avoid

None identified.

Incompatible Materials

Avoid Strong reducing agents.

Hazardous decomposition products



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Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May be harmful if inhaled. May cause damage to lung through prolonged exposure.

Skin Contact

Causes severe burns.

Eye Contact

Causes severe burns.

Ingestion

POISON. May be harmful or fatal if swallowed. May cause burns to the mouth, throat and digestive tract.

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 LD50 Rat >90 mL/kg

Silver nitrate (7761-88-8)

Oral LD50 Rat 1173 mg/kg

Immediate Effects

No information on significant adverse effects.

Delayed Effects

Inhalation: Harmful if inhaled and may cause delayed lung injury. Eyes: Causes severe burns. Airborne dust extremely irritating. Skin: Causes severe burns. Ingestion: Poison. May be fatal if swallowed. May cause burns of the gastrointestinal tract if swallowed.

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.



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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

Silver nitrate	7761-88-8
Fish:	LC50 96 h Poecilia reticulata 0.00512 - 0.00787 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 0.009 - 0.02 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 0.0242 - 0.0484 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 0.05 - 0.07 mg/L [static]; LC50 96 h Oncorhynchus mykiss 0.001339 - 0.001637 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 0.0075 mg/L [semi-static]; LC50 96 h Oncorhynchus mykiss 0.00839 - 0.1802 mg/L [static]; LC50 96 h Pimephales promelas 0.00452 - 0.00638 mg/L [flow-through]; LC50 96 h Pimephales promelas 0.00181 - 0.00214 mg/L [static]; LC50 96 h Pimephales promelas 0.0064 - 0.0106 mg/L [semi-static]; LC50 96 h Pimephales promelas 0.009 mg/L; LC50 96 h Cyprinus carpio 0.0027 mg/L [semi-static]
Invertebrate:	EC50 48 h Daphnia magna 0.0006 mg/L IUCLID; EC50 48 h Daphnia magna 0.0008 - 0.001 mg/L [Flow through] EPA; EC50 48 h Daphnia magna 0.0008 - 0.0011 mg/L [Static] EPA

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Waste must be handled in accordance with all federal, state, provincial, and local regulations. Transport waste material to an authorized waste location, or incinerate under controlled conditions.



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Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: Environmentally Hazardous Substances Liquid N.O.S., (Contains: Silver Nitrate Solution)

Hazard Class: 9

UN/NA #: UN3082

Packing Group: III

Required Label(s): Environmental

TDG Information:

Shipping Name: Environmentally Hazardous Substances Liquid N.O.S., (Contains: Silver Nitrate Solution)

Hazard Class: 9

UN#: UN3082

Packing Group: III

Required Label(s): Environmental

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.

Silver nitrate	7761-88-8
CERCLA:	1 lb final RQ ; 0.454 kg final RQ

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
Silver nitrate	7761-88-8	Yes	Yes	No	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



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Silver nitrate	7761-88-8
	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

Silver nitrate (7761-88-8)

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

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; ENCS - Japan Existing and New Chemical Substance Inventory; 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; ISHL - Japan Industrial Safety and Health Law; JP - Japan; Kow - Octanol/water partition coefficient; KECI - Korea Existing Chemicals Inventory; KECL - Korea Existing Chemicals List; 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; MX - Mexico; 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-



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Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act.; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

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..