

SAFETY DATA SHEET



Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product name : Lumialza™

Manufacturer or supplier's details

COMPANY IDENTIFICATION

Manufacturer/importer : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

Customer Information Number : 1-800-258-3033

E-mail address : customerinformation@corteva.com

Emergency telephone : INFOTRAC (CONTRACT 84224).
+1 800-992-5994 or +1 317-337-6009

Recommended use of the chemical and restrictions on use

Recommended use : Seed Treatment
Nematicide

Restrictions on use : Do not use product for anything outside of the above specified uses.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Inhalation) : Category 4

GHS label elements

Hazard pictograms :



Signal Word : Warning

SAFETY DATA SHEET



Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

Hazard Statements : H332 Harmful if inhaled.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P271 Use only outdoors or in a well-ventilated area.
Response:
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Bacillus amyloliquefaciens strain PTA-4838	Not Assigned	16.5
Balance	Not Assigned	83.5

SECTION 4. FIRST AID MEASURES

General advice : Never give anything by mouth to an unconscious person. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call toll free 1-888-226-8832. See Label for Additional Precautions and Directions for Use. Information presented in Section 4 conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory Agencies.

If inhaled : Move to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Call a poison control center or doctor for treatment advice.

In case of skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

In case of eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

SAFETY DATA SHEET



Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

If swallowed : Hold eye open and rinse slowly and gently with water for 15-20 minutes.
Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
Call a poison control center or doctor for treatment advice.
Call a poison control center or doctor for treatment advice.
Have person sip a glass of water if able to swallow.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray
Alcohol-resistant foam

Unsuitable extinguishing media : None known.

Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.
Use personal protective equipment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g., by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages

SAFETY DATA SHEET



Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

cannot be contained.
Prevent from entering into soil, ditches, sewers, underwater.
See Section 12, Ecological Information.

Methods and materials for containment and cleaning up : Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,
Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-pressurization of the container.
Keep in suitable, closed containers for disposal.
Wipe up with absorbent material (e.g. cloth, fleece).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
See Section 13, Disposal Considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

Local/Total ventilation : Use with local exhaust ventilation.
Advice on safe handling : Avoid formation of aerosol.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapors/dust.
Do not smoke.
Handle in accordance with good industrial hygiene and safety practice.
Smoking, eating and drinking should be prohibited in the application area.
Do not breathe vapors or spray mist.
Do not get in eyes.
Avoid contact with skin and eyes.
Avoid prolonged or repeated contact with skin.
Keep container tightly closed.
Take care to prevent spills, waste and minimize release to the environment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Conditions for safe storage : Store in a closed container.
Keep in properly labeled containers.
Store in accordance with the particular national regulations.
Materials to avoid : Strong oxidizing agents
Packaging material : Unsuitable material: None known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

SAFETY DATA SHEET



Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

Engineering measures : Information presented in Section 8 conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory

Ensure adequate ventilation.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Personal protective equipment

Respiratory protection : Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

Hand protection

Remarks : Chemical-resistant gloves

Eye protection : Wear a face-shield which allows use of chemical goggles, or wear a full-face respirator, to protect face and eyes when there is any likelihood of splashes.

Skin and body protection : Applicators and other handlers must wear:
Long sleeved shirt and long pants
Chemical resistant gloves made of any waterproof material
Shoes plus socks
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls

Chemical resistant gloves made of any waterproof material
Shoes plus socks

Remove contaminated clothing immediately, wash skin area with soap and water. Contaminated clothing should be disposed of properly or decontaminated and laundered before reuse.

Protective measures : Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Notify workers of the application by warning them orally or by posting warning signs at entrances to treated areas.

Hygiene measures : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing/PPE immediately if material gets inside.
Wash thoroughly and put on clean clothing.

Remove personal protective equipment immediately after handling this product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

SAFETY DATA SHEET



Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

Appearance : liquid

Color : brown

Odor : No data available

Odor Threshold : No data available

pH : 7.3 (77 °F / 25 °C)
Concentration: 1 %

Melting point/range : Not applicable

Freezing point : No data available

Boiling point/boiling range : No data available

Flash point : Method: closed cup
No data available

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Density : 1.205 g/cm³ (68 °F / 20 °C)

Solubility(ies)
Water solubility : No data available

Autoignition temperature : No data available

Viscosity
Viscosity, dynamic : No data available
Viscosity, kinematic : 393.83 cSt (68 °F / 20 °C)
143.67 cSt (104 °F / 40 °C)

Explosive properties : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

SAFETY DATA SHEET



Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

Reactivity : Not classified as a reactivity hazard.
Chemical stability : No decomposition if stored and applied as directed.
Stable under normal conditions.
Possibility of hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.
None known.
Conditions to avoid : None known.
Incompatible materials : None.
Hazardous decomposition products : Decomposition products depend upon temperature, air supply and the presence of other materials.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 2.13 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity : LD50 (Rat): > 5,050 mg/kg

Skin corrosion/irritation

Product:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit
Result : slight irritation

Respiratory or skin sensitization

Product:

Species : Guinea pig
Remarks : No data available.

Carcinogenicity

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

STOT-single exposure

Components:

Bacillus amyloliquefaciens strain PTA-4838:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Repeated dose toxicity

Components:

Bacillus amyloliquefaciens strain PTA-4838:

Remarks : No relevant data found.

Aspiration toxicity

Components:

Bacillus amyloliquefaciens strain PTA-4838:

Based on available information, aspiration hazard could not be determined.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Components:

Balance:

Partition coefficient: n-octanol/water : Remarks: No relevant data found.

Mobility in soil

Components:

Balance:

Distribution among environmental compartments : Remarks: No relevant data found.

Other adverse effects

Product:

Additional ecological information : No data is available on the product itself.

SAFETY DATA SHEET



Lumialza™

Version 1.0 Revision Date: 08/05/2022 SDS Number: 750075100505 Date of last issue: -
Date of first issue: 08/05/2022

Components:

Bacillus amyloliquefaciens strain PTA-4838:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Balance:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.
If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

SAFETY DATA SHEET



Lumialza™

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08/05/2022	750075100505	Date of first issue: 08/05/2022

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Serious eye damage or eye irritation

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

The ingredients of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Federal Insecticide, Fungicide and Rodenticide Act

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

SECTION 16. OTHER INFORMATION

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Indus-

SAFETY DATA SHEET



Lumialza™

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08/05/2022	750075100505	Date of first issue: 08/05/2022

trial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 08/05/2022

Product code: 3PP-Lumialza

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.

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