# SAFETY DATA SHEET

Issuing Date 15-Dec-2017

Revision Date 15-Dec-2017

**Revision Number** 0

NGHS / English



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# 1. IDENTIFICATION

**Product identifier** 

Product Name Better-Gro Orchid Plus Fertilizer

Other means of identification

Product Code(s) 1020895

Recommended use of the chemical and restrictions on use

Recommended Use Fertilizer

Restrictions on use No information available

Details of the supplier of the safety data sheet

**Supplier Identification** Sun Bulb Company, Inc.

Address P.O. Box 698

Arcadia Florida 34265

**United States** 

**Telephone** Phone:863-494-4022

Fax:863-494-7568

E-mail TTaylor@sunbulb.com

Emergency telephone number

**Company Emergency Phone** 

863-494-4022

Number

# 2. HAZARDS IDENTIFICATION

## Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2A
Oxidizing solids	Category 2



Appearance Blue green

Physical state Granular Solid

Odor No information available

### GHS Label elements, including precautionary statements

## **Danger**

### **Hazard statements**

Harmful if inhaled Causes serious eye irritation May intensify fire; oxidizer



### **Precautionary Statements - Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Keep away from heat
Keep/Store away from clothing/ combustible materials
Take any precaution to avoid mixing with combustibles
Wear protective gloves/eye protection/face protection

## **Precautionary Statements - Response**

## **Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing Call a POISON CENTER or doctor if you feel unwell

## Fire

In case of fire: Use CO2, dry chemical, or foam to extinguish

## **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### Other information

May be harmful if swallowed.

## Unknown acute toxicity

98.25 % of the mixture consists of ingredient(s) of unknown toxicity

5.1 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

98.25 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

98.25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

98.25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

96.65 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

## **Substance**



Not applicable.

### Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material	Date HMIRA filed and
			Information Review Act	date exemption granted
			registry number (HMIRA	(if applicable)
			registry #)	
Ammonium nitrate	6484-52-2	39.95	-	-
Sodium iron(III)	15708-41-5	1.6	-	-
ethylenetetraacetate				
Boric acid (H3BO3)	10043-35-3	0.13	-	-

# 4. FIRST AID MEASURES

First aid measures

**General advice** Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical

attention immediately. If symptoms persist, call a physician.

**Eye contact**Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water

before removing clothes. IF ON SKIN: Wash with plenty of soap and water. Wash

contaminated clothing before reuse.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Get medical 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. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or

clothing. Avoid breathing dust/fume/gas/mist/vapors/spray.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

**Note to physicians**Treat symptomatically.

# 5. FIRE-FIGHTING MEASURES

Flood fire area with water from a distance. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.

**Unsuitable extinguishing media** Dry chemical. Foam. CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the**Chemical
These substances will accelerate burning when involved in a fire. Some may decompose explosively when heated or involved in a fire. May ignite combustibles (wood paper, oil,



clothing, etc.). Runoff may create fire or explosion hazard.

Hazardous Combustion Products Carbon oxides.

**Explosion Data** 

**Sensitivity to Mechanical Impact** None. **Sensitivity to Static Discharge** Yes.

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Do not move cargo or vehicle if cargo has been exposed to heat. oxidizer. May ignite combustibles (wood paper, oil, clothing, etc.). Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn.

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Evacuate personnel

to safe areas. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See section 8 for more information. Stop leak if you can do it without risk. Use personal protective

equipment as required. Avoid generation of dust. Do not breathe dust.

Other Information Keep combustibles (wood, paper, oil, etc) away from spilled material. Do not get water

inside containers. Ventilate the area. Refer to protective measures listed in Sections 7 and

8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with DRY earth, DRY sand or other

non-combustible material followed with plastic sheet to minimize spreading or contact with

rain.

Methods for cleaning up With clean shovel place material into clean, dry container and cover loosely; move

containers from spill area. Flush area with flooding quantities of water. Prevent product from entering drains. Cover powder spill with plastic sheet or tarp to minimize spreading and

keep powder dry.

