

SAFETY DATA SHEET



SDS No.:
Date Created: April 28, 2016
Supercedes: NA

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: ASCEND™ PA KIT
General Use: Vesicular Arbuscular Mycorrhiza (VAM) soil and root inoculant
Product Description: Two part system - Part A is a liquid with a consortia of natural beneficial organisms. Part B is a dry powder inoculum containing propagules of VAM. Part A and B are designed to be mixed together immediately before use.

MANUFACTURER
 BioScientific, Inc.
 4405 S. Litchfield Road
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EMERGENCY TELEPHONE NUMBER:
 (800)-424-9300 CHEMTREC USA & CANADA
 +1 (703) 527-3887 Int'l & Maritime

2. HAZARD IDENTIFICATION

Components having exposure limits established by recognized authorities

Component	EXPOSURE LIMITS 8 hrs TWA (ppm)			
	OSHA PEL	ACGIH TLV	NIOSH REL	AIHA WEEL
Kaolin*	15 mg/m ³ total 5 mg/m ³ respir.	2 mg/m ³ - respir.	10 mg/m ³ total 5 mg/m ³ respir.	
Peat Moss*	15 mg/m ³ total 5 mg/m ³ respir.	10 mg/m ³ total 5 mg/m ³ respir.		
Kelp*	15 mg/m ³ total 5 mg/m ³ respir.	10 mg/m ³ total 5 mg/m ³ respir.		
Diatomaceous Earth*	15 mg/m ³ total 5 mg/m ³ respir.	10 mg/m ³ total 5 mg/m ³ respir.		

Part A and Part B are designed to be mixed together for use and will be a liquid for application. SDS considers both Part A and Part B individually and the ready to use mixture.

EMERGENCY OVERVIEW

GHS CLASSIFICATION OF SUBSTANCE

Flammable Liquid/Flammable Solid	Not Applicable
Aspiration Toxicity	Not Applicable
Skin Irritation	No classification Under GHS
Eye Irritation	No classification Under GHS
Carcinogenicity	No classification Under GHS
Specific Organ Toxicity Repeated Exposure	No classification Under GHS
Specific Organ Toxicity Single Exposure	No Classification Under GHS
Reproductive Toxicity	No Classification Under GHS
Acute Toxicity	No Classification Under GHS
Germ Cell mutagenicity	No Classification Under GHS
Hazardous to the aquatic env.	No classification Under GHS

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GHS LABEL ELEMENTS

No pictogram

No Signal Word

Hazard Statements

H320 - May cause eye irritation if splashed into the eyes

Precautionary Statements

General:

P101 - If medical advice is needed, have product container or label at hand.

Prevention:

P262 - Do not get in eyes, on skin, or on clothing.

Response:

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P338+351 - EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so.

P337+P313 - If eye irritation persists: Get medical advice/attention.

Storage/Disposal:

P402+P404 - Store in a dry place. Store in a closed container at ambient temperature.

UN GHS

According to the Globally Harmonized Standard for Classification and Labeling (GHS), this product is considered non-hazardous. Eye contact is a concern because of potential to irritate eyes .

3. COMPOSITION/INFORMATION ON INGREDIENTS

Combined Parts A and B per instructions for combination.

<u>Component</u>	<u>wt%</u>	<u>CAS Registry #</u>
Mycorrhizae	<0.01%	NA
Kelp	<0.1%	NA
Peat Moss	<0.1%	NA
Kaolin clay	<0.02%	1332-58-7
Diatomaceous Earth	<0.001%	68855-54-9
Water	balance	

4. FIRST AID MEASURES

INHALATION:

Part A and mixed material is not sufficiently volatile to create an inhalation hazard unless it is aspirated as a mist in some manner. Part B is a fine dry powder and can present an inhalation hazard if dispersed in the air.

If inhalation exposure is suspected, remove person to fresh air and seek medical attention if the person shows any signs of distress and/or allergic response.

EYE CONTACT:

Remove contact lens (if present). Rinse eyes immediately with plenty of clean water for at least 15 minutes. If necessary, gently hold the eyelid open during the flush. If eye irritation persists, seek medical attention.

SKIN CONTACT:

Immediately wash skin with soap and plenty of water. Consult a physician if redness or irritation occurs.

