

## Safety Data Sheet

# Bio-Save® 10 LP Biological Fungicide



LALLEMAND PLANT CARE

Version: 1

Version date: 03/04/2025

Language: EN

According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

### 1.1. Product identifier

**Trade name/designation** : Bio-Save® 10 LP Biological Fungicide

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Uses advised against** : Use only as directed on the product label.

**Relevant identified uses** : A post-harvest fungal disease control for raw agricultural commodities.

### 1.3. Details of the supplier of the safety data sheet

**Supplier** : **Name:** Danstar Ferment AG / LALLEMAND PLANT CARE  
**Street:** Poststrasse 30  
**Postal code/City:** 6300 / Zug  
**Country:** Switzerland  
**Telephone:** +41 41 727 20 30  
**Website:** [www.lallemandplantcare.com](http://www.lallemandplantcare.com)  
**E-mail:** [plantcare@lallemand.com](mailto:plantcare@lallemand.com)

**U.S. Contact for regulatory and compliance inquiries** : **Name:** Lallemand Specialties Inc.  
**Street:** 6120 W. Douglas Avenue  
**Postal code/City:** 53218 / Milwaukee  
**Country:** USA  
**Telephone:** +1 414 464 6440

### 1.4. Emergency Telephone Number

**In USA and Canada:** Call +1-800-424-9300 / +1-703-527-3887

**In the European Union:** Call 112.

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Classification according to the regulation (EC) n° 1272/2008 (CLP) and its amendments

**Hazards identification:** This mixture is not classified as hazardous.

## 2.2. Label elements

Label elements according to the regulation (EC) n°1272/2008 (CLP) and its amendments

<b>Hazard pictograms :</b>	None required
<b>Signal word :</b>	Caution
<b>Hazard statements :</b>	None required
<b>Precautionary statement(s):</b>	Contact with eyes may cause mild/reversible eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

## 2.3. Other hazards

No other hazards known.

# SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

## 3.1. Substances

Product is a mixture.

## 3.2. Mixtures

<u>Ingredient (active)</u>	<i>Pseudomonas syringae</i> strain ESC-10
CAS No. / EC No.	CAS# 68583-32-4
REACH Registration No.	Not applicable
Content	> 9.0 x 10 <sup>10</sup> CFU/g (28.61%)
Classification according to Reg (EC) No 1278/2008 [CLP]	Not classified

## Other ingredients:

Mixture does not contain any other ingredients that are classified as dangerous according to Reg (EC) No. 1272/2008 [CLP].

## Remark

Not available.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### General information:

Protection of rescue workers: Wear appropriate individual protective equipment (see Section 8). Transport the affected person into the open air. Remove contaminated shoes and clothing.

#### Following inhalation:

In the event of inhalation, take into the open air. Do not allow the person to get cold. Keep the victim resting in a semi-seated position. In the absence of breathing, use artificial respiration. Consult a doctor.

#### Following skin contact:

Rinse thoroughly in running water and soap. Remove contaminated shoes and clothing. Consult a doctor if symptoms develop.

#### Following eye contact:

Rinse thoroughly in running water, with the eyelids opened for a sufficient length of time (protect uninjured eye). Consult a doctor if symptoms develop.

#### Following ingestion:

In the event of ingestion, rinse the mouth with water (only if the person is conscious). Consult a doctor if symptoms develop.

#### Self-protection of the first aider:

Ensure that automatic eye baths and safety showers are located close to the workstations.

### 4.2. Most important symptoms and effects, both acute and delayed

Eye contact: May cause eye irritation (redness).

Skin Contact: Prolonged or repeated skin contact may cause irritation.

Inhalation: Possible respiratory irritation or asthma in sensitive individuals.

Ingestion: Ingestion of the product may cause gastrointestinal problems. May cause vomiting, headache, apathy.

### 4.3. Indication of any immediate medical attention and special treatment needed

#### Notes for the doctor:

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable extinguishing media:

Water, foam, carbon dioxide, dry powder.

