SAFETY DATA SHEET

Revision date 11-Jul-2022



Revision Number 1

1. Identification	
Product identifier	
Product Name	B/OX 315
Other means of identification	
Product Code(s)	EPI-0062C
UN number or ID number	UN3264
Synonyms	None
Details of the supplier of the safety data sheet	
Manufacturer Address Electrochemical Products Inc. 17000 West Lincoln Ave New Berlin, WI 53151 Phone: 262-786-9330 E-mail: us-sales@epi.com www.epi.com Fax: 262-786-9403	

Emergency telephone number

Emergency Telephone

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

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

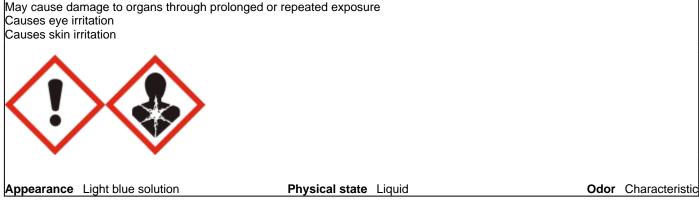
Danger

Hazard statements

May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause an allergic skin reaction

May cause cancer

May damage fertility or the unborn child



Precautionary Statements - Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection In case of inadequate ventilation wear respiratory protection Contaminated work clothing must not be allowed out of the workplace Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention IF ON SKIN: Wash with plenty of water and soap If skin irritation or rash occurs: Get medical advice/attention Wash contaminated clothing before reuse IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing If experiencing respiratory symptoms: Call a POISON CENTER or doctor

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

May be harmful if swallowed. Causes mild skin irritation. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Not applicable.

<u>Mixture</u>

Chemical name	CAS No	Weight-%	Trade secret
Water	7732-18-5	92-95	*
Selenious acid	7783-00-8	2-4	*
Nickel(II) sulphate, hexahydrate	10101-97-0	0-1	*
Phosphoric acid	7664-38-2	0.2-0.5	*
Sulfuric acid, copper(2+) salt (1:1)	7758-98-7	0.1-0.3	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get medical attention immediately if symptoms occur.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.
Most important symptoms and eff	ects, both acute and delayed
Symptoms	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives. Prolonged contact may cause redness and irritation.
Indication of any immediate medical attention and special treatment needed	
Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.
Explosion data Sensitivity to mechanical impact None.	
Sensitivity to static discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Selenious acid	TWA: 0.2 mg/m ³ Se	TWA: 0.2 mg/m ³ Se	IDLH: 1 mg/m ³ Se
7783-00-8	-	(vacated) TWA: 0.2 mg/m ³ Se	TWA: 0.2 mg/m ³ except
			Selenium hexafluoride Se
Nickel(II) sulphate, hexahydrate	TWA: 0.1 mg/m ³ Ni inhalable	TWA: 1 mg/m³ Ni	IDLH: 10 mg/m ³ Ni
10101-97-0	particulate matter	(vacated) TWA: 0.1 mg/m ³ Ni	TWA: 0.015 mg/m ³ except
			Nickel carbonyl Ni
Phosphoric acid	STEL: 3 mg/m ³	TWA: 1 mg/m ³	IDLH: 1000 mg/m ³
7664-38-2	TWA: 1 mg/m ³	(vacated) TWA: 1 mg/m ³	TWA: 1 mg/m ³
	-	(vacated) STEL: 3 mg/m ³	STEL: 3 mg/m ³
Sulfuric acid, copper(2+) salt	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and
(1:1)			mist
7758-98-7			TWA: 1 mg/m ³ Cu dust and
			mist

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls

Showers Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Light blue solution
Color	Light blue solution
Odor	Characteristic

<u>Property</u>	Values	Remarks • Method
pH	0 - 2	None known
Melting point / freezing point	0 °C / 32 °F	None known
Boiling point / boiling range	105 °C / 221 °F	None known
Flash point	No data available	None known
Relative density	1.03 - 1.045	None known
Water solubility	Completely soluble	None known
Other information		
VOC Content (%)	0	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause sensitization in susceptible persons. (based on components).
Eye contact	Specific test data for the substance or mixture is not available.

