

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Spod-X® LC
EPA Registration No. 70051-46
Product Type: Bio-insecticide
Active Ingredient: *Spodoptera exigua* nuclear polyhedrosis virus
CAS No.: Not applicable

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

Identified uses: Bio-insecticide
Uses advised against: Any use not listed on the label

1.3. Details of the supplier of the safety data sheet

Name: Certis U.S.A., LLC
Address: 9145 Guilford Road, Suite 175
Columbia, Maryland 21046
U.S.A.
Phone Number: +01 (800) 255-3924
Website: <http://www.certisusa.com>

1.4. Emergency telephone number

Emergency number: +1 800 255-3924

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Hazard Classification: Not classified as hazardous by OSHA
EPA Signal Word: Caution (refer to section 15)
Hazard Statements: None
Pictogram: None
Precautionary Statements: Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin eyes or clothing. Avoid inhalation or contact with eyes, skin, or clothing. Harmful if inhaled. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating drinking chewing gum, or using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

2.2 Other Hazards: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate.

SECTION 3: Composition/information on ingredients

3.1 Substances

Component	CAS#	% by weight
<i>Spodoptera exigua</i> nuclear polyhedrosis virus	Not applicable	0.64

SECTION 4: First aid measures

4.1. Description of first aid measures

- Generic measures** Call poison control center or doctor for treatment advice. Have the product container or label with you when calling or going for a treatment.
- Eye Contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses after 5 minutes if present and continue rinsing eye.
- Skin Contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.
- Inhalation:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth, if possible.
- Ingestion:** If ingested, call poison control centre or doctor for treatment advice.

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

None specified

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

None specified

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable Extinguishing Media:** Water mist, alcohol resistant foam, dry powder, carbon dioxide
- Unsuitable Extinguishing Media:** None known

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: None known

5.3. Advice for firefighters

Protection of Firefighters: None specified

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing
Remove PPE immediately after handling this product. As soon as possible remove wash thoroughly and change into clean clothes.

For emergency responders: None specified

6.2. Environmental precautions

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

6.3. Methods and material for containment and cleaning up

Methods for Containment: Recover any clean product for reuse.

Methods for Clean-Up: Do not allow wash water to contaminate water supplies. Dispose of in accordance with local regulations for disposal of non-hazardous waste.

Other Information: None

6.4. Reference to other sections

See Section 8 for occupational exposure limits and risk management measures. Refer to Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Applicators and other handlers must wear long sleeved shirt, long pants, shoes plus socks

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

7.2. Conditions for safe storage, including any incompatibilities

Do not contaminate water, food or feed by storage or disposal.

Store this product in original sealed container in a cool dry place inaccessible to children and pets. Store this product at temperatures below 90°F. Bioactivity may be impaired if stored above 90° F. Storing this product in a freezer or refrigerator will extend its shelf life.

7.3. Specific end use(s)

Wastes resulting from the use this product must be disposed of on site or at an approved waste disposal site.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OSHA Permissible Exposure Limits (PELs): Not determined

ACGIH Threshold Limit Values: Not determined

Other Exposure Limits: None determined

8.2. Exposure controls

Engineering Controls: When handlers use closed systems, enclosed cabs, or aircraft in manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.
IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided with all PPE specified above for applicators and other handlers” and have such PPE immediately available for use in an emergency such as a spill or equipment break-down.

Personal Protective Equipment

Eye/Face Protection: None specified

Skin Protection Long sleeved shirt and pants

Hand Protection: None specified

Body Protection: Shoes plus socks

Respiratory Protection: None specified

Thermal Hazards: None

General Hygiene Considerations: Wash thoroughly with soap and water after handling and before eating drinking chewing gum, or using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Environmental exposure controls: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: Grey/brown liquid

Odour: Earthy

Odour Threshold: Not determined

pH:	6-7
Melting Point / Freezing Point:	Not determined
Initial Boiling Point:	Not determined
Boiling Range:	Not determined
Flash Point:	>200°C
Evaporation Rate:	Not determined
Flammability (solid, gas):	Not applicable
Lower & Upper Flammability Limits:	Not applicable
Vapour Pressure:	Not determined
Vapour Density:	Not determined
Density:	9.6 lb. /gal.
Solubility:	99%
Partition Coefficient (n-octanol/water):	Not known
Auto-ignition Temperature:	Not known
Decomposition Temperature:	Not known
Viscosity:	Not determined
Explosive Properties:	None
Oxidising Properties:	None

9.2. Other information

Not available.

SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	Not determined
<u>10.2. Chemical stability</u>	Stable when stored according to label
<u>10.3. Possibility of hazardous reactions</u>	None known
<u>10.4. Conditions to avoid</u>	Storage at high temperature reduces efficacy.
<u>10.5. Incompatible materials</u>	None known
<u>10.6. Hazardous decomposition products</u>	None known

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Toxicological information on the substance or mixture:

LD₅₀ (oral)	Toxicity Category IV based on similar NPV's
LD₅₀ (dermal)	Avoid contact with skin.

LC₅₀ (inhalation) Avoid breathing spray mist.

Skin corrosion / irritation: Slightly irritating, Toxicity Category IV

Eye irritation: No positive effects, Toxicity Category IV

Respiratory or skin sensitization: No data available.

Other information on adverse health effects:

Carcinogenicity

NTP Listed: Not applicable

IARC Listed: Not applicable

OSHA: Not applicable

11.2 Reference to other sections

See Section 4 for symptoms and acute and delayed effects.

SECTION 12: Ecological information

12.1. Toxicity

Test species	Test method	Test substance	LC ₅₀
Rainbow Trout	96 hour Acute	Spod-X LC	LC ₅₀ 96-h > 1000 mg/L
<i>Daphnia magna</i>	48 hour Acute	Spod-X LC	LC ₅₀ 48-h > 2202.7 mg/L

12.2. Persistence and degradability

Not persistent, rapidly degraded in air by UV light.

12.3. Bioaccumulative potential

Bioaccumulation not expected. Do not apply directly to water.

12.4. Mobility in soil

No data available.

12.5. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal Instructions: Do not contaminate water, food, or feed, by storage and disposal.

Storage: Store this product in original sealed container in a cool, dry place inaccessible to children and pets. Store at temperatures below 90°F. Bioactivity may be impaired

by storage above 90°F. Storing the product in a freezer or refrigerator will extend its shelf life.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or if allowed by state and local authorities, by burning. If burned stay out of smoke.

SECTION 14: Transportation information

14.1. UN number

Not regulated.

14.2. UN proper shipping name

Not regulated.

14.3. Transport hazard class(es)

Not regulated.

14.4. Packing group

Not regulated.

14.5. Environmental hazards

Not regulated.

14.6. Special precautions for user

Not regulated.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not regulated.

SECTION 15: Regulatory information

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

EPA: This product is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticidal chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION- KEEP OUT OF REACH OF CHILDREN
Causes moderate eye irritation.
Harmful if absorbed through skin.
Harmful if inhaled.

OSHA: N/A
TSCA Status: Exempt
CERCLA Reportable Quantity: N/A

SARA Title III:

Section 302: N/A
Section 311/312: N/A
Section 313: N/A

RCRA Status: N/A

SECTION 16: Other information

Disclaimer:

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA nor any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All material may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

SDS Authoring Information:

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SDS Prepared by: Certis U.S.A. L.L.C.