#### Unsuitable extinguishing media:

None.

### 5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases. Burning may produce heavy smoke.

### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus (SCBA) when exposed to confined or enclosed fires as product powder could be in the air. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

#### Additional information

Not available.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes, skin and clothing. Wear suitable protective equipment (see section 8).

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose it. This material is not a physical, health or environmental hazard.

### 6.3. Methods and material for containment and cleaning up

Small accidental spillage or leak: Mop up with appropriate material. Place in an appropriate container.

Clean the area affected with plenty of water.

Large accidental spillage or leak: Prevent spillage into the drains, subsoil or confined areas. Contain if necessary. Mop up the product spilled with inert material (e.g. dry sand or dry earth) and place in a chemical waste container.

#### 6.4. Reference to other sections

Safe handling: see section 7.

Disposal: see section 13.

Personal protection equipment: see section 8.

#### Additional information

Not available.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

#### PROTECTIVE MEASURES:

Preventive measures: Keep out of the reach of children and unauthorized persons.

Handling: Avoid contact with skin or eyes. Use localized ventilation system. Before making transfer operations, assure that there are not any incompatible residues in the containers.

#### Advices on general occupational hygiene:

Wash hands thoroughly after handling. Do not eat, drink or smoke while working. Store work clothing separately. See also section 8 for recommended equipment.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in dry and well-ventilated place in its tightly closed original packaging. Storage instructions (temperatures and times) given on product label.

Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

National occupational exposure limit values: None.

Other limit values:	None.
DNEL:	None.
PNEC:	None.

## 8.2. Exposure controls

### Appropriate engineering controls:

See section 7. No additional measures necessary.

### Individual protection measures, such as personal protective equipment:

Protection of lungs:	In case of insufficient ventilation, effective dust mask.
Protection of skin:	Wear suitable protective clothing.
Protection of hands:	Wear insulated gloves when handling frozen materials.
Protection of eyes:	Wear goggles or safety glasses with side shields when mixing or loading.

### Environmental exposure controls:

No environmental exposure limits or controls.

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local and national health and environmental regulations.

### Consumer exposure controls:

Not available.

## Additional information

Wear a long-sleeved shirt, long pants, shoes plus socks, waterproof gloves, eye goggles and a dust/mist filtering respirator (dust mask) meeting a standard of N-95, R-95, P-95 or HE when, loading the product and during clean-up/repair activities. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid - powder
Colour	: Off-white to tan
Odour	: Bread like
pH	: 6 to 8
Melting point/freezing point	: Not available

<b>Initial boiling point and boiling range</b>	: Not available
<b>Flash point</b>	: Not available
<b>Flammability</b>	: Not available
<b>Upper/lower flammability or explosive limits</b>	: Not available
<b>Vapour pressure</b>	: Not available
<b>Vapour density</b>	: Not available
<b>Relative density</b>	: Not available
<b>Solubility(ies)</b>	: Insoluble in water
<b>Partition coefficient n-octanol/water (log value)</b>	: Not applicable
<b>Auto-ignition temperature</b>	: Not available
<b>Decomposition temperature</b>	: Not available
<b>Dynamic viscosity</b>	: Not applicable
<b>Kinematic viscosity</b>	: Not available
<b>Oxidising properties</b>	: Not available
<b>Solubility in other Solvents</b>	: Not available
<b>Particle characteristics</b>	: Powder

## 9.2. Other safety information

### Other security characteristics

Not available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Stable under recommended conditions of storage, use and transportation.

Not reactive. No hazardous reactions when transported, stored, and handled according to prescribed instructions.

### 10.2. Chemical stability

Stable under recommended conditions of storage, use and transportation.

### 10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

### 10.4. Conditions to avoid

Heat or warm temperatures.

### 10.5. Incompatible materials

Acids, bases, concentrated fertilizer liquids, chemical pesticides, food, drink and animal feeding stuffs.

