

SAFETY DATA SHEET

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Palmgain

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Fertilizer

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Bougainvillea Growers Intl

Supplier Address 7401 Stringfellow Road
Saint James City
Florida
33956
US

Supplier Phone Number Phone:954-415-2887
Fax:561-424-8005
Contact Phone561-374-9216

Supplier Email bgi-accounting@bgi-usa.com

Emergency telephone number

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral


Category 4



Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger		
Hazard Statements			
Harmful if swallowed			
Causes serious eye damage			
May cause damage to organs through prolonged or repeated exposure			
			
Appearance	Tan and white with black particles	Physical state	Granular Solid
		Odor	Slight sulfur

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Get medical advice/attention if you feel unwell

Eyes

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 or doctor/physician

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

56.4% of the mixture consists of ingredient(s) of unknown toxicity

Other information

Causes mild skin irritation
Harmful to aquatic life with long lasting effects

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Limestone	1317-65-3	10 - 30	*
Ammonium sulfate	7783-20-2	10 - 30	*
Ferrous sulfate heptahydrate	7782-63-0	3 - 7	*
Superphosphates, concd.	65996-95-4	1 - 5	*
Manganese(II) sulfate	7785-87-7	1 - 5	*
Zinc sulfate	7446-19-7	1 - 5	*
Copper (II) sulfate pentahydrate (1:1:5)	7758-99-8	0.1 - 1	*

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

4. FIRST AID MEASURES

First aid measures**General Advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

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. Seek immediate medical attention/advice.

Skin contact

Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur.

Ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning sensation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the 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 No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

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

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes. Do not ingest. If swallowed then seek immediate medical assistance.

Conditions for safe storage, including any incompatibilities

Storage Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

Incompatible Products Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Limestone 1317-65-3	-	TWA: 15 mg/m ³ TWA: 5 mg/m ³ (vacated) TWA: 15 mg/m ³ (vacated) TWA: 5 mg/m ³	TWA: 5 mg/m ³ respirable dust TWA: 10 mg/m ³ total dust
Ferrous sulfate heptahydrate 7782-63-0	TWA: 1 mg/m ³ Fe	(vacated) TWA: 1 mg/m ³ Fe	TWA: 1 mg/m ³ Fe
Manganese(II) sulfate 7785-87-7	TWA: 0.02 mg/m ³ Mn TWA: 0.1 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn
Copper (II) sulfate pentahydrate (1:1:5) 7758-99-8	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Granular, Solid	Odor	Slight sulfur
Appearance	Tan and white with black particles	Odor Threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	No data available	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	No data available	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Specific Gravity	No data available	None known	
Water Solubility	Soluble in water	None known	
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	No data available	None known	
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity	No data available	None known	
Explosive properties	No data available		
Oxidizing properties	No data available		

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage 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

Strong oxidizing agents. Strong acids. Strong bases.

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.
Eye contact	Specific test data for the substance or mixture is not available. Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.
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 irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium sulfate 7783-20-2	= 2000 mg/kg (Rat)	-	-
Ferrous sulfate heptahydrate 7782-63-0	= 237 mg/kg (Rat)	-	-
Manganese(II) sulfate 7785-87-7	= 2150 mg/kg (Rat)	-	-
Zinc sulfate 7446-19-7	= 500 mg/kg (Rat)	-	-
Copper (II) sulfate pentahydrate (1:1:5) 7758-99-8	= 300 mg/kg (Rat)	= 1000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms Erythema (skin redness). May cause blindness. Burning.

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

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).

Chronic Toxicity Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects Eyes. Blood. Central Nervous System (CNS). Gastrointestinal tract (GI). Kidney. Liver. Respiratory system. Skin.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

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

ATEmix (oral)

1,700.00 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ammonium sulfate 7783-20-2		96h LC50: = 250 mg/L (Brachydanio rerio) 96h LC50: = 480 mg/L (Brachydanio rerio) 96h LC50: = 18 mg/L (Cyprinus carpio) 96h LC50: = 420 mg/L (Brachydanio rerio) 96h LC50: = 32.2 - 41.9 mg/L (Oncorhynchus mykiss) 96h LC50: = 5.2 - 8.2 mg/L (Oncorhynchus mykiss) 96h LC50: > 100 mg/L (Pimephales promelas) 96h LC50: = 123 - 128 mg/L (Poecilia reticulata) 96h LC50: = 126 mg/L (Poecilia reticulata) 96h LC50: = 460 - 1000 mg/L (Leuciscus idus)		48h LC50: = 14 mg/L 24h EC50: = 423 mg/L
Copper (II) sulfate pentahydrate (1:1:5) 7758-99-8		96h LC50: = 0.66 - 1.15 mg/L (Lepomis macrochirus) 96h LC50: = 0.1478 - 0.165 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.09 - 0.19 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.96 - 1.8 mg/L (Lepomis macrochirus) 96h LC50: = 0.6752 mg/L (Pimephales promelas)	EC50 < 0.25 mg/L 30 min EC50 = 0.25 mg/L 15 min EC50 = 1.3 mg/L 5 min	48h EC50: = 0.147 - 0.227 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical Name	Log Pow
Ammonium sulfate 7783-20-2	-5.1

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

California Hazardous 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
Zinc sulfate 7446-19-7	Toxic
Copper (II) sulfate pentahydrate (1:1:5) 7758-99-8	Toxic

14. TRANSPORT INFORMATION

DOT
 Proper Shipping Name NOT REGULATED
 Hazard Class NON REGULATED
 N/A

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA
 Proper Shipping Name NOT REGULATED
 Hazard Class N/A

IMDG/IMO
 Hazard Class Not regulated
 N/A
 Marine Pollutant Product is a marine pollutant according to the criteria set by IMDG/IMO

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories



TSCA Complies
 DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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 sulfate - 7783-20-2	7783-20-2	10 - 30	1.0
Manganese(II) sulfate - 7785-87-7	7785-87-7	1 - 5	1.0
Zinc sulfate - 7446-19-7	7446-19-7	1 - 5	1.0
Copper (II) sulfate pentahydrate (1:1:5) - 7758-99-8	7758-99-8	0.1 - 1	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ferrous sulfate heptahydrate 7782-63-0	1000 lb			X
Zinc sulfate 7446-19-7	1000 lb	X		X
Copper (II) sulfate pentahydrate (1:1:5) 7758-99-8	10 lb	X		X

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
Ferrous sulfate heptahydrate 7782-63-0	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Zinc sulfate 7446-19-7	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Copper (II) sulfate pentahydrate (1:1:5) 7758-99-8	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations



Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Sulfur 7704-34-9	X	X	X		
Potassium 7440-09-7	X	X	X		
Nitrogen 7727-37-9	X	X	X		-
Magnesium 7439-95-4	X	X	X		
Manganese 7439-96-5	X	X	X	X	X
Zinc 7440-66-6	X	X	X	X	

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Limestone 1317-65-3 (10 - 30)		Mexico: TWA= 10 mg/m ³ Mexico: STEL= 20 mg/m ³
Ferrous sulfate heptahydrate 7782-63-0 (3 - 7)		Mexico: TWA 1 mg/m ³ Mexico: STEL 2 mg/m ³
Manganese(II) sulfate 7785-87-7 (1 - 5)		Mexico: TWA 0.2 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class

D2B - Toxic materials



16. OTHER INFORMATION

NFPA	Health Hazards 3	Flammability 0	Instability 0	Physical and Chemical Hazards
HMIS	Health Hazards 3 *	Flammability 0	Physical Hazard 0	W Personal Protection X

Chronic Hazard Star Legend * = Chronic Health Hazard

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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

