



**1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION**

PRODUCT NAME: Knudson C Orchid Medium, Morel Modification  
 PRODUCT NUMBER: K400  
 COMPANY INFO: PhytoTech Labs Inc.  
 14610 W 106<sup>th</sup> St. Lenexa, KS 66215  
 Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442  
 www.phytotechlab.com

EMERGENCY PHONE NUMBER 1-800-535-5053 - US Only  
 (INFOTRAC):: 1-352-323-3500 - International

RECOMMENDED USE: For Research Use Only

RESTRICTIONS ON USE: Products sold by PhytoTech Labs Inc. are intended for research and laboratory use only. Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, in vitro diagnostics, or as household chemicals.

**2. HAZARDS IDENTIFICATION**

**Classification of the substance or mixture:**

This is not a hazardous substance or mixture

**GHS Label elements, including hazard and precautionary statements:**

This is not a hazardous substance or mixture

**Hazards not otherwise classified (HNOC) or not covered by GHS:** - none

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

This product is a mixture that contains, but is not limited to, the following components that may cause harm to the user or environment or may be suspected to do so:

Ingredient	CAS Number	Percent	Hazardous
Sucrose	57-50-1	90%	No exposure limits established by OSHA or ACGIH
Ammonium Nitrate	6484-52-2	2.27 %	No exposure limits established by OSHA or ACGIH
Calcium Nitrate, Tetrahydrate	13477-34-4	1.58 %	No exposure limits established by OSHA or ACGIH
Manganese Sulfate, Monohydrate	10034-96-5	0.026 %	OSHA PEL: 5 mg (Mn)/m <sup>3</sup>

**4. FIRST AID MEASURES**

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Entry	Symptoms	First Aid Procedures
Ingestion	May cause irritation if swallowed	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. <b>Get medical attention.</b>
Inhalation	May cause irritation to respiratory tract	Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. <b>Get medical attention.</b>
Eye Contact	Direct contact may cause irritation. May cause redness, tearing, or blurred vision.	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. <b>Get medical attention if irritation persists.</b>
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. <b>Get medical attention if irritation persists.</b>

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

## 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.
Special Protective Equipment and Precaution for Firefighters:	In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.
Hazardous Combustion Products:	No data available

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Method of Containment and Cleanup:	Wear suitable protective clothing. Avoid dust formation. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water. Do not let products enter drains.

## 7. HANDLING AND STORAGE

Precaution for Safe Handling:	Avoid contact with skin and eyes. Avoid dust formation and aerosols. Avoid incompatible substances. Keep away from combustible materials. Wash thoroughly after use.
Conditions for Safe Storage:	Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Protect from moisture.
Incompatibilities:	No data available
Recommended Storage Temperature:	2-8°C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA's Permissible Exposure Limits (PELs):	Manganese Sulfate, Monohydrate : 5 mg (Mn)/m <sup>3</sup> Sucrose: 15 mg/m <sup>3</sup>
ACGIH Threshold Limit Values (TLVs):	Manganese Sulfate, Monohydrate: 0.2 mg (Mn)/m <sup>3</sup> Sucrose: 10 mg/m <sup>3</sup>
Engineering Controls:	Handle in accordance to general industrial hygiene and safety practice.
Personal Protective Equipment (PPE):	
Eye/Face Protection:	Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.
Skin Protection:	Protective gloves
Body Protection:	Lab coat
Respiratory Protection:	Respiratory protection is not required. Use N95 (US) or type P1 (EN 143) dust mask where dust level is nuisance. A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to off-white powder
pH (22.00 g/L):	4.0 – 5.0

Solubility:	Soluble in Water	
Melting Range:	No data available	
Vapor Density:	No data available	
Vapor Pressure:	No data available	
Specific Gravity:	No data available	
Odor:	Odorless	
Odor Threshold:	No data available	
Viscosity:	No data available	
Relative Density:	No data available	
Evaporation Rate:	No data available	
Initial Boiling Point and Boiling Range:	No data available	
Flammability (solid, gas):	No data available	
Partition coefficient: n-octanol/water):	No data available	
Auto-ignition Temperature:	No data available	
Decomposition Temperature:	No data available	
Flash Point (Closed Cup):	No data available	
Flammable Limits:	Upper (%) – No data available	Lower (%) – No data available

## 10. STABILITY AND REACTIVITY

Reactivity:	No data available	
Chemical Stability:	Stable under normal conditions of use	
Possibility of Hazard Reactions:	No data available.	
Conditions to Avoid:	No data available.	
Incompatibles Materials:	Strong oxidizing agents	
Hazardous Decomposition Products:	Carbon oxides, nitrogen oxides (NO <sub>x</sub> ), Sulphur oxides, Oxides of phosphorus, Potassium oxides, Calcium oxide	

## 11. TOXICOLOGICAL INFORMATION

Toxicity:	LD <sub>50</sub> (Oral-Rat)(mg/Kg):	No data available
	LD <sub>50</sub> (IP-Mouse)(mg/Kg):	No data available
	LD <sub>50</sub> (Dermal-Rabbit)(mg/Kg):	No data available
Carcinogenicity:	NTP:	No
	IARC:	No
	OSHA Reg:	No
Reproductive Toxicity:	No data available	
Specific Target Organ Toxicity:	Single Exposure:	No data available
	Repeated Exposure:	No data available
Target Organs:	No data available	
Routes of Entry:	Inhalation, Ingestion, skin and eye contact	
NIOSH/RTECS NO:	Not listed	

***The toxicological properties of this product have not been thoroughly investigated***

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available  
Persistence and Degradability: No data available  
Bioaccumulative Potential: No data available  
Mobility in Soil: No data available  
Other Adverse Effects: No data available

## 13. DISPOSAL CONSIDERATION

Disposal Procedure: Dispose in accordance with all applicable federal, state, and local environmental regulations.

## 14. TRANSPORT INFORMATION

Domestic (D.O.T.): Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

### International:

IMDG: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

IATA: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

## 15. REGULATORY INFORMATION

TSCA: No

### SARA TITLE III:

Section 302 (EHS) Ingredients: No  
Section 313 Ingredients: Yes  
Ammonium Nitrate CAS No. 6484-52-2

Section 304 (EHS/CERCLA) Ingredients: No

Section 311/312 Hazard: Acute Health Hazard, Chronic Health Hazard, Reactivity Hazard

**California Proposition 65 List:** None of the components in this product are known to cause cancer or reproductive toxicity

### Massachusetts Right To Know Components:

Ammonium Nitrate CAS No. 6484-52-2  
Ferrous Sulfate 7782-63-0  
Sucrose 57-50-1

### New Jersey Right to Know Components:

CAS No.

Ammonium Nitrate 6484-52-2  
 Ferrous Sulfate 7782-63-0  
 Zinc Sulfate 7446-20-0

**Pennsylvania Right to Know Components:**

CAS No.  
 Ammonium Nitrate 6484-52-2  
 Manganese Sulfate 10034-96-5  
 Ferrous Sulfate 7782-63-0  
 Sucrose 57-50-1

**16. OTHER INFORMATION**

<b>HMIS Rating:</b>	<b>Health</b>	<b>Flammability</b>	<b>Physical Hazard</b>	<b>Personal Protection</b>
	2	*	0	3
<b>NFPA Rating:</b>	<b>Health</b>	<b>Fire Hazard</b>	<b>Instability</b>	<b>Special Hazard</b>
	2	0	0	

**PhytoTech Labs Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. The above information is intended to be used only as a guide to the appropriate precautionary handling of this material by a properly trained person. PhytoTech Labs Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.**

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