



Natural Antimicrobial LDPE/LLDPE Safety Data Sheet

Silver Defender Corp - 1 Bridge Plaza N, Suite 275, Fort Lee, NJ 07024

1. Identification:

Trade Name: LDPE/LLDPE Film with Anti-microbial additive

Manufacturer: Silver Defender Corp - 1 Bridge Plaza N, Suite 275, Fort Lee, NJ 07024

Phone: 201-351-0884 **Fax:** 201-608-7919

2. Hazard Identification:

Hazardous Components of Mixtures:

Hazard description: Not applicable

Information pertaining to particular dangers for man and environment: Not applicable

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 1

Flammability = 1

Reactivity = 1

Composition/Information on ingredients:

The composition of the material is a blend of low density and linear low density polyethylene(s) and a silver based antimicrobial (CAS 308069-39-8), which is proprietary information. The EPA number of the silver based antimicrobial is 73148-1-92760.

3. First Aid Measures:

- **Film first aid measures:** Silver is encapsulated in a plastic resin and is considered safe.
- Creating dust particles from sanding grinding or shearing may cause the following issues:

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove to fresh air, keep patient warm, Respiratory problems: consult a doctor/medical service.

First -aid measures after skin contact: Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get Medical advice/attention.

First-aid measures after eye contact: Direct contact with the eyes is likely to be irritating. Rinse eyes with water as a precaution. If eye irritation persists: Get Medical advice/attention.

First-aid measures after ingestion : Get medical advice/attention.

4. Fire-Fighting Measures:

In pelletized or dust form it is suggested to use a Carbon Dioxide or powder extinguisher. As film use large amounts of water.

Fire Extinguishing Media: Dry Chemical powder, ABC Powder

Special Fire – Fighting Procedures: No Halogenated extinguishing agents. No heavy water streams on dust or powder forms.



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Reactivity: This product is non-reactive under normal conditions of use storage and transport

Protective Equipment: In the event of a fire, wear a NIOSH (USA) or CEN (EU) approved self-contained breathing apparatus (SCBA) and full protective clothing.

5. Accidental Release Measures:

In the event of an accidental release as a film pick up and dispose per local, state and federal regulations require.

As pellets avoid release to the environment use gloves and safety glasses, dispose according to local, state and federal regulations. Cleanup maybe done with brooms, shovels and approved collection containers.

6. Handling and Storage:

Materials should be kept in a controlled atmosphere it is not defined as explosive by established regulatory criteria. This material as produced, does not generate dust.

Electro static charge may accumulate as film is being unwound ensure proper grounding of materials and equipment.

Do not store with Alkalis (bases) or Acids.

Keep container tightly sealed

Avoid high temperature storage as degradation may occur.

Avoid contact with strong oxidizers. Prevent loose ends from causing trip hazards. Do not cut, grind, drill, or weld (introduction of an ignition source) in the vicinity as fire may occur.

Precautions for safe handling: Avoid contact with skin eyes and clothing. Wash hands and exposed skin areas with mild soap and water before eating, drinking or smoking and upon leaving work.

7. Exposure Controls/Personal Protective Equipment:

No biological exposure limits are noted for the ingredients. Do not generate dust, may cause a fire hazard. Static accumulation may occur as film is being processed. Ground equipment to prevent electrical discharge.

7.1 Personal protective equipment

7.1a. Eye Protection: ANSI 787 rated safety glasses with side-shields

7.1b. Respiratory Protection: NIOSH N-100 or P-100 rated particulate respirator with full face mask.

7.1c. Skin Protection: Nitrile gloves or equivalent and protective clothing to prevent skin contact, such as cotton fiber lab coat or uniform or Tyvek coveralls

7.1d Ventilation: A local or general exhaust system is recommended.

7.2 General protective and hygienic measures

7.2a. Keep away from foodstuffs, beverages and feed.

7.2b. Remove all soiled and contaminated clothing immediately.



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- 7.2c. Wash hands before breaks and at the end of work.
- 7.2d. Avoid contact with the eyes.
- 7.2e. Avoid contact with the eyes and skin.

8. Physical and Chemical Properties:

Material as film is considered inert. It has not been tested or deemed suitable for implantable medical devices.

