



SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION

Product ID: Rhizolizer Duo BA
Product Name: Rhizolizer Duo BA
Revision Date: Sep 01, 2022 **Date Printed:** Sep 01, 2022
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Locus Agricultural Solutions
Address: 30600 Aurora Rd, Ste. 180 Solon, OH 44139
Information Phone Number: (888) 331-5008
Emergency Phone: CHEMTREC 1-800-424-9300
Product/Recommended Uses: Supports nutrient availability and crop nutrient uptake from the soil.

SECTION 2) HAZARDS IDENTIFICATION

Classification

Not classified as a hazardous substance or mixture in accordance to the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
	BACILLUS AMYLOLIQUEFACIENS	1% - 5%
	TRICHODERMA HARZIANUM	1% - 5%
PROPRIETARY	PROPRIETARY	90% - 98%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell or are concerned.

Eye Contact

If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 5 minutes, while holding the eyelids open. If eye irritation persists: Get medical advice/attention.

Skin Contact

Rinse/wash with lukewarm, gently flowing water and mild soap for 5 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Ingestion

Rinse mouth. If you feel unwell/If concerned: Get medical advice/attention.

Most important symptoms and effects, both acute and delayed

No data available.

Indication of any immediate medical attention and special treatment needed

Treat according to symptoms (decontamination, vital functions), no known specific antidote. Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Small Fire : Dry chemical, foam, carbon dioxide, water-spray or alcohol-resistant foam. Large Fire: Dry chemical, CO₂, alcohol resistant foam or water spray Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Unsuitable Extinguishing Media

Do not use water jet.

Specific Hazards in Case of Fire

Dense smoke may be generated while burning.

Fire-fighting Procedures

Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray is recommended to cool or protect exposed materials or structures. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Isolate hazard area and keep unauthorized personnel away. Do not touch or walk through spilled material. Ventilate closed spaces before entering.

Recommended Equipment

See section 8 for specifics on protective personal equipment (PPE).

Personal Precautions

Avoid breathing vapor or mist. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

SECTION 7) HANDLING AND STORAGE

General

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. Use good personal hygiene practices. Wash hands after use.

Ventilation Requirements

Report ventilation failures immediately. Use only with adequate ventilation to control air contaminants to their exposure limits.

Storage Room Requirements

Store in cool, dry, well-ventilated areas away from heat, direct sunlight and strong oxidizers. Keep container(s) tightly closed and properly labeled. Containers that have been opened must be carefully resealed to prevent leakage.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection

Wear eye protection with side shields or goggles.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber.

Respiratory protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations	OSHA TWA (mg/m3)
PROPRIETARY	10			URT irr		[15]; [5 (a)];
PROPRIETARY	2 (R)			Pneumoconiosis		[15]; [15 mppcf]; [5];
PROPRIETARY	2 (E,R)		A4	Pneumoconiosis	A4	[15]; [5 (a)];
PROPRIETARY	2 (E,R)	0.1 f/cc (F) (K)	[A1]; [A4];	Pulm fibrosis; Pulm func	[A1]; [A4];	20 mppcf

Chemical Name	OSHA TWA (ppm)	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	NIOSH TWA (mg/m3)
PROPRIETARY			1	10,5a
PROPRIETARY	15 (a) mppcf		[1]; [3];	2.5
PROPRIETARY			1	10,5a
PROPRIETARY		1	1	

(C) - Ceiling limit, (F) - Respirable fibers, (K) - Should not exceed 2 mg/m3 respirable particulate mass, (R) - Respirable fraction, A4 - Not Classifiable as a Human Carcinogen, func - Function, irr - Irritation, pulm - Pulmonary, URT - Upper respiratory tract

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity	N/A
% VOC	N/A
Density VOC	N/A
% HAPS	N/A
Density HAPS	N/A
% VHAPS	N/A
Density VHAPS	N/A
% Solids By Weight	N/A
Density	N/A
Odor Description	N/A
pH	N/A
Water Solubility	N/A