# 7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid contact with skin, eyes or clothing. Keep away

from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Use with local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid generation of dust.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly

labeled containers. Do not store near combustible materials. Store in accordance with the



particular national regulations. Store in accordance with local regulations. Keep out of the reach of children.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Control parameters

Exposure Limits

Chemical name		ACGIH TLV		OSHA PEL		NIOSH IDLH	
Sodium iron(III)		TWA: 1 mg/	m³ Fe	(vacated) TWA: 1 mg/m <sup>3</sup> Fe		TWA: 1 mg/m <sup>3</sup> Fe	
ethylenetetraacetate							
15708-41-5							
Boric acid (H3BO3)		TWA: 2 mg/m³ inhalable fraction			-		
10043-35-3		STEL: 6 mg/m <sup>3</sup>	inhalable				
		fraction	1				
Chemical name		Alberta	British C	olumbia	Ontario TWAE	V	Quebec
Sodium iron(III)	-	ΓWA: 1 mg/m³	TWA: 1	mg/m³	TWA: 1 mg/m	3	TWA: 1.0 mg/m <sup>3</sup>
ethylenetetraacetate			STEL: 2	2 mg/m³			
15708-41-5							
Boric acid (H3BO3)			TWA: 2	2 mg/m³	TWA: 2 mg/m	3	
10043-35-3			STEL: 6	6 mg/m <sup>3</sup>	STEL: 6 mg/m		

Other Exposure Guidelines See section 15 for national exposure control parameters.

Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

**Eye/face protection** Tight sealing safety goggles.

**Hand protection** Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Wear

fire/flame resistant/retardant clothing.

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or

smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Avoid breathing

dust/fume/gas/mist/vapors/spray.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical and Chemical Properties** 

Physical stateGranular; SolidAppearanceBlue green



Odor No information available
Color No information available

Odor Threshold Not applicable

Property Values Remarks Method

pH No data available

Melting / freezing pointNo data availableNone knownBoiling point / boiling rangeNo data availableNone known

Flash Point No data available

 Evaporation Rate
 No data available
 None known

 Flammability (solid, gas)
 No data available
 None known

 Flammability Limit in Air
 None known

Flammability Limit in Air
Upper flammability limit No data available

Lower flammability limit No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone known

Relative density 45.1

Water Solubility Soluble in water

Solubility(ies) No data available None known

Partition coefficient: n-octanol/water0

Autoignition temperatureNo data availableNone knownDecomposition temperatureNo data availableNone knownKinematic viscosityNo data availableNone knownDynamic viscosityNo data availableNone known

Other Information

**Explosive properties** No information available **Oxidizing properties** No information available **Softening Point** No information available **Molecular Weight** No information available **VOC Content (%)** No information available **Liquid Density** No information available **Bulk Density** No information available **Particle Size** No information available **Particle Size Distribution** No information available

# 10. STABILITY AND REACTIVITY

Reactivity oxidizer.

**Chemical stability** May cause fire or explosion; strong oxidizer.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

**Conditions to avoid** Heat, flames and sparks. Incompatible materials. Excessive heat.

**Incompatible materials** Organic material. Combustible material. Hydrocarbons.

Hazardous Decomposition Products Carbon oxides.

# 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 irritation of

respiratory tract. Harmful by inhalation. (based on components).

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation.

(based on components). May cause redness, itching, and pain.

**Skin contact** Specific test data for the substance or mixture is not available. May cause irritation.

Prolonged contact may cause redness and irritation.

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause

gastrointestinal irritation, nausea, vomiting and diarrhea.

### Information on toxicological effects

**Symptoms** May cause redness and tearing of the eyes. Coughing and/ or wheezing.

### Numerical measures of toxicity

### **Acute Toxicity**

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

ATEmix (oral) 3,144.00 mg/kg ATEmix (inhalation-dust/mist) 3.10 mg/L

**Unknown acute toxicity** 98.25 % of the mixture consists of ingredient(s) of unknown toxicity

5.1 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

98.25 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

98.25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

98.25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor) 96.65 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

_		· ·		
Chemical name Oral LD50		Oral LD50	Dermal LD50	Inhalation LC50
	Ammonium nitrate	= 2217 mg/kg (Rat)	-	> 88.8 mg/L (Rat) 4 h
	Sodium iron(III)	> 5000  mg/kg (Rat) = 5  g/kg (	> 5000 mg/kg (Rat)	> 2.05 g/m³(Rat)4 h
	ethylenetetraacetate	Rat )		
	Boric acid (H3BO3)	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.03 mg/L ( Rat ) 4 h

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

**Skin corrosion/irritation** May cause skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Irritating to eyes.

**Respiratory or skin sensitization** No information available.

Germ cell mutagenicity No information available.