Appearance:	Solid
Form:	Film
Color:	Raw materials are colorless, Color additives may be utilized
Odor:	mild or odorless
Odor Threshold:	Not available
PH:	Not applicable
Melting Point:	220-330 F
Freeze point:	Not Applicable
Initial Boiling Point:	Not Applicable
Flashpoint:	Not Available
Evaporation Rate	Not Applicable
Flammability:	Not Available
Upper/Lower flammability or explosive limits:	Not applicable
Vapor Pressure	Not Applicable
Relative Density	Not Available
Solubility:	Insoluble in water
Partition coefficient:	insoluble in (N-octanol/water)
Auto Ignition temp:	Not Available
Decomposition Temp	Not Available
Viscosity:	Not Applicable
Chemical Family:	Polyolefins, polyethylene

9. Stability and Reactivity:

Reactivity: This product is non-reactive under normal conditions of use, storage and transport.

Chemical Stability: Material is stable under normal conditions.

Possibility of hazardous reactions: Not anticipated under normal conditions.

Incompatible materials: See precautions under *Handling and Storage*.

Hazardous decomposition products: Carbon Dioxide, Carbon Monoxide, Thermal decomposition may produce other hazardous organic compounds during combustion. Possible metal oxides. Persons exposed to these products should wear SCBA.

10. Toxicological information:

Silver is encapsulated in a plastic resin and is considered safe.

Dust:

Acute Toxicity Tumorigenic effects have been observed on tests with Lab animals.

Skin Corrosion/Irritation Not Classified

Likely routes of exposure: ingestion, inhalation, skin contact, eye contact



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Symptoms: <u>Inhalation:</u>	Dust may cause irritation to the nose throat and lungs by mechanical abrasion.
<u>Skin:</u>	Dust may cause irritation to abrasion, repeated contact may cause reddening, itching, and inflammation.
<u>Eyes:</u>	Dusts may cause mechanical irritation including pain, tearing and redness. Effects may become more serious with repeated and prolonged contact.
<u>Ingestion:</u>	Ingesting large quantities may cause gastrointestinal disturbances

Subacute to chronic toxicity: Absorption of silver compounds (Powders) by ingestion, inhalation or through broken skin can cause argyria, a permanent bluish-grey discoloration of the skin, conjunctiva and mucous membranes. Films have this material encapsulated.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product in powder form. As a film it is encapsulated in plastic.

11. Ecological Information:

Material is considered harmful to aquatic organisms.

Material in pellet form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

12. Disposal considerations:

This material as supplied when discarded or disposed of is not a hazardous waste according to Federal Regulations (40CFR 261). Under the resource conservation and recovery act it is the responsibility of the user of the material to characterize and determine at the time of disposal whether the material is a hazardous waste subject to RCRA.

This is a non-regulated material. *

Disposal: in accordance with all Federal, State, and Local guidelines.

13. Transport information:

These materials are not regulated by the DOT for air or ground transport.

14. Regulatory Information:

This material is intended for use in the manufacture of articles and goods as appropriate. It is the responsibility of the manufacturer to determine that it is safe, lawful and technically suitable for the intended use. This material is not intended for use in the manufacture of any form of implanted medical or surgical device.

All components of this product are listed or excluded from listing on the United States Environmental



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Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product is a mixture and does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR § 372.38(a) subject to the reporting requirements of section 313 of the title III of the Superfund Amendments and Reauthorization Act of 1986 and 40CFR part 372.

Canada: No additional information available

EU-regulations No additional information available

Prop 65 This product does not contain any substances known to the state of California to cause cancer developmental and /or reproductive harm

15. Other Information:

Special Precautions: Precautions to be taken in handling and storing: store in a clean, dry area, wash thoroughly before eating or smoking, use good practices.

Full text of H-statements:

- Aquatic Acute 1 Hazardous to the aquatic environment — Acute Hazard, Category 1
- Aquatic Chronic 1 Hazardous to the aquatic environment — Chronic Hazard, Category 1 –
- H400 Very toxic to aquatic life
- H410 Very toxic to aquatic life with long lasting effects

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 1 - Normally stable, even under fire exposure conditions, and are not reactive with water.