### 10.6. Hazardous decomposition products

Under recommended conditions of storage and use, no hazardous decomposition products should occur. In case of fire, see section 5.

### Additional information

Not available.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### **Acute oral toxicity:**

Oral: LD50 (rats) > 5000 mg/kg.

Inhalation: No information is available for the mixture. However, no mortality or irreversible signs of toxicity were produced by the active ingredient, *Pseudomonas syringae*, in an inhalation toxicity study in rats.

#### **Acute dermal toxicity:**

The product is not classified.

#### **Acute inhalation toxicity:**

The product is not classified.

#### **Skin corrosion/irritation:**

Irritation to the skin may occur.



**Serious eye damage/irritation:**

No skin irritation was noted in a primary dermal irritation study in rabbits. No local or systemic toxicity was noted in an acute dermal toxicity study in rabbits.

LD50 (rabbits) > 5010 mg/kg.

**Skin sensitisation:**

An eye irritation study in rabbits produced mild, reversible eye irritation.

**Specific target organ toxicity (repeated exposure):**

No data available.

**Specific target organ toxicity (single exposure):**

No data available.

**Carcinogenicity:**

Not listed as a carcinogen by NTP, OSHA or IARC.

**Reproductive toxicity:**

No data available. Not required for microbial based product.

**Germ cell mutagenicity:**

No data available. Not required for microbial based product.

**Sensitisation to the respiratory tract:**

Micro-organisms may have the potential to provoke sensitizing reactions. Not classified.

**Additional information:**

Not available

**11.2. Information on other hazards****Endocrine disrupting properties:**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Other information:**

No other known hazards.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

No information is available. *Pseudomonas syringae* ESC 10, is not classified as a plant pathogen by USDA/APHIS.

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

### 12.5. Results of PBT and vPvB assessment

According to Regulation (EU) 1907/2006, no substances are assessed as PBT or vPvB.

### 12.6. Endocrine disrupting properties

According to Regulation (EU) 2017/2100 or Regulation (EU) 2018/605, no substances are known to have endocrine disrupting properties.

### 12.7. Other adverse effects

If the product has escaped into a water course, into a drainage system, or has contaminated the ground or vegetation in exceed quantities, notify the competent authorities.

### Additional ecotoxicological information

Not available.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### Disposal instructions:

Dispose of contents and container in accordance with local and national regulations.

Do not throw the product or packaging/containers into waters, ponds, rivers or ditches.

**Product disposal:**

To avoid wastes, use all material in this package/container by application according to label instructions. If wastes cannot be avoided, offer remaining product to an appropriate waste collection point according to national and local pesticide disposal requirements and instructions.

**Sewage disposal:**

Waste should not be disposed of by release to sewers.

**Packaging disposal:**

Rinse empty packaging/container with water to reduce any potential product residue in the packaging/container to insignificant amounts. Empty, rinsed packages/containers are disposed to appropriate waste collection point according to national and local requirements and instructions. Do not reuse or refill the packages/containers for other purposes.

**Additional information**

Not available.

**SECTION 14: TRANSPORT INFORMATION****General:**

Product is not classified as dangerous goods according to international transportation regulations in force ADR, RID, ADN, OACI/IATA and OMI/IMDG.

<b>14.1. UN number</b>	Not applicable, not regulated.
<b>14.2. UN proper shipping name</b>	Not applicable.
<b>14.3. Transport hazard class(es)</b>	Not applicable.
<b>14.4. Packing group</b>	Not applicable.
<b>14.5. Environmental hazards</b>	None.
<b>14.6. Special precautions for user</b>	None.
<b>14.7. Bulk shipping according to IMO instruments</b>	Product is not intended for bulk transport.

**Additional information**

Not available.

