



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

E-Phos 660

Product Use

Zinc. phosphate.

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.

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



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

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
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

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	40-50
7664-38-2	Phosphoric acid	22-30
7697-37-2	Nitric acid	3-5
Trade Secret	Nickel, inorganic compounds	0.1-0.5
1314-13-2	Zinc oxide	5-10

Section 4 - FIRST AID MEASURES

Inhalation

Remove to fresh air. Give artificial respiration if not breathing. Get immediate medical attention.

Skin

Immediately flush skin with lots of running water for 5 minutes. Remove contaminated clothing and shoes. Wash before reuse. Get immediate medical attention.



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

Eyes

Immediately flush with lots of running water for 15 minutes, lifting the upper and lower eye lids occasionally. Washing eyes within several seconds is essential to achieve maximum effectiveness. Get immediate medical attention.

Ingestion

Do not induce vomiting. Give large quantities of water. If available, give several glasses of milk. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Water spray, foam, carbon dioxide or dry chemical may be used in areas where the product is stored.

Hazardous Combustion Products

Nitrogen oxides (NO_x).

Fire Fighting Measures

Protective clothing and self-contained breathing apparatus should be worn by fire fighters in areas where product is stored.

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.

Environmental Precautions

Dike the spill with sand or earth. Sweep up and shovel into suitable containers for disposal.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities

Store locked up

Keep container tightly closed.



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

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

Biological limit value

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

Engineering Controls

Use local exhaust ventilation.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Safety glasses or chemical goggles. 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

The use of rubber gloves, long sleeved shirt and trousers are required.

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

The use of rubber gloves is recommended.

Protective Materials

Eye wash fountain and emergency showers are recommended.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear liquid	Physical State	Liquid
Odor	Acidic	Color	Blue/Green
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



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

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)	1.4 - 1.55
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

Will not occur.

Chemical Stability

This is a stable material.

Possibility of Hazardous Reactions

Will not occur.

Conditions to Avoid

Avoid strong oxidizing agents. Avoid Strong reducing agents. This product may react with strong alkalis.

Incompatible Materials

Strong oxidizing and reducing agents. This material may violently react with alkalis.

Hazardous decomposition products

Nitrogen oxides (NO_x).

Thermal decomposition products

None identified.

Section 11 - TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

Component Analysis - LD50/LC50



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

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

Nitric acid (7697-37-2)

Inhalation LC50Rat 67 ppm 4 h

Zinc oxide (1314-13-2)

Oral LD50Rat >5000 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

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

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



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

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.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

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

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
CERCLA:	5000 lbfinal RQ; 2270 kgfinal RQ
Nitric acid	7697-37-2
SARA 302:	1000 lb TPQ
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lbfinal RQ; 454 kgfinal RQ



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

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. This product is in compliance with TSCA.

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
Water	7732-18-5	No	No	No	No	Yes
Phosphoric acid	7664-38-2	Yes	Yes	Yes	Yes	Yes
Nitric acid	7697-37-2	Yes	Yes	Yes	Yes	Yes
Zinc oxide	1314-13-2	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 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 %
Nitric acid	7697-37-2
	1 %
Zinc oxide	1314-13-2
	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



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

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

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

Zinc oxide (1314-13-2)

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

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™



Safety Data Sheet

Material Name: E-Phos 660

SDS ID: EPI-0336c

- 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.