**Carcinogenicity** No information available.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Ammonium nitrate	-	Group 2A	-	X
6484-52-2				

## Legend

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans



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## OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

**STOT - single exposure** No information available.

STOT - repeated exposure No information available.

**Aspiration hazard** No information available.

# 12. ECOLOGICAL INFORMATION

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to	Daphnia Magna (Water
			Microorganisms	Flea)
Ammonium nitrate	-	48h LC50: 65 - 85 mg/L	-	-
		(Cyprinus carpio)		
Boric acid (H3BO3)	-	72h LC50: = 1020 mg/L	-	48h EC50: 115 - 153
		(Carassius auratus)		mg/L

**Persistence and Degradability** 

No information available.

### **Bioaccumulation**

Chemical name	Log Pow
Ammonium nitrate	-3.1
Boric acid (H3BO3)	-0.757

MobilityNo information available.Other adverse effectsNo information available.

# 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Should not be released into the environment. 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 D001

California Waste Codes 141

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste
Ammonium nitrate	Ignitable
6484-52-2	Reactive
Boric acid (H3BO3)	Toxic
10043-35-3	



# 14. TRANSPORT INFORMATION

DOT

Proper Shipping Name CONSUMER COMMODITY

Hazard Class ORM-D

**Description** CONSUMER COMMODITY, ORM-D

Emergency Response Guide 140

Number

**TDG** 

**UN-No.** UN1477

Proper Shipping Name NITRATES, INORGANIC, N.O.S.

Hazard Class 5.1 Packing Group II

**Description** UN1477, NITRATES, INORGANIC, N.O.S., 5.1, II

MEX

**UN-No.** UN1477

Proper Shipping Name NITRATES, INORGANIC, N.O.S.

Hazard Class 5.1 Packing Group

**Description** UN1477, NITRATES, INORGANIC, N.O.S., 5.1, II

**ICAO** 

**UN-No.** UN1477

Proper Shipping Name NITRATES, INORGANIC, N.O.S.

Hazard Class 5.1 Packing Group II

**Description** UN1477, NITRATES, INORGANIC, N.O.S., 5.1, II

<u>IATA</u>

**UN-No.** UN1477

Proper Shipping Name NITRATES, INORGANIC, N.O.S.

Hazard Class 5.1 Packing Group II ERG Code 5L

**Description** UN1477, NITRATES, INORGANIC, N.O.S., 5.1, II

IMDG/IMO

**UN-No.** UN1477

Proper Shipping Name NITRATES, INORGANIC, N.O.S.

Hazard Class 5.1
Packing Group II
EmS-No. F-A, S-

Description UN1477, NITRATES, INORGANIC, N.O.S., 5.1, II

<u>RID</u>

**UN-No.** UN1477

Proper Shipping Name NITRATES, INORGANIC, N.O.S.

Hazard Class 5.1
Packing Group II
Classification code O2

**Description** UN1477, NITRATES, INORGANIC, N.O.S., 5.1, II

ADR/RID-Labels 5.1

**ADR** 

**UN-No.** UN1477

**Proper Shipping Name** NITRATES, INORGANIC, N.O.S.



Hazard Class 5.1
Packing Group II
Classification code O2
Tunnel restriction code (E)

Description UN1477, NITRATES, INORGANIC, N.O.S., 5.1, II, (E)

**ADN** 

**UN-No.** UN1477

Proper Shipping Name NITRATES, INORGANIC, N.O.S.

Hazard Class 5.1
Packing Group II
Classification code O2
Special Provisions 511

Description UN1477, NITRATES, INORGANIC, N.O.S., 5.1, II

Hazard Labels 5.1 Limited Quantity 1 KG

# 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

**International Regulations** 

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

**Export Notification requirements** Not applicable

**International Inventories** 

TSCA

DSL/NDSL

Contact supplier for inventory compliance status.

