

**1. Identification**

<b>Product identifier</b>	<b>Manni-Plex for Small Grains</b>	
<b>Other means of identification</b>		
<b>Product code</b>	28125	
<b>Recommended use</b>	Agriculture / Horticulture - Micronutrient - 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 2A
	Reproductive toxicity	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>	Warning
<b>Hazard statement</b>	Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. 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. Wash thoroughly after handling. 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. If exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: 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.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Cupric Nitrate		3251-23-8	5 - < 10*
Boric acid (H3BO3) reaction products with ethanolamine		94095-04-2	3 - < 5*
Manganese Nitrate		10377-66-9	3 - < 5*
Zinc Nitrate		7779-88-6	3 - < 5*
Urea		57-13-6	1 - < 3*
2-Amino Ethanol (Ethanolamine)		141-43-5	< 0.1*
Formaldehyde		50-00-0	< 0.1*
Sodium hydroxide, (Na(OH))		1310-73-2	< 0.1*
Other components below reportable levels			70 - < 80

\*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. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. 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 if irritation develops and persists.
<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. Skin irritation. May cause redness and pain.
<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.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<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.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. 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.
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**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. 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 Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Components	Type	Value
Formaldehyde (CAS 50-00-0)	STEL	2 ppm
	TWA	0.75 ppm

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

Components	Type	Value
2-Amino Ethanol (Ethanolamine) (CAS 141-43-5)	PEL	6 mg/m3
Manganese Nitrate (CAS 10377-66-9)	Ceiling	3 ppm
		5 mg/m3
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)	PEL	2 mg/m3

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
2-Amino Ethanol (Ethanolamine) (CAS 141-43-5)	STEL	6 ppm	
	TWA	3 ppm	
Cupric Nitrate (CAS 3251-23-8)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Formaldehyde (CAS 50-00-0)	Ceiling	0.3 ppm	
Manganese Nitrate (CAS 10377-66-9)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)	Ceiling	2 mg/m3	

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

Components	Type	Value	Form
2-Amino Ethanol (Ethanolamine) (CAS 141-43-5)	STEL	15 mg/m3	

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

Components	Type	Value	Form
		6 ppm	
	TWA	8 mg/m3	
		3 ppm	
Cupric Nitrate (CAS 3251-23-8)	TWA	1 mg/m3	Dust and mist.
Formaldehyde (CAS 50-00-0)	Ceiling	0.1 ppm	
	TWA	0.016 ppm	
Manganese Nitrate (CAS 10377-66-9)	STEL	3 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)	Ceiling	2 mg/m3	

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

Components	Type	Value	Form
Urea (CAS 57-13-6)	TWA	10 mg/m3	Total particulate.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

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.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

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.

**9. Physical and chemical properties****Appearance**

Aqueous solution.

**Physical state**

Liquid.

**Form**

Liquid.

**Color**

Blue

**Odor**

None.

**Odor threshold**

Not available.

**pH**

3 - 5

**Melting point/freezing point**

32 °F (0 °C) estimated

**Initial boiling point and boiling range**

212 °F (100 °C) estimated

**Flash point**

Not available.

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not applicable.

**Upper/lower flammability or explosive limits****Flammability limit - lower (%)**

Not available.

**Flammability limit - upper (%)**

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>	1.16 - 1.22 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	100 %
<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>Density</b>	1.16 - 1.22 g/cm <sup>3</sup>
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	71.03 % estimated
<b>pH in aqueous solution</b>	4.7 - 6.7 (10% Solution)
<b>Pounds per gallon</b>	9.7 - 10.1 lb/gal
<b>Specific gravity</b>	1.16 - 1.22
<b>VOC</b>	1.81 % 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>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<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. Skin irritation. May cause redness and pain.