Skin contact	Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitization by skin contact. Causes mild skin irritation.
Ingestion	Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation". May be harmful if swallowed.
Symptoms related to the	physical, chemical and toxicological characteristics
Symptoms	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives. Prolonged contact may cause redness

Acute toxicity

Numerical measures of toxicity No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	3,436.40 mg/kg
ATEmix (inhalation-dust/mist)	17.2165 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
7732-18-5	-		
Nickel(II) sulphate, hexahydrate 10101-97-0	= 264 mg/kg (Rat)	-	-
Phosphoric acid 7664-38-2	= 1530 mg/kg (Rat)	= 2740 mg/kg (Rabbit)	> 850 mg/m³(Rat)1 h
Sulfuric acid, copper(2+) salt (1:1)	= 300 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
7758-98-7			

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Classification based on data available for ingredients. May cause skin irritation.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	May cause sensitization by inhalation. May cause sensitization by skin contact.
Germ cell mutagenicity	No information available.

Carcinogenicity

Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Selenious acid	-	Group 3	-	-
7783-00-8		-		
Nickel(II) sulphate, hexahydrate 10101-97-0	-	Group 1	Known	Х

Legend

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)

Known - Known Carcinogen OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present

Reproductive toxicity	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.
STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	No information available.
Other adverse effects	No information available.
Interactive effects	No information available.

12. Ecological information

Ecotoxicity

Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Nickel(II) sulphate, hexahydrate 10101-97-0	EC50: =0.75mg/L (72h, Pseudokirchneriella subcapitata)	LC50: 2.594 - 3.279mg/L (96h, Pimephales promelas) LC50: 32.36 - 41.04mg/L (96h, Poecilia reticulata) LC50: 5.79 - 6.54mg/L (96h, Cyprinus carpio) LC50: 8.6 - 13.6mg/L (96h, Oncorhynchus mykiss) LC50: =1.28mg/L (96h, Oncorhynchus mykiss) LC50: =47.58mg/L (96h, Cyprinus carpio)		EC50: =1mg/L (48h, Daphnia magna)
Sulfuric acid, copper(2+) salt (1:1) 7758-98-7	-	LC50: =0.1mg/L (96h, Oncorhynchus mykiss)	-	EC50: 0.0058 - 0.0073mg/L (48h, Daphnia magna)

Persistence and degradability

No information available.

Bioaccumulation

There is no data for this product.

Other adverse effects

No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
US EPA Waste Number	U204

14. Transport information

DOT UN number or ID number Proper shipping name Transport hazard class(es) Packing group Reportable Quantity (RQ)	UN3264 Corrosive liquid, acidic, inorganic, n.o.s. 8 II (Sulfuric acid, copper(2+) salt (1:1): RQ (kg)= 4.54, Nickel(II) sulphate, hexahydrate: RQ (kg)= 45.40, Selenious acid: RQ (kg)= 4.54) Sulfuric acid, copper(2+) salt (1:1): RQ (lb)= 10, Nickel(II) sulphate, hexahydrate: RQ (lb)= 100.00, Selenious acid: RQ (lb)= 10
DOT reportable quantity kg (calculated) DOT Reportable Quantity Ibs. (calculated) Special Provisions DOT Marine Pollutant Marine pollutant Description	Sulfuric acid, copper(2+) salt (1:1): RQ (kg)= 2522.00, Nickel(II) sulphate, hexahydrate: RQ (kg)= 6776.00, Selenious acid: RQ (kg)= 156.00 Sulfuric acid, copper(2+) salt (1:1): RQ (lb)= 5556.00, Nickel(II) sulphate, hexahydrate: RQ (lb)= 14925.00, Selenious acid: RQ (lb)= 344.00 386, B2, IB2, T11, TP2, TP27 I Selenious acid, Nickel(II) sulphate, hexahydrate UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II, Marine pollutant (Selenious acid, Nickel(II) sulphate, hexahydrate) 154
Emergency Response Guide Number	154
TDG UN number or ID number UN proper shipping name Transport hazard class(es) Packing group Special Provisions Marine pollutant Description	UN3264 Corrosive liquid, acidic, inorganic, n.o.s. 8 II 16 Selenious acid, Nickel(II) sulphate, hexahydrate. UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II
<u>MEX</u> UN number or ID number UN proper shipping name Transport hazard class(es) Packing group Technical Name Description Special Provisions	UN3264 Corrosive liquid, acidic, inorganic, n.o.s. 8 II Phosphoric acid UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II 274
ICAO (air) UN number or ID number UN proper shipping name Transport hazard class(es) Packing group Description Special Provisions	UN3264 Corrosive liquid, acidic, inorganic, n.o.s. 8 II UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II A3
IATA UN number or ID number UN proper shipping name Transport hazard class(es) Packing group Technical Name Description	UN3264 Corrosive liquid, acidic, inorganic, n.o.s. 8 II Phosphoric acid UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II

