



Material Safety Data Sheet

The Dow Chemical Company

Product Name: DOWICIDE* 25L Antimicrobial

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The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

DOWICIDE* 25L Antimicrobial

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
United States

Customer Information Number:

800-258-2436

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:

989-636-4400

Local Emergency Contact:

989-636-4400

2. Hazards Identification

Emergency Overview

Color: Yellow to brown

Physical State: Suspension

Odor: Ether

Hazards of product:

DANGER! Keep out of reach of children. Causes severe eye burns. Causes severe skin burns. Causes burns of the mouth and throat. Causes respiratory tract irritation. Harmful if swallowed. Aspiration hazard. Can enter lungs and cause damage. Evacuate area. Keep upwind of spill. Highly toxic to fish and/or other aquatic organisms. Possible cancer hazard. May cause cancer based on animal data.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Skin Contact: Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage. Orthophenyl phenol may be released if product is heated. 2-Phenylphenol has been reported to produce depigmentation (white patches) on skin of experimental animals when given orally but not by skin contact, and in humans only at concentrations that were significantly irritating to the skin. 2-Phenylphenol has not been found to cause depigmentation when present at low concentrations used in disinfectant formulations. 2-Phenylphenol (OPP) has important structural differences from the substituted phenols which are known to cause depigmentation at use dilutions in disinfectants.

Skin Sensitization: Skin contact may cause an allergic skin reaction in a small proportion of individuals.

Inhalation: Excessive exposure may cause severe irritation to the upper respiratory tract (nose and throat). Vapor from heated material or mist may cause respiratory irritation.

Respiratory Sensitization: May cause allergic respiratory response in a small proportion of individuals.

Ingestion: Moderate toxicity if swallowed. Swallowing may result in burns of the mouth and throat. May rarely cause allergic reactions in small proportion of individuals. Symptoms may include skin reactions, stomach cramps and diarrhea, asthma-like symptoms, and, in severe cases, shock and unconsciousness. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause serious injury, even death.

Aspiration hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

Effects of Repeated Exposure: Based on information for component(s): In animals, effects have been reported on the following organs: Bladder. Kidney. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects. Orthophenyl phenol may be released if product is heated. In animals, effects have been reported on the following organs: Kidney. Liver. Bladder.

Cancer Information: Sodium o-phenylphenate has been shown to cause bladder tumors when fed at exaggerated doses to rats. Under typical use patterns, the long term risk of human health effects of OPP and the sodium salt are negligible. Orthophenyl phenol may be released if product is heated. Ortho-phenylphenol has been shown to produce urinary bladder tumors in male rats and liver tumors in male mice fed exaggerated doses.

Birth Defects/Developmental Effects: The data presented are for the following material: Ortho phenyl phenol (OPP). Orthophenyl phenol may be released if product is heated. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

3. Composition Information

Component	CAS #	Amount
Sodium o-phenylphenate	132-27-4	25.3 %
Propylene glycol	57-55-6	<= 6.0 %
Sodium hydroxide	1310-73-2	<= 1.5 %

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

Skin Contact: Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Safety shower should be located in immediate work area.

Eye Contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Eye wash fountain should be located in immediate work area.

Ingestion: Call a 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 the poison control center or doctor. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Maintain adequate ventilation and oxygenation of the patient. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. Probable mucosal damage may contraindicate the use of gastric lavage. Treat allergic reaction with antihistamines and consider steroids and epinephrine, if reaction is severe. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. Fire Fighting Measures

Suitable extinguishing media

To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Evacuate area. Refer to Section 7, Handling, for additional precautionary measures. Only trained and properly protected personnel must be involved in clean-up operations. Keep upwind of spill. Ventilate area of leak or spill. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Keep out of reach of children. Do not get in eyes, on skin, on clothing. Do not swallow. Avoid breathing vapor. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Do not store in: Aluminum. See Section 10 for more specific information.

Shelf life: Use within 24 Months

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Sodium o-phenylphenate	Dow IHG	TWA	1 mg/m3
Propylene glycol	WEEL	TWA Aerosol.	10 mg/m3
Sodium hydroxide	ACGIH	Ceiling	2 mg/m3
	OSHA Table Z-1	PEL	2 mg/m3

Personal Protection

Eye/Face Protection: Use chemical goggles.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Polyvinyl alcohol ("PVA").

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties**Appearance****Physical State**

Suspension

Color

Yellow to brown

Odor

Ether

Odor Threshold

No test data available

pH13.6 *Calculated***Melting Point**

Not applicable

Freezing Point

No test data available

Boiling Point (760 mmHg)100 °C (212 °F) *Measured* .**Flash Point - Closed Cup**

None

Evaporation Rate (Butyl Acetate = 1)

No test data available

Flammability (solid, gas)

No

Flammable Limits In Air**Lower:** No test data available**Upper:** No test data available**Vapor Pressure***Measured* Same as water**Vapor Density (air = 1)**

No test data available

Specific Gravity (H₂O = 1)1.1047 *Calculated***Solubility in water (by weight)**100 % @ 25 °C *Literature* Miscible with water in all proportions**Partition coefficient, n-octanol/water (log Pow)**

No test data available

Autoignition Temperature

No test data available

Decomposition Temperature

No test data available

Dynamic Viscosity4.96 mPa.s @ 25 °C *OECD 114***Kinematic Viscosity**4.49 cSt @ 25 °C *Calculated***Explosive properties**

no data available

Oxidizing properties

no data available

Molecular Weight

No test data available

10. Stability and Reactivity**Reactivity**

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to Avoid: Some components of this product can decompose at elevated temperatures.**Incompatible Materials:** Avoid contact with strong acids. Avoid contact with oxidizing materials.

Flammable hydrogen may be generated from contact with metals such as: Aluminum.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD50 has not been determined.

Dermal

The dermal LD50 has not been determined.

Inhalation

As product: The LC50 has not been determined.

Eye damage/eye irritation

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Skin corrosion/irritation

Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage. Orthophenyl phenol may be released if product is heated. 2-Phenylphenol has been reported to produce depigmentation (white patches) on skin of experimental animals when given orally but not by skin contact, and in humans only at concentrations that were significantly irritating to the skin. 2-Phenylphenol has not been found to cause depigmentation when present at low concentrations used in disinfectant formulations. 2-Phenylphenol (OPP) has important structural differences from the substituted phenols which are known to cause depigmentation at use dilutions in disinfectants.

Sensitization

Skin

Skin contact may cause an allergic skin reaction in a small proportion of individuals.

Respiratory

May cause allergic respiratory response in a small proportion of individuals.

Repeated Dose Toxicity

Based on information for component(s): In animals, effects have been reported on the following organs: Bladder. Kidney. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects. Orthophenyl phenol may be released if product is heated. In animals, effects have been reported on the following organs: Kidney. Liver. Bladder.

Chronic Toxicity and Carcinogenicity

Sodium o-phenylphenate has been shown to cause bladder tumors when fed at exaggerated doses to rats. Under typical use patterns, the long term risk of human health effects of OPP and the sodium salt are negligible. Orthophenyl phenol may be released if product is heated. Ortho-phenylphenol has been shown to produce urinary bladder tumors in male rats and liver tumors in male mice fed exaggerated doses.

Carcinogenicity Classifications:

Component	List	Classification
Sodium o-phenylphenate	IARC	Possibly carcinogenic to humans.; 2B

Developmental Toxicity

The data presented are for the following material: Ortho phenyl phenol (OPP). Orthophenyl phenol may be released if product is heated. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For the major component(s): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive Toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

Genetic Toxicology

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. The data presented are for the following material: Ortho phenyl phenol (OPP). Orthophenyl phenol may be released if product is heated. In vitro genetic toxicity studies were negative in some cases and positive in other cases. Contains component(s) which were negative in animal genetic toxicity studies.

12. Ecological Information

Toxicity

Data for Component: **Sodium o-phenylphenate**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm). Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg).

Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), flow-through test, 96 h: 2.6 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, *Daphnia magna* (Water flea): 3.8 mg/l

LC50, saltwater mysid *Mysidopsis bahia*, flow-through test, 96 h, survival: 0.32 mg/l

Aquatic Plant Toxicity

EC50, diatom *Navicula* sp., static test, Growth inhibition (cell density reduction), 96 h: 1.9 mg/l

EC50, *Skeletonema costatum*, static test, Growth inhibition (cell density reduction), 96 h: 6.4 mg/l

Based on information for a similar material: Ortho phenyl phenol (OPP). EC50, alga *Scenedesmus* sp., static test, biomass growth inhibition, 72 h: 0.85 mg/l

Toxicity to Above Ground Organisms

oral LD50, *Colinus virginianus* (Bobwhite quail): 1,000 mg/kg

dietary LC50, *Colinus virginianus* (Bobwhite quail): > 5,620 mg/kg

dietary LC50, *Anas platyrhynchos* (Mallard duck): > 5,620 mg/kg

Data for Component: **Propylene glycol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 h: 40,613 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, *Ceriodaphnia Dubia* (water flea), static test, 48 h: 18,340 mg/l

Aquatic Plant Toxicity

ErC50, *Pseudokirchneriella subcapitata* (green algae), Growth rate inhibition, 96 h: 19,000 mg/l

Toxicity to Micro-organisms

NOEC, no data available; *Pseudomonas putida*, 18 h: > 20,000 mg/l

Aquatic Invertebrates Chronic Toxicity Value

Ceriodaphnia Dubia (water flea), semi-static test, 7 d, reproduction, NOEC: 13020 mg/l

Data for Component: **Sodium hydroxide**

May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

Persistence and Degradability

Data for Component: **Sodium o-phenylphenate**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
88 %	28 d	OECD 301B Test	pass
47 - 86 %	14 d	OECD 302C Test	Not applicable

Data for Component: **Propylene glycol**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
81 %	28 d	OECD 301F Test	pass
96 %	64 d	OECD 306 Test	Not applicable

Indirect Photodegradation with OH Radicals			
Rate Constant	Atmospheric Half-life		Method
1.28E-11 cm3/s	10 h		Estimated.
Biological oxygen demand (BOD):			
BOD 5	BOD 10	BOD 20	BOD 28
69.000 %	70.000 %	86.000 %	
Chemical Oxygen Demand: 1.53 mg/mg			
Theoretical Oxygen Demand: 1.68 mg/mg			

Data for Component: **Sodium hydroxide**

Biodegradation is not applicable.

Bioaccumulative potential

Data for Component: **Sodium o-phenylphenate**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Data for Component: **Propylene glycol**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -1.07 Measured

Bioconcentration Factor (BCF): 0.09; Estimated.

Data for Component: **Sodium hydroxide**

Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility.

Mobility in soil

Data for Component: **Sodium o-phenylphenate**

Mobility in soil: No data available.

Data for Component: **Propylene glycol**

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): < 1 Estimated.

Henry's Law Constant (H): 1.2E-08 atm*m³/mole Measured

Data for Component: **Sodium hydroxide**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 14 Estimated.

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred option is to contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. The preferred option in other jurisdictions is to contact the regulatory authority for this product for guidance.

14. Transport Information

DOT Non-Bulk

Proper Shipping Name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.

Technical Name: SODIUM O-PHENYLPHENATE TETRAHYDRATE**Hazard Class:** 8 **ID Number:** UN3267 **Packing Group:** PG II**DOT Bulk****Proper Shipping Name:** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.**Technical Name:** SODIUM O-PHENYLPHENATE TETRAHYDRATE**Hazard Class:** 8 **ID Number:** UN3267 **Packing Group:** PG II**IMDG****Proper Shipping Name:** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.**Technical Name:** SODIUM O-PHENYLPHENATE TETRAHYDRATE**Hazard Class:** 8 **ID Number:** UN3267 **Packing Group:** PG II**EMS Number:** F-A,S-B**Marine pollutant.:** Yes**ICAO/IATA****Proper Shipping Name:** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.**Technical Name:** SODIUM O-PHENYLPHENATE TETRAHYDRATE**Hazard Class:** 8 **ID Number:** UN3267 **Packing Group:** PG II**Cargo Packing Instruction:** 855**Passenger Packing Instruction:** 851**Additional Information**

MARINE POLLUTANT

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**Immediate (Acute) Health Hazard** Yes**Delayed (Chronic) Health Hazard** Yes**Fire Hazard** No**Reactive Hazard** No**Sudden Release of Pressure Hazard** No**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Sodium o-phenylphenate	132-27-4	<= 26.5 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Propylene glycol	57-55-6	<= 6.0 %
Sodium hydroxide	1310-73-2	<= 1.5 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS #	Amount
Sodium o-phenylphenate	132-27-4	<= 26.5 %

US. Toxic Substances Control Act

This product contains chemical substance(s) exempt from TSCA Inventory requirements. It is sold solely for use as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	3	0	0

Recommended Uses and Restrictions**Identified uses**

For biocidal applications. For industrial use.

Revision

Identification Number: 51204 / 1001 / Issue Date 05/02/2012 / Version: 5.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is

the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.