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety Data Sheet and Classification in accordance with following EU Regulations:

COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

CLP Regulation (EC) 1272/2008 on classification, labelling, and packaging of substances and mixtures, amending and repealing Directives 67/548/EC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Regulation (EU) 453/2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

Regulation (EU) 453/2010 ANNEX II: Requirements for the compilation of safety data sheets.

Regulation (EC) 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

Directive 1999/45/EC concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

Regulation (EU) 547/2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards labelling requirements for plant protection products.

Directive 2003/82/EC regarding standard phrases for special risk and safety precautions for plant protection products.

Directive 2001/36/EC concerning the placing of plant protection products on the market.

#### In Canada:

WHMIS Statement: This product has been classified in accordance with the hazard criteria of the Controlled Product Regulation (CIn USA:

TSCA STATUS:	Exempt
FIFRA:	Regulated
CERCLA REPORTABLE QUANTITY:	None
SARA Title III	
SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES:	None
SECTION 311/312 HAZARD CATEGORIES:	Non-hazardous
SECTION 313 TOXIC CHEMICALS:	None
RCRA STATUS:	None
STATE/COUNTRY INFORMATION:	Not applicable
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD CLASSIFICATION:(Key: 0=Minimum, 1=Slight, 2=Moderate, 3=High/Serious, 4=Extreme/Severe)	
Health --- 0;    Flammable --- 0;    Reactivity --- 0	

**In USA:**

California Proposition 65: This product does not contain any proposition 65 chemicals.

SARA 313, section 313 of the Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and 40 CFR Part 372.

**In Brazil:**

Federal Decree 2.657/1998.

ABNT–NBR 14725 Standard.

Ordinance nº 229 of 2011 – Amending the Regulatory Standard nº 26.

Joint Normative Instruction No. 3 of 2006.

**In Uruguay:**

Resolution MGAP N° 688 04-10-2013 (MGAP – Ministry of Livestock, Agriculture and Fisheries).

**15.2. Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture under Regulation (EC) 1907/2006 REACH).

Active substance and formulated end product/mixture regulated, assessed, and approved as plant protection product under Regulation (EC) 1107/2009, (EU) 540/2011 and Directive 91/414/EEC.

### Additional information

Not available.

## SECTION 16: OTHER INFORMATION

### Indication of changes

Revision of Section 1 to 16.

### Abbreviations and acronyms

ADR:	Accord European Relatif au International Transport des Marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road).
CFU:	Colony forming units.
CLP:	Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
EC50:	Average effective concentration.
ECHA:	European Chemicals Agency.
EC:	European Community.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
ELINCS:	European List of Notified Chemical Substances.
EN:	European standards.
EU:	European Union.
IATA:	International Air Transport Association (= International Air Transport Association).
IMDG:	Code International Maritime Code for Dangerous Goods.
LC50:	Lethal Concentration to 50% of a test population.
LD50:	Lethal Dose to 50% of a test population (Median Lethal Dose) (= lethal dose for 50% of a test population (median lethal dose).
N.a.:	Not applicable.
NOEC:	No observed effect concentration.
NOAEC:	No Observed Adverse Effect Concentration.

PBT: Persistent, Bioaccumulative and Toxic.

VPvB: Very Persistent and Very Bioaccumulative.

### Key literature references and sources for data

CLP Regulation (EC) 1272/2008, Regulation (EU) 453/2010 and Directive 1999/45/EC with amendments. Guidelines and Instructions for the creation of safety data sheets in the current version (ECHA). Guidelines on labelling and packaging in accordance with Regulation (EC) No. 1272/2008 (CLP) as amended (ECHA). Regulations for the transport of dangerous goods by road, rail, sea and air transport (ADR, RID, IMDG, IATA) in the currently valid version.

### Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

**Classification:** Not classified.

**Procedure:** On basis of test data made with active substance and/or product. Data evaluated by authorities and experts according to Uniform Principles.

### Relevant R-, H- and EUH-phrases (Number and full text)

No H-statements.

### Training advice

No specific recommendations.

### Additional information

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