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

**KECL** - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

### **US Federal Regulations**

### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name		CAS No.	Weight-%	SARA 313 - Threshold Values %
	Ammonium nitrate - 6484-52-2	6484-52-2	39.95	1.0

### 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. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard 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, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

# **US State Regulations**

## **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **U.S. State Right-to-Know Regulations**

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Chemical name	New Jersey	Massachusett	Pennsylvania	Rhode Island	Illinois
		S			
Ammonium nitrate 6484-52-2	Х	Х	Х	Х	Х
Boric acid (H3BO3)	Х				Х
10043-35-3					

## **16. OTHER INFORMATION**

NFPA Health hazards 2 Flammability 1 Instability 1 Physical and Chemical Properties OX

HMIS Health hazards 2 Flammability 1 Physical hazards 1 Personal Protection X

Prepared By Product Stewardship

23 British American Blvd. Latham, NY 12110 1-800-572-6501

**Issuing Date** 15-Dec-2017

Revision Date 15-Dec-2017

Revision Note No information available

### **Disclaimer**

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** 



# SAFETY DATA SHEET

Issuing Date No data available

Revision Date 14-Dec-2017

**Revision Number** 0

NGHS / English



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# 1. IDENTIFICATION

**Product identifier** 

Product Name Better-Gro Orchid Better Bloom

Other means of identification

Product Code(s) 1020896

Recommended use of the chemical and restrictions on use

Recommended Use Plant food

Restrictions on use No information available

Details of the supplier of the safety data sheet

**Supplier Identification** Sun Bulb Company, Inc.

Address P.O. Box 698

Arcadia Florida 34265

**United States** 

**Telephone** Phone:863-494-4022

Fax:863-494-7568

E-mail TTaylor@sunbulb.com

Emergency telephone number

**Company Emergency Phone** 

863-494-4022

Number

# 2. HAZARDS IDENTIFICATION

Classification

Not classified.

The product contains no substances which at their given concentration, are considered to be hazardous to health



Appearance Blue green Physical state Granular Solid Odor Slight

GHS Label elements, including precautionary statements

### **Hazard statements**

Not classified.

### Other information

May be harmful if swallowed.

**Unknown acute toxicity** 97.973 % of the mixture consists of ingredient(s) of unknown toxicity

6 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

97.973 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

97.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

97.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

97.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Substance

Not applicable.

### Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)	
Citric acid	77-92-9	1.923	-	-	
Boric acid (H3BO3)	10043-35-3	0.125	-	-	

# 4. FIRST AID MEASURES

## First aid measures

**Inhalation** Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

**Skin contact** Wash skin with soap and water.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

**Symptoms** No information available.



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Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

5. FIRE-FIGHTING MEASURES

surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

No information available.

Hazardous Combustion Products Carbon oxides.

**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 eyes.

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.

Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

**Exposure Limits** 



Chemical name	ACGIH TLV		OSHA PEL			NIOSH IDLH	
Boric acid (H3BO3) 10043-35-3	TWA: 2 mg/m³ inha STEL: 6 mg/m³			-			
	fraction						
Chemical name	Alberta	British C	Columbia	Ontario TWAE	V	Quebec	
Boric acid (H3BO3)		TWA: 2	2 mg/m³	TWA: 2 mg/m	3		
10043-35-3		STEL: 6	6 mg/m <sup>3</sup>	STEL: 6 mg/m	1 <sup>3</sup>		

## Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** No special protective equipment required.

**Skin and body protection**No special protective equipment required.

exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical and Chemical Properties** 

Physical state Granular; Solid Appearance Blue green Odor Slight

Color No information available Odor Threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks Method</u>

**pH** No data available

Melting / freezing pointNo data availableNone knownBoiling point / boiling rangeNo data availableNone known

Flash Point No data available
Evaporation Rate No data available None known
Flammability (solid, gas) No data available None known

Flammability (solid, gas) No data available None known
Flammability Limit in Air None known

Upper flammability limit No data available

Lower flammability limitNo data availableVapor pressureNo data availableNone knownVapor densityNo data availableNone knownRelative densityNo data availableNone known

Water Solubility Soluble in water

Solubility(ies) No data available None known

Partition coefficient: n-octanol/water0

Autoignition temperatureNo data availableNone knownDecomposition temperatureNo data availableNone knownKinematic viscosityNo data availableNone knownDynamic viscosityNo data availableNone known

Other Information

Explosive properties No information available Oxidizing properties No information available



Softening Point
Molecular Weight
VOC Content (%)
Liquid Density
Bulk Density
Particle Size
Particle Size
No information available

# 10. STABILITY AND REACTIVITY

**Reactivity** No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Conditions to avoid**None known based on information supplied.