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
Manni-Plex for Small Grains		
<b><u>Acute</u></b>		
<b>Inhalation</b>		
LC50	Rat	4333 mg/l, 6 hours estimated
<b>Oral</b>		
LD50	Mouse	5424 mg/kg estimated
	Rat	8070 mg/kg estimated

Components	Species	Test Results
2-Amino Ethanol (Ethanolamine) (CAS 141-43-5)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	1025 mg/kg
<b>Inhalation</b>		
LC50	Rat	> 1.3 mg/l, 6 hours
<b>Oral</b>		
LD50	Guinea pig	620 mg/kg
	Mouse	700 mg/kg
	Rat	10.2 g/kg
Cupric Nitrate (CAS 3251-23-8)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	940 mg/kg
Formaldehyde (CAS 50-00-0)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	0.414 mg/l, 4 Hours 0.4 mg/l, 2 Hours
	Rat	0.82 mg/l, 0.5 Hours 0.48 mg/l, 4 Hours
<b>Oral</b>		
LD50	Guinea pig	260 mg/kg
	Mouse	42 mg/kg
	Rat	100 mg/kg
Urea (CAS 57-13-6)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	8471 mg/kg
	Sheep	28500 mg/kg
Zinc Nitrate (CAS 7779-88-6)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Mouse	241.3 mg/kg
	Rat	1400 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 irritation.
<b>Respiratory or skin sensitization</b>	
<b>ACGIH sensitization</b>	
Formaldehyde (CAS 50-00-0)	Dermal sensitization Respiratory sensitization
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<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.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Formaldehyde (CAS 50-00-0) 1 Carcinogenic to humans.

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

Formaldehyde (CAS 50-00-0) Cancer

**US. National Toxicology Program (NTP) Report on Carcinogens**

Formaldehyde (CAS 50-00-0) 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>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

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

Product	Species	Test Results
<b>Manni-Plex for Small Grains</b>		
<b>Aquatic</b>		
Crustacea	EC50 Daphnia	3.3724 mg/l, 48 hours estimated
Fish	LC50 Fish	10.3716 mg/l, 96 hours estimated
Components	Species	Test Results
<b>2-Amino Ethanol (Ethanalamine) (CAS 141-43-5)</b>		
<b>Aquatic</b>		
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	114 - 196 mg/l, 96 hours
<b>Cupric Nitrate (CAS 3251-23-8)</b>		
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Moina dubia)	0.037 - 0.044 mg/l, 48 hours
Fish	LC50 Winter flounder (Pleuronectes americanus)	0.057 - 0.1061 mg/l, 96 hours
<b>Formaldehyde (CAS 50-00-0)</b>		
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Daphnia pulex)	4.3 - 7.8 mg/l, 48 hours
Fish	LC50 Striped bass (Morone saxatilis)	10.302 - 16.743 mg/l, 96 hours
<b>Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)</b>		
<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
<b>Urea (CAS 57-13-6)</b>		
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Daphnia magna)	3910 mg/l, 48 hours
Fish	LC50 Carp (Leuciscus idus melanotus)	> 10000 mg/l, 48 hours
	Guppy (Poecilia reticulata)	16200 - 18300 mg/l, 96 hours
	Harlequinfish, red rasbora (Rasbora heteromorpha)	12000 mg/l, 96 hours
	Mozambique tilapia (Tilapia mossambica)	590 - 730 mg/l, 96 hours
<b>Zinc Nitrate (CAS 7779-88-6)</b>		
<b>Aquatic</b>		
Crustacea	LC50 Brown mussel (Perna indica)	1.2858 - 1.5402 mg/l, 96 hours

Components	Species	Test Results
Fish	LC50 Minnow ( <i>Phoxinus phoxinus</i> )	2.7 - 3.7 mg/l, 96 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**

**Partition coefficient n-octanol / water (log Kow)**

2-Amino Ethanol (Ethanalamine)	-1.31
Formaldehyde	0.35
Urea	-2.11

**Mobility in soil** No data available.

**Other adverse effects** 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

**Disposal instructions** 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.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste U List: Reference**

Formaldehyde (CAS 50-00-0) U122

**Waste from residues / unused products** 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).

**Contaminated packaging** 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

**DOT**

<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	Environmentally hazardous substances, liquid, n.o.s. (Cupric Nitrate RQ = 1172 LBS, Zinc Nitrate RQ = 23095 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

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant. Not DOT regulated in domestic (USA ground) transportation in package sizes less than 1,176 lbs (118 gallons); 533 kg (466 liters). The DOT transportation information below is for shipments with package sizes equal to or exceeding this value.