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INGESTION:

Ingestion of small quantities is not expected to be of concern unless the person has some kind of pre-existing allergies. If the person experiences distress, immediately seek medical attention. Microbe concentrations are not expected to cause any ingestion distress but when seeking medical attention provide the SDS. Part B is in dry form and contains a significant amount of clay, kelp, and peat moss that could act to block the digestive tract if a substantial quantity is consumed.

5. FIRE FIGHTING MEASURES

Flashpoint and Method: Unknown

Flammable Limits: Unknown

Autoignition Temperature: Unknown

GENERAL HAZARD:

Part A is water based and not expected to be a significant fire hazard. Part B is an organic solid that is combustible.

FIRE FIGHTING INSTRUCTIONS:

Water fog or fine spray; dry chemical fire extinguishers; carbon dioxide fire extinguishers; foam; alcohol resistant foams (ATC type).

FIRE FIGHTING EQUIPMENT:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. For small outdoor fires, which may be easily extinguished with a portable fire extinguisher, use of protective equipment is generally unnecessary.

FURTHER INFORMATION:

During a fire, smoke may contain the original material in addition to combustion products which might be more irritating.

HAZARDOUS COMBUSTION PRODUCTS:

Carbon dioxide, carbon monoxide, sulfur oxides, aldehydes and miscellaneous organic gases.

6. ACCIDENTAL RELEASE MEASURES

LAND SPILL RESPONSE:

Part A will penetrate into the soil and act as a beneficial soil enhancement. Part B is dry and can be shoveled or scooped up. The final mix is a liquid and will penetrate into the soil acting as a beneficial soil enhancement. Small spills will dissipate on their own. Larger spills can be diluted through mixing impacted soils with other soils to utilize the value of the beneficial organisms.

WATER SPILL:

Part A and mixture are water based and will dissipate into the water system. Ingredients are not expected to be toxic to aquatic organisms but may enhance growth of aquatic plant material. Part B is an insoluble solid. Small spills will dissipate and larger spills could be physically captured from a water body if the material does not dissipate.

RECOMMENDED DISPOSAL:

The material is not hazardous according to U.S. EPA CFR 40. Dispose of in accordance with local and state regulatory agency requirements.

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7. HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient

STORAGE PRESSURE: Atmospheric

GENERAL:

Store Part A and Part B in a cool dry place. The two parts are designed to be mixed in the ratios identified in product literature. The combined product has no shelf life and is designed to be used soon after mixing is performed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

Component	EXPOSURE LIMITS 8 hrs TWA (ppm)			
	OSHA PEL	ACGIH TLV	NIOSH REL	AIHA WEEL
Kaolin*	15 mg/m ³ total		10 mg/m ³ total	
	5 mg/m ³ respir.	2 mg/m ³ - respir.	5 mg/m ³ respir.	
Peat Moss*	15 mg/m ³ total	10 mg/m ³ total		
	5 mg/m ³ respir.	5 mg/m ³ respir.		
Kelp*	15 mg/m ³ total	10 mg/m ³ total		
	5 mg/m ³ respir.	5 mg/m ³ respir.		
Diatomaceous Earth*	15 mg/m ³ total	10 mg/m ³ total		
	5 mg/m ³ respir.	5 mg/m ³ respir.		

*-applies only to handling Part B in dry form. Peat Moss, kelp, and Diatomaceous earth have no established limits. These are the limits for nuisance dust.

ENGINEERING CONTROLS:

None required. An eye wash is recommended if routinely using large volumes of the product.

PERSONAL PROTECTION:

None required. Impermeable gloves are recommended when handling Part A, B, or the mixture.

9. PHYSICAL AND CHEMICAL PROPERTIES

Part A Liquid

Vapor Pressure: Unknown
Specific Gravity: 1.01 g/ml
Solubility in Water: disperses in water

Vapor Density: similar to water
Evaporation Rate: similar to water
Freezing Point: 32 F
Odor: slight
Appearance: Light Amber
Physical State: Liquid
Flammable Range: NA

pH: neutral
Boiling Point: similar to water

Kinematic Viscosity: Unknown
Flash Point: NA

Part A Solid

Vapor Pressure: Unknown
Specific Gravity: 0.55 gm/cc
Solubility in Water: insoluble

Vapor Density: NA
Evaporation Rate: NA
Freezing Point: NA
Odor: slight
Appearance: greyish
Physical State: powder
Flammable Range: Unknown

pH:
Boiling Point: NA
Kinematic Viscosity: NA
Flash Point: Unknown

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Combined Final Mixture - mixed according to instructions

Vapor Pressure:	Unknown	Vapor Density:	similar to water
Specific Gravity:	1.01 g/ml	Evaporation Rate:	similar to water
Solubility in Water:	disperses in water	Freezing Point:	32 F
		Odor:	slight
pH:	neutral	Appearance:	Light Amber
Boiling Point:	similar to water	Physical State:	Liquid
Kinematic Viscosity:	Unknown	Flammable Range:	NA
Flash Point:	NA		

10. STABILITY AND REACTIVITY

GENERAL:

Both Parts A and B are stable but have a manufacturer determined expiration date for potency. The combined parts are meant to be used shortly after mixed and have no shelf life. Unused product loses potency but is not reactive or unstable with respect to safety concerns.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Part A - avoid strongly acidic conditions and high concentrations of free ammonia. Do not mix with aqua ammonia (ammonium hydroxide) sulfuric acid, urea sulfuric acid, phosphoric acid, soil fumigants or soil fungicides.

Part B - avoid excessive humidity or moisture. Material is stable but will react with strong oxidizers and strong acids.

Ready-to-use mixture - not meant to be stored but is a stable solution.

HAZARDOUS DECOMPOSITION:

None

11. TOXICOLOGICAL INFORMATION

TOXICITY TO ANIMALS:

<u>Component</u>	<u>Acute Test</u>	<u>Value</u>	<u>Species</u>
None available. Not expected to be toxic.			

ROUTES OF ENTRY:

Skin contact; eye contact through splashing; and oral contact through accidental ingestion; respiratory inhalation is not a significant route unless a mist is created for Part A and the mixture. Part B can be inhaled as a dust.

CHRONIC EFFECTS ON HUMANS:

No known chronic effects.

Eyes:

The liquids can irritate eyes if splashed into the eyes and not washed out immediately. Not expected to result in irreversible eye damage unless it is allowed to remain in the eyes. The dry powder will irritate eyes as a dust.

Skin:

May cause skin irritation and redness if not washed off.

Ingestion:

Ingesting large quantities may result in gastrointestinal distress.

Inhalation:

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Not a significant route of exposure for the liquids unless a mist is created. Part B is an inhalable dust hazard.

12. ECOLOGICAL INFORMATION

<u>Component</u>	<u>Acute Test</u>	<u>Value</u>	<u>Species</u>
No data available but not expected to be aquatically toxic.			

PRODUCTS OF BIODEGRADATION:
Less toxic than the material, itself.

13. DISPOSAL CONSIDERATIONS

This is not a hazardous waste based on EPA CFR40 unless mixed with something that would render it hazardous. Dispose of in accordance with local and state regulatory requirements.

14. TRANSPORT INFORMATION

The following proper shipping name, hazard class and packing group are in accordance to transportation regulations.

Mode of Transportation	Domestic Surface (USDOT)	Domestic Air	International Air (IATA)
UN Number	Not Regulated	Not Regulated	Not Regulated
Proper Shipping Name			
Hazard Class			
Packing Group			
Hazard Label			
Handling Label(s)			
ERG#:			
Packaging Instructions:			

15. REGULATORY INFORMATION

Chemical Inventory Status

Ingredients listed on: TSCA, DSL, Japan, and EC inventories.

SARA Section 302 - Emergency Planning Notification - None

SARA Section 304 - Emergency Release Notification - None None

SARA 311/312 - Hazard categories for SARA Section 311/312 Reporting - None

CERCLA - Hazardous Substance - None

RCRA Hazardous Waste Classification - None

California Proposition 65:

No components listed on Proposition 65 list of known cancer causing agents.

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16. OTHER INFORMATION

UNITED STATES NATIONAL FIRE PROTECTION ASSOCIATION (U.S. NFPA)

NFPA Category	Part A, Part B, Ascend™ PA
Health:	1
Fire:	0
Reactivity:	0

CREATION/REVISION SUMMARY:

Created on:

28-Apr-16

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THE INFORMATION RELATES TO THIS SPECIFIC INFORMATION. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY ONESELF AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR HIS OWN PARTICULAR USE. ALL MATERIALS MAY PRESENT UNKNOWN HAZARDS AND SHOULD BE USED WITH CAUTION. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, WE CANNOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.