

## 1. Identification

<b>Product identifier</b>	<b>Brandt Ligno Coastal Mix</b>	
<b>Other means of identification</b>		
<b>Product code</b>	24020	
<b>Recommended use</b>	Agricultural/ Horticultural Use- Micronutrient Fertilizer- Refer to product label.	
<b>Recommended restrictions</b>	Refer to product label.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	Brandt Consolidated, Inc.	
<b>Address</b>	2935 South Koke Mill Road Springfield, IL 62711 United States	
<b>Telephone</b>	Corporate Office	1-217-547-5800
<b>Website</b>	www.brandt.co	
<b>E-mail</b>	msds@brandt.co	
<b>Contact person</b>	EH&S / Regulatory Department	
<b>Emergency phone number</b>	CHEMTREC (24 hours): USA, Canada, Puerto Rico 1-800-424-9300 Virgin Islands 1-800-424-9300 International Maritime +1 (703) 527-3887	

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Reproductive toxicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 2
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response</b>	If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Collect spillage.
<b>Storage</b>	Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	27.23% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 27.23% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
FERROUS SULFATE		7782-63-0	5 - < 10*
Manganese Sulfate, monohydrate		10034-96-5	5 - < 10*
Zinc Sulfate		7733-02-0	3 - < 5*
Cupric Sulfate, pentahydrate		7758-99-8	0.75
Poly(ethylene oxide)		25322-68-3	< 0.1*
Potassium Hydroxide (Caustic Potash)		1310-58-3	< 0.1*
Sodium hydroxide, (Na(OH))		1310-73-2	< 0.1*
Sulfuric Acid		7664-93-9	< 0.1*
Other components below reportable levels			80 - < 90

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.  
**General fire hazards** No unusual fire or explosion hazards noted.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Manganese Sulfate, monohydrate (CAS 10034-96-5)	Ceiling	5 mg/m <sup>3</sup>
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)	PEL	2 mg/m <sup>3</sup>
Sulfuric Acid (CAS 7664-93-9)	PEL	1 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Cupric Sulfate, pentahydrate (CAS 7758-99-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
Manganese Sulfate, monohydrate (CAS 10034-96-5)	TWA	0.2 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup>	Fume. Inhalable fraction.
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)	Ceiling	0.02 mg/m <sup>3</sup> 2 mg/m <sup>3</sup>	Respirable fraction.
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>	
Sulfuric Acid (CAS 7664-93-9)	TWA	0.2 mg/m <sup>3</sup>	Thoracic fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Cupric Sulfate, pentahydrate (CAS 7758-99-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
Manganese Sulfate, monohydrate (CAS 10034-96-5)	STEL	3 mg/m <sup>3</sup>	Fume.
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)	TWA	1 mg/m <sup>3</sup> 2 mg/m <sup>3</sup>	Fume.
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>	
Sulfuric Acid (CAS 7664-93-9)	TWA	1 mg/m <sup>3</sup>	

**US. AIHA Workplace Environmental Exposure Level (WEEL) Guides**

Components	Type	Value	Form
Poly(ethylene oxide) (CAS 25322-68-3)	TWA	10 mg/m <sup>3</sup>	Particulate.

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Chemical respirator with organic vapor cartridge and full facepiece.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge and full facepiece.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties**

<b>Appearance</b>	Liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Brown.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	1562 °F (850 °C) estimated
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.

<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	0.00001 hPa estimated
<b>Vapor density</b>	Not available.
<b>Relative density</b>	1.27 g/cm <sup>3</sup> (+/- 0.4)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	55.55 % estimated
<b>pH in aqueous solution</b>	4.3 (+/- 1.0 10% solution)
<b>Pounds per gallon</b>	10.6 lb/gal (+/- 0.4)
<b>Specific gravity</b>	2.79 estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause damage to organs through prolonged or repeated exposure by inhalation.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

<b>Acute toxicity</b>	May cause an allergic skin reaction.
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Product	Species	Test Results
Brandt Ligno Coastal Mix		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Sprague-Dawley rat	20000 mg/kg, 14 days estimated
<b>Inhalation</b>		
LC50	Guinea pig	21 mg/l, 8 Hours estimated
LD50	Rat	402 mg/l, 4 hours estimated