**Incompatible materials**None known based on information supplied.

Hazardous Decomposition Products Carbon oxides.

# 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

### **Product Information**

**Inhalation** Specific test data for the substance or mixture is not available.

**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.

**Ingestion** Specific test data for the substance or mixture is not available.

## Information on toxicological effects

**Symptoms** No information available.

Numerical measures of toxicity

### **Acute Toxicity**

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

**ATEmix (oral)** 4,660.00 mg/kg

Unknown acute toxicity 97.973 % of the mixture consists of ingredient(s) of unknown toxicity

6 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

97.973 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

97.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas) 97.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor) 97.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

### **Component Information**



Chemical name	Oral LD50	Dermal LD50	Inhalation LC50	
Citric acid	= 3000  mg/kg (Rat) = 3  g/kg (	-	-	
	Rat )			
Boric acid (H3BO3)	= 2660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.03 mg/L ( Rat ) 4 h	

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

**Skin corrosion/irritation** No information available.

Serious eye damage/eye irritation No information available.

**Respiratory or skin sensitization** No information available.

Germ cell mutagenicity No information available.

**Carcinogenicity** No information available.

Reproductive toxicity No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure**No information available.

**Aspiration hazard** No information available.

# 12. ECOLOGICAL INFORMATION

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

Chemical name	Toxicity to Algae	Toxicity to Fish Toxicity to		Daphnia Magna (Water	
			Microorganisms	Flea)	
Citric acid	-	96h LC50: = 1516 mg/L	-	72h EC50: = 120 mg/L	
		(Lepomis macrochirus)		-	
Boric acid (H3BO3)	-	72h LC50: = 1020 mg/L	-	48h EC50: 115 - 153	
		(Carassius auratus)		mg/L	

Persistence and Degradability

No information available.

### **Bioaccumulation**

Chemical name	Log Pow		
Citric acid	-1.72		
Boric acid (H3BO3)	-0.757		

Mobility

No information available.

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.



### California Waste Codes

This product contains one or more substances that are listed with the State of California as a hazardous waste.

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Chemical name	California Hazardous Waste		
Boric acid (H3BO3)	Toxic		
10043-35-3			

# 14. TRANSPORT INFORMATION

DOT NOT REGULATED

Proper Shipping Name NON REGULATED

Hazard Class N/A

**TDG** Not regulated

MEX Not regulated

ICAO Not regulated

<u>IATA</u> Not regulated

Proper Shipping Name NON REGULATED

Hazard Class N/A

IMDG/IMO Not regulated

Hazard Class N/A

RID Not regulated

ADR Not regulated

ADN Not regulated

# 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

## **International Regulations**

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

**Export Notification requirements** Not applicable

### **International Inventories**

TSCA Contact supplier for inventory compliance status.

DSL/NDSL Contact supplier for inventory compliance status.

EINECS/ELINCS Contact supplier for inventory compliance status.

ENCS Contact supplier for inventory compliance status.

KECL Contact supplier for inventory compliance status.

PICCS Contact supplier for inventory compliance status.

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

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

## **US Federal Regulations**

### **SARA 313**

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. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard 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	RQ
Citric acid 77-92-9			RQ Section number 180.950

## **US State Regulations**

### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

## **U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusett	Pennsylvania	Rhode Island	Illinois
		S			
Boric acid (H3BO3)	Х				Х
10043-35-3					

# 16. OTHER INFORMATION

NFPA Health hazards 1 Flammability 0 Instability 0 Physical and Chemical

Properties 
HMIS Health hazards 1 Flammability 0 Physical hazards 0 Personal Protection X

Prepared By Product Stewardship

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Revision Date 14-Dec-2017

Revision Note No information available

### **Disclaimer**

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** 