Special Provisions	A3, A803
ERG Code	8L
IMDG	UN3264
UN number or ID number	Corrosive liquid, acidic, inorganic, n.o.s.
UN proper shipping name	8
Transport hazard class(es)	II
Packing group	F-A, S-B
EmS-No	274
Special Provisions	P
Marine pollutant	Selenious acid
Marine Pollutant	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Selenious acid), 8, II,
Description	Marine pollutant
RID	UN3264
UN number or ID number	Corrosive liquid, acidic, inorganic, n.o.s.
UN proper shipping name	8
Transport hazard class(es)	II
Packing group	C1
Classification code	274
Special Provisions	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II, Environmentally
Description	Hazardous
ADR	UN3264
UN number or ID number	Corrosive liquid, acidic, inorganic, n.o.s.
UN proper shipping name	8
Transport hazard class(es)	II
Packing group	C1
Classification code	(E)
Tunnel restriction code	274
Special Provisions	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II, (E),
Description	Environmentally Hazardous
ADN	UN3264
UN number or ID number	Corrosive liquid, acidic, inorganic, n.o.s.
UN proper shipping name	8
Transport hazard class(es)	II
Packing group	C1
Classification code	274
Special Provisions	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II, Environmentally
Description	Hazardous
Equipment Requirements	PP, EP

15. Regulatory information

International Inventories

TSCA

Complies

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Selenious acid	7783-00-8	Present	Active
Trade secret	-	Present	Active
Nickel(II) sulphate, hexahydrate	10101-97-0	Present	Active
Phosphoric acid	7664-38-2	Present	Active
Sulfuric acid, copper(2+) salt (1:1)	7758-98-7	Present	Active
Surfactants	-	Present	Active

DSL/NDSL	Does not comply	
EINECS/ELINCS	Does not comply	
ENCS	Complies	
IECSC	Complies	
KECL	Does not comply	
PICCS	Complies	
AICS	Does not comply	

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances **ENCS** - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

<u>SARA 313</u>

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Selenious acid 7783-00-8	10 lb	10 lb	RQ 10 lb final RQ RQ 4.54 kg final RQ
Nickel(II) sulphate, hexahydrate 10101-97-0	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ
Phosphoric acid 7664-38-2	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Sulfuric acid, copper(2+) salt (1:1) 7758-98-7	10 lb	_	RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65	
Nickel(II) sulphate, hexahydrate - 10101-97-0	Carcinogen Developmental Male Reproductive	

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	Х
Selenious acid 7783-00-8	Х	-	Х
Trade secret	Х	-	Х
Nickel(II) sulphate, hexahydrate 10101-97-0	Х	-	Х
Phosphoric acid 7664-38-2	Х	-	Х
Sulfuric acid, copper(2+) salt (1:1) 7758-98-7	Х	-	Х

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information				
NFPA <u>HMIS</u> Chronic Hazard Star Leg	Health hazards 2 Health hazards 2 * end *= Chronic H	Flammability 0 Flammability 0 Health Hazard	Instability 0 Physical hazards 0	Special hazards - Personal protection X
Legend Section 8: E TWA TV	reviations and acronyms u xposure controls/personal /A (time-weighted average) iximum limit value		<u>sheet</u> STEL (Short Tern Skin designation	n Exposure Limit)
	11-Jul-2022 No informat ided in this Safety Data Sh	tion available.	est of our knowledge, infor	mation and belief at the

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet