

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

1.1. Product identifier

Product name: OSO 5% SC
EPA registration No. 68173-4-70051
Product Type: Suspension Concentrate
Active Ingredient: Polyoxin D zinc salt
CAS No.: 146659-78-1

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

Identified uses: Fungicide
Uses advised against: All uses not listed on the label

1.3. Details of the supplier of the safety data sheet

Distributor: 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: Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

For terrestrial uses. This product is moderately toxic to aquatic invertebrates and fish. To protect the environment do not allow pesticide to enter or runoff into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for

the next 24 hours will help ensure that wind and rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

SECTION 3: Composition/information on ingredients

3.1 Substance

Ingredient	CAS#	% by weight
Polyoxin D zinc salt	146659-78-1	5

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 you calling the poison control center or doctor or going for 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. Call a poison control center or doctor for treatment advice.
Skin Contact:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
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. Call poison control center or doctor for treatment advice.
Ingestion:	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by poison control center or doctor. Do not give anything to an unconscious person.

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

No symptoms

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

None known

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media:	Dry chemicals
Unsuitable Extinguishing Media:	water

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: None known

5.3. Advice for firefighters

Protection of Firefighters: Keep upwind to avoid inhalation of gases, vapors and smoke.
Wear chemical protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency personnel: Wear protective clothing as described in section 8 of this data sheet. Provide adequate ventilation.

6.2. Environmental precautions

For terrestrial uses. This product is moderately toxic to aquatic invertebrates and fish. To protect the environment do not allow pesticide to enter or runoff into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help ensure that wind and rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

6.3. Methods and material for containment and cleaning up

Methods for Containment: Do not use in a manner that would allow drift or rinse water from equipment cleaning to contaminate water sources or supplies.

Methods for Clean-Up: None specified

6.4. Reference to other sections

Refer to Section 13 for disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Provide adequate ventilation. Wear protective clothing as described in section 8 of this data sheet.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container. Store in a dry, well ventilated place, away from direct sunlight and away from food or feed. Keep container tightly sealed when not in use. Do not store below 40°F (4°C).

7.3. Specific end use(s): Use only as specified on label.

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: Not determined

8.2. Exposure controls

Engineering Controls: None specified

Personal Protective Equipment

Eye/Face Protection: None specified

Skin Protection Long sleeved shirt and pants

Hand Protection: Chemical resistant gloves

Body Protection: Shoes and socks

Respiratory Protection: None specified

Thermal Hazards: None specified

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

Environmental exposure controls: For terrestrial uses. This product is moderately toxic to aquatic invertebrates and fish. To protect the environment do not allow pesticide to enter or runoff into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help ensure that wind and rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: Brown liquid with suspended solid

Odour: Similar to vegetable oil

Odour Threshold: Not determined

pH: 1% dilution 7.01 @ 25° C

Melting Point / Freezing Point: Not determined

Initial Boiling Point: Not determined

Boiling Range: Not determined

Flash Point: >232° C

Evaporation Rate: Not determined

Flammability (solid, gas): Not applicable

Lower & Upper Flammability Limits: Not applicable

Vapour Pressure: Not applicable

Volatility by weight :	Not volatile
Density:	1.05 g/ml @ 22° C
Solubility:	Not determined
Partition Coefficient (n-octanol/water):	Not determined
Auto-ignition Temperature:	Not determined
Decomposition Temperature:	Not determined
Viscosity:	Not available
Explosive Properties:	Not explosive
Oxidising Properties:	Stable to oxidation

SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	None known
<u>10.2. Chemical stability</u>	Stable at ambient temperatures and when used as recommended.
<u>10.3. Possibility of hazardous reactions</u>	None known
<u>10.4. Conditions to avoid</u>	None known
<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)	> 5000 mg/kg, Oral, Rat
LD₅₀ (dermal)	> 5050 mg/kg, Dermal, Rat
LC₅₀ (inhalation)	> 2.20 mg/L, Inhalation, Rat

Skin corrosion / irritation: Not irritating, 48 hours

Serious eye damage/ irritation Not irritating

Respiratory sensitization: Not available.

Skin sensitization: Very faint erythema, usually nonconfluent, Guinea pig

Germ cell mutagenicity: Not available.

Carcinogenicity: Not established: IARC, NTP, EU, OSHA, ACGIH

Reproductive toxicity: Not available.
Specific target organ toxicity: Not available.
Aspiration hazard: Not available

Polyoxin D Zinc Salt Technical

Germ cell mutagenicity:

Genotoxicity- in vitro: Ames test: Negative
Genotoxicity- in vivo: Micronucleus test (Mammalian erythrocyte): Negative

Carcinogenicity: No evidence of carcinogenicity and other adverse effects were observed at the highest dose tested. (Combined long-term toxicity and carcinogenicity test, 2 years)

Reproductive toxicity:

Reproductive toxicity- fertility No adverse effects were observed at the highest dosage tested (Two generation reproductive toxicity study)

Reproductive toxicity, development No effects for developmental toxicity were observed at highest dose tested. (Teratogenicity study)

11.2 Reference to other sections

See Section 4 for symptoms and acute and delayed effects.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity: This product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

	Polyoxin D Zinc Salt Technical
Acute toxicity- fish	LC ₅₀ , 96 hours: > 100 mg/l, Fish
Acute toxicity- aquatic invertebrates	EC ₅₀ , 48 hours: 1.4 mg/l, Daphnia magna
Acute toxicity- aquatic plants	EbC ₅₀ , 0-72 hours: 6.47 mg/l, Algae ErC ₅₀ , 24-72 hours: 7.01 mg/l, Algae
Acute toxicity- terrestrial	Acute oral LD ₅₀ , 96 hours: 28.774 µg/bee, Apis Mellifera (Honeybee) Acute contact LD ₅₀ , 48 hours: >100 µg/bee, Apis Mellifera (Honeybee)

- 12.2. Persistence and degradability** This product is degraded by hydrolysis.
- 12.3. Bioaccumulative potential** No data available on bioaccumulation
- 12.4. Mobility in soil** No data available.
- 12.5. Other adverse effects** Not known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal Instructions: Dispose of waste to licensed waste disposal site in accordance with the requirements of the local waste authority.

EPA Label Disposal Instructions:

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

Pesticide Storage: Store in a dry place away from food or feed.

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

Container Handling: Nonrefillable container. Do not use or refill this container. Completely empty container into application equipment. 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 or reconditioning (if available), or puncture and dispose of in a sanitary landfill or by incineration, if allowed by state and local authorities. If burned, stay out of the smoke.

SECTION 14: Transportation information

This product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DoT)

Road transport notes: Not regulated

Rail transport notes: Not regulated

Sea transport notes: Not regulated

Air transport notes: Not regulated

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.
TMDG subsidiary risk
ICAO subsidiary risk

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous: No.

14.6. Special precautions for user

Not applicable.

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

Not applicable.

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

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin and clothing.

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

Remove and wash contaminated clothing before reuse.

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

Safety Assessments

Safety assessments have been carried out by U.S. EPA (Reg. No. 68173-1,4,5)
U.S. EPA has established a tolerance exemption of Polyoxin D zinc salt in or on all food commodities (40 CFR 180.1285)

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., LLC