Product	Species	Test Results
<b>Oral</b>		
LD100	Mouse	2739 mg/kg estimated
LD50	Mouse	5669 mg/kg estimated
	Rat	34718 mg/kg estimated
	Sprague-Dawley rat	20000 mg/kg, 14 days estimated
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Cupric Sulfate, pentahydrate (CAS 7758-99-8)		
<b>Acute</b>		
<b>Oral</b>		
LD100	Mouse	50 mg/kg
LD50	Rat	960 mg/kg
Manganese Sulfate, monohydrate (CAS 10034-96-5)		
<b>Acute</b>		
<b>Oral</b>		
LD100	Mouse	305 mg/kg
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	273 mg/kg
Sulfuric Acid (CAS 7664-93-9)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Guinea pig	0.018 mg/l, 8 Hours
	Rat	347 mg/l, 1 Hours
<b>Oral</b>		
LD50	Rat	2140 mg/kg
Zinc Sulfate (CAS 7733-02-0)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rat	> 2000 mg/kg
<b>Oral</b>		
LD50	Rat	623 mg/kg

\* Estimates for product may be based on additional component data not shown.

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Sulfuric Acid (CAS 7664-93-9)	1 Carcinogenic to humans.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Not regulated.	
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	
Sulfuric Acid (CAS 7664-93-9)	Known To Be Human Carcinogen.
<b>Reproductive toxicity</b>	Suspected of damaging fertility or the unborn child.

<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Product		Species	Test Results
Brandt Ligno Coastal Mix			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	315.1989 mg/l, 48 hours estimated
Fish	LC50	Fish	72.9438 mg/l, 96 hours estimated
Components		Species	Test Results
Cupric Sulfate, pentahydrate (CAS 7758-99-8)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.0058 - 0.0073 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.66 - 1.15 mg/l, 96 hours
Manganese Sulfate, monohydrate (CAS 10034-96-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia obtusa)	30.8 - 44.1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	36.9 mg/l, 96 hours 29.7 - 52.7 mg/l, 192 hours
Poly(ethylene oxide) (CAS 25322-68-3)			
<b>Aquatic</b>			
Fish	LC50	Atlantic salmon (Salmo salar)	> 1000 mg/l, 96 hours
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)			
<b>Aquatic</b>			
Fish	LC50	Western mosquitofish (Gambusia affinis)	80 mg/l, 96 hours
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	34.59 - 47.13 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	125 mg/l, 96 hours
Sulfuric Acid (CAS 7664-93-9)			
<b>Aquatic</b>			
Fish	LC50	Western mosquitofish (Gambusia affinis)	42 mg/l, 96 hours
Zinc Sulfate (CAS 7733-02-0)			
<b>Aquatic</b>			
Algae	LC50	Green algae (Chlorella vulgaris)	5 mg/l, 24 hours
Crustacea	EC50	Amphipod (Crangonyx pseudogracilis)	15.1 - 24.5 mg/l, 96 hours
		Rotifer (Philodina acuticornis)	0.5 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	10.62 - 11.3 mg/l, 5 days 0.168 - 0.25 mg/l, 96 hours
		Fish (Lepidocephalichthyes guntea)	76 - 118.8 mg/l, 24 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

<b>DOT</b>	
<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	Environmentally hazardous substances, liquid, n.o.s. (Cupric Sulfate, pentahydrate RQ = 1333 LBS), MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	8, 146, 335, IB3, T4, TP1, TP29
<b>Packaging exceptions</b>	155
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	241

Not DOT regulated in domestic (USA ground) transportation in package sizes less than 1333 lbs (126 gallons); 605 kg (477 liters). The DOT transportation information above is for shipments with package sizes equal to or exceeding this value.

DOT Shipping Notes: 40 CFR 172.504(f)(9) For Class 9, a CLASS 9 placard is not required for domestic (USA ground) transportation, however shipments with packaging exceeding the Reportable Quantity (RQ) or bulk packaging must be marked with the appropriate identification number on a CLASS 9 placard, an orange panel, or a white square-on-point display configuration as required. Since the Class 9 placard is not required (although it may be used) the hazardous material endorsement is also not required on a Commercial Drivers License.