Water Solubility	N/A
Flammability	N/A
Flash Point Symbol	N/A
Flash Point	N/A
Viscosity	N/A
Kinematic Viscosity	N/A
Lower Explosion Level	N/A
Odor Threshold	N/A
Refractive Index	N/A
Upper Explosion Level	N/A
Vapor Pressure	N/A
Kinematic Viscosity Temperature	N/A
Vapor Density	N/A
Freezing Point	N/A
Melting Point	N/A
Low Boiling Point	N/A
High Boiling Point	N/A
Auto Ignition Temp	N/A
Decomposition Pt	N/A
Evaporation Rate	N/A
Coefficient Water/Oil	N/A
Appearance	Powder

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal storage and handling conditions.

Conditions To Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.

Hazardous Reactions/Polymerization

No data available.

Incompatible Materials

Strong bases, acids, and oxidizing agents.

Hazardous Decomposition Products

Oxides of carbon.

SECTION 11) TOXICOLOGICAL INFORMATION

Acute Toxicity

Based on available data, the classification criteria are not met.

The Acute Toxicity Estimate (ATE) for an oral exposure to this mixture is >5000 mg/kg body weight

The Acute Toxicity Estimate (ATE) for a dermal exposure to this mixture is >5000 mg/kg body weight

The Acute Toxicity Estimate (ATE) for an inhalation (vapour) exposure to this mixture is >20 mg/l

Aspiration Hazard

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity

Based on available data, the classification criteria are not met.

Reproductive Toxicity

Based on available data, the classification criteria are not met.

Respiratory/Skin Sensitization

Based on available data, the classification criteria are not met.

Serious Eye Damage/Irritation

Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure

Based on available data, the classification criteria are not met.

Likely Routes of Exposure

Inhalation, Ingestion, Skin contact, Eye contact

Potential Health Effects - Miscellaneous

The following medical conditions may be aggravated by exposure: asthma, dermatitis. Repeated or prolonged inhalation may cause any of the following: lung injury.

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Based on available data, the classification criteria are not met.

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, state and local laws.

SECTION 14) TRANSPORT INFORMATION

	U.S. DOT Information	IMDG Information	IATA Information
UN Number	Not Regulated	Not Regulated	Not Regulated
UN proper shipping name	N/A	N/A	N/A

Transport Hazard class(es)	Not Applicable	Not Applicable	Not Applicable
Packing group	Not Applicable	Not Applicable	Not Applicable
Environmental hazards	No Data Available	No Data Available	No Data Available
Special precautions for user	No Data Available	No Data Available	No Data Available
Transport in bulk according to Annex II of MARPOL and the IBC code	No Data Available	No Data Available	No Data Available

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
PROPRIETARY	PROPRIETARY	90% - 98%	DSL,SARA312, TSCA,MA_RightToKnow - MASSACHUSETTS RIGHT TO KNOW
	BACILLUS AMYLOLIQUEFACIENS	1% - 5%	SARA312,TSCA
	TRICHODERMA HARZIANUM	1% - 5%	SARA312,TSCA

The information in this Section does not list non-hazardous components that might have relevant SARA312, TSCA regulatory values, if they are present at less than 1%. Please contact manufacturer for more information.

Product does not contain any chemicals listed under California Proposition 65

SECTION 16) OTHER INFORMATION

Glossary

ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service ; Chemtrec - Chemical Transportation Emergency Center; DSL - Domestic Substances List; ESL- Effects screening levels; GHS - "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations; HMIS - Hazardous Material Information Service; IATA - Dangerous Goods Regulations (DGR) for the air transport (IATA); IMDG - International Maritime Dangerous Goods Code; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; OEL - Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL - Permissible Exposure Limit; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self Contained Breathing Apparatus; ppm - parts per million; STEL - Short-term exposure limit; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-weighted average; US DOT- US Department of Transportation.

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