**IATA**

<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	Environmentally hazardous substances, liquid, n.o.s.
<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>	Yes



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

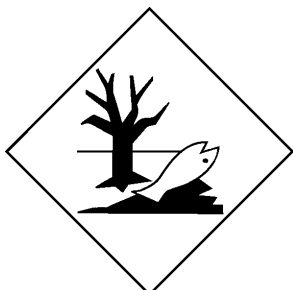
**IMDG**

**UN number** UN3082  
**UN proper shipping name** Environmentally hazardous substances, liquid, n.o.s., MARINE POLLUTANT  
**Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**Label(s)** 9  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** Not available.  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**DOT; IATA; IMDG**



**Marine pollutant**



**General information**

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant. Not DOT regulated in domestic (USA ground) transportation in package sizes less than 1,176 lbs (118 gallons); 533 kg (466 liters). The DOT transportation information below 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)**

Cupric Nitrate (CAS 3251-23-8)	Listed.
Formaldehyde (CAS 50-00-0)	Listed.
Manganese Nitrate (CAS 10377-66-9)	Listed.
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)	Listed.
Zinc Nitrate (CAS 7779-88-6)	Listed.

**SARA 304 Emergency release notification**

Formaldehyde (CAS 50-00-0)	100 LBS
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**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Formaldehyde (CAS 50-00-0)	Cancer
	Skin sensitization
	Respiratory sensitization
	Eye irritation
	Skin irritation

respiratory tract irritation  
Acute toxicity  
Flammability

## 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
Formaldehyde	50-00-0	100	500 lbs		

**SARA 311/312 Hazardous chemical** No

### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Cupric Nitrate	3251-23-8	5 - < 10
Manganese Nitrate	10377-66-9	3 - < 5
Zinc Nitrate	7779-88-6	3 - < 5

## Other federal regulations

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Formaldehyde (CAS 50-00-0)  
Manganese Nitrate (CAS 10377-66-9)

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

Formaldehyde (CAS 50-00-0)

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

## 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))

Formaldehyde (CAS 50-00-0)  
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)

### US. Massachusetts RTK - Substance List

2-Amino Ethanol (Ethanolamine) (CAS 141-43-5)  
Cupric Nitrate (CAS 3251-23-8)  
Formaldehyde (CAS 50-00-0)  
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)  
Zinc Nitrate (CAS 7779-88-6)

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

2-Amino Ethanol (Ethanolamine) (CAS 141-43-5)  
Cupric Nitrate (CAS 3251-23-8)  
Formaldehyde (CAS 50-00-0)  
Manganese Nitrate (CAS 10377-66-9)  
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)  
Zinc Nitrate (CAS 7779-88-6)

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

2-Amino Ethanol (Ethanolamine) (CAS 141-43-5)  
Cupric Nitrate (CAS 3251-23-8)  
Formaldehyde (CAS 50-00-0)  
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)  
Zinc Nitrate (CAS 7779-88-6)

### US. Rhode Island RTK

Cupric Nitrate (CAS 3251-23-8)  
Formaldehyde (CAS 50-00-0)  
Manganese Nitrate (CAS 10377-66-9)  
Sodium hydroxide, (Na(OH)) (CAS 1310-73-2)

Zinc Nitrate (CAS 7779-88-6)

**US. California Proposition 65**



**WARNING:** This product can expose you to chemicals including arsenic, cadmium, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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

Formaldehyde (CAS 50-00-0)

Listed: January 1, 1988

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
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** 03-13-2014

**Revision date** 05-07-2018

**Version #** 06

**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.

**Revision information**

Physical & Chemical Properties: Multiple Properties  
GHS: Classification