#### IATA

<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s. (Cupric Sulfate, pentahydrate)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	9L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

#### IMDG

<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Cupric Sulfate, pentahydrate), MARINE POLLUTANT



**Transport hazard class(es)**

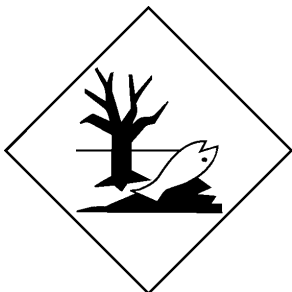
**Class** 9  
**Subsidiary risk** -  
**Packing group** III

**Environmental hazards**

**Marine pollutant** Yes

**EmS** F-A, S-F

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**DOT; IATA; IMDG****Marine pollutant****General information**

Not DOT regulated in domestic (USA ground) transportation in package sizes less than 1333 lbs (126 gallons); 605 kg (477 liters). The DOT transportation information above is for shipments with package sizes equal to or exceeding this value.

**15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

FERROUS SULFATE (CAS 7782-63-0)	Listed.
Manganese Sulfate, monohydrate (CAS 10034-96-5)	Listed.
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)	Listed.
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)	Listed.
Sulfuric Acid (CAS 7664-93-9)	Listed.
Zinc Sulfate (CAS 7733-02-0)	Listed.

**SARA 304 Emergency release notification**

Sulfuric Acid (CAS 7664-93-9) 1000 LBS

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**

Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Sulfuric Acid	7664-93-9	1000	1000 lbs		

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Manganese Sulfate, monohydrate	10034-96-5	5 - < 10
Zinc Sulfate	7733-02-0	3 - < 5

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Manganese Sulfate, monohydrate (CAS 10034-96-5)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Sulfuric Acid (CAS 7664-93-9)

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Sulfuric Acid (CAS 7664-93-9) 6552

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Sulfuric Acid (CAS 7664-93-9) 20 %WV

**DEA Exempt Chemical Mixtures Code Number**

Sulfuric Acid (CAS 7664-93-9) 6552

**US state regulations****US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)

Sulfuric Acid (CAS 7664-93-9)

**US. Massachusetts RTK - Substance List**

Cupric Sulfate, pentahydrate (CAS 7758-99-8)

FERROUS SULFATE (CAS 7782-63-0)

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)

Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)

Sulfuric Acid (CAS 7664-93-9)

Zinc Sulfate (CAS 7733-02-0)

**US. New Jersey Worker and Community Right-to-Know Act**

Cupric Sulfate, pentahydrate (CAS 7758-99-8)

Manganese Sulfate, monohydrate (CAS 10034-96-5)

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)

Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)

Sulfuric Acid (CAS 7664-93-9)

Zinc Sulfate (CAS 7733-02-0)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Cupric Sulfate, pentahydrate (CAS 7758-99-8)

FERROUS SULFATE (CAS 7782-63-0)

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)

Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)

Sulfuric Acid (CAS 7664-93-9)

Zinc Sulfate (CAS 7733-02-0)

**US. Rhode Island RTK**

FERROUS SULFATE (CAS 7782-63-0)

Manganese Sulfate, monohydrate (CAS 10034-96-5)

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)

Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)

Sulfuric Acid (CAS 7664-93-9)

Zinc Sulfate (CAS 7733-02-0)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Sulfuric Acid (CAS 7664-93-9)

Listed: March 14, 2003

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date** 08-23-2016

**Version #** 01

**Disclaimer** The information provided in this Safety Data Sheet is correct to the best of Manufacturer's knowledge, information and belief at the date of its publication; however, it is provided only as a guidance for safe handling, use, processing, storage, transportation, disposal and release of the Product. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made with respect to the Product or the information provided herein, or that the Product or information herein may be used without infringing the intellectual property rights of others. The information provided in this Safety Data Sheet relates only to the specific Product designated and may not be valid if the Product is used in combination with other materials or in any other process, unless specified herein. The user assumes all risk and liability for loss, injury, damage or expense due to any use, handling, storage or disposal of the Product, and Manufacturer recommends that the user conducts its own tests of the Product to determine suitability of the Product for user's particular use.