

1 Identification

· Product identifier

· Trade name: **Zing!® Fungicide**

EPA Registration No.: 10163-331

· CAS Number:

Active Ingredient: Chlorothalonil (40.0%), CAS: 1897-45-6

Zoxamide (6.8%), CAS: 156052-68-5

· Application of the substance / the mixture Agricultural fungicide

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Gowan Company

P.O. Box 5569

Yuma, Arizona 85366-5569

(928) 783-8844

· Information department: sds@gowanco.com

· Emergency telephone number:

Chemtrec® Emergency Telephone 24 - Hours: (Spills, leak or fire) Inside U.S. & Canada: (800) 424-9300

Outside the U.S. & Canada: +011 (703) 527-3887

For medical emergency (Prosar®): (888) 478-0798

2 Hazard(s) identification

· Classification of the substance or mixture



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

· Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS07

· Signal word Warning

· Hazard-determining components of labeling:

chlorothalonil (ISO)

· Hazard statements

Harmful if swallowed or if inhaled.

· Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

If swallowed: Call a poison center/doctor if you feel unwell.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a poison center/doctor if you feel unwell.

Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA

Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 1)

· **Hazard description:**

Harmful if swallowed, absorbed through skin or inhaled. Causes Moderate Eye Irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



HAZARD INDEX:

4 Severe Hazard
 3 Serious Hazard
 2 Moderate Hazard
 1 Slight Hazard
 0 Minimal Hazard

· **HMIS-ratings (scale 0 - 4)**



HAZARD INDEX:

4 Severe Hazard
 3 Serious Hazard
 2 Moderate Hazard
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 0 Minimal Hazard

· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable in US.
- **vPvB:** Not applicable in US.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

1897-45-6	chlorothalonil (ISO) ⚠ Acute Tox. 2, H330; ⚠ Carc. 2, H351; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	40.0%
156052-68-5	zoxamide (ISO) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317	6.8%

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

For emergency information concerning this product, contact 1-888-478-0798, day or night.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA

Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 2)

- **After 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 further treatment advice.
- **After 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.
- **After eye contact:**
 - Hold eye open and rinse slowly and gently with water for 15-20 minutes.
 - Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.
 - Call a poison control center or doctor for treatment advice.
- **After swallowing:**
 - 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 a poison control center or doctor.
 - Do not give anything by mouth to an unconscious person.
- **Information for doctor:**
 - **Most important symptoms and effects, both acute and delayed** Unknown
 - **Indication of any immediate medical attention and special treatment needed** None

* 5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
 - Carbon monoxide (CO)
 - Hydrogen chloride (HCl)
 - Nitrogen oxides (NO_x)
- **Advice for firefighters**
 - **Protective equipment:** Wear self-contained respiratory protective device.

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
This product is toxic to fish, aquatic invertebrates and wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.
- **Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
- **Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

US

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA

Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 3)

7 Handling and storage

· Handling:

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.

· **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

· Conditions for safe storage, including any incompatibilities

· Storage:

· **Requirements to be met by storerooms and receptacles:**

Store product in original container only, away from other pesticides, fertilizers, food or feed.

· **Information about storage in one common storage facility:** Store away from foodstuffs.

· **Further information about storage conditions:** Keep receptacle tightly sealed.

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· Control parameters

· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the creation were used as basis.

· Exposure controls

· **Personal protective equipment:**

· **General protective and hygienic measures:**

• Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

• Remove PPE immediately after handling this product.

• Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and change into clean clothing.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves** Chemical-resistant gloves.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA

Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 4)

· **Eye protection:**

Safety glasses

· **Body protection:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material.
- Shoes plus socks

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

- **Form:** Liquid
- **Color:** White
- **Odor:** Paint-like
- **Odour threshold:** Not determined.

· **pH-value at 20 °C (68 °F):** 6.8· **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:**· **Decomposition temperature:** Not determined.· **Auto igniting:** Product is not self-igniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:**

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Vapor pressure:** Not determined.· **Density at 20 °C (68 °F):** 1.25 g/cm³ (10.431 lbs/gal)

- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**· **Water:** Dispersible.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA

Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 5)

· **Other information** *No further relevant information available.*

10 Stability and reactivity

- **Reactivity** *No further relevant information available.*
- **Chemical stability** *Stable under normal conditions*
 - **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Conditions to avoid** *Excessive heat.*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:**
 - Carbon monoxide (CO)*
 - Nitrogen oxides*
 - Hydrogen chloride (HCl)*

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

<i>Oral</i>	<i>LD50</i>	<i>1750 - 5000 mg/kg (rat)</i>
<i>Dermal</i>	<i>LD50</i>	<i>>5000 mg/kg (rat)</i>
<i>Inhalative</i>	<i>LC50/4 h</i>	<i>>2.13 mg/l (rat)</i>

- **Primary irritant effect:**
 - **on the skin:** *Slightly irritating*
 - **on the eye:** *Mild irritation*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

 - Irritant*
 - Very toxic*

· **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
<i>1897-45-6</i>	<i>chlorothalonil (ISO)</i>	<i>2B</i>

· **NTP (National Toxicology Program)**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

- **Toxicity**

This product is toxic to fish, aquatic invertebrates and wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water or rinsate.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA

Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 6)

Groundwater Advisory

This chemical is known to leach through soil into groundwater under certain conditions as a result of labeled use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Surface Water Advisory

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water for several days to weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with infield canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips and areas over-laying tile drainage systems that drain to surface water.

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
 - **Remark:** Very toxic for fish
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

* 13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:**
Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.
- **Uncleaned packagings:**
 - **Recommendation:**
Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container 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 1/4 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.

* 14 Transport information

- | | |
|--|--|
| <ul style="list-style-type: none"> · UN-Number · DOT · ADR, IMDG, IATA | <p>Not regulated
UN3082</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · ADR | <p>3082 Environmentally hazardous substances, liquid, n.o.s.</p> |

(Contd. on page 8)

US

Safety Data Sheet

acc. to OSHA

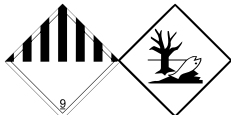
Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 7)

· IMDG	<i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (chlorothalonil (ISO), zoxamide (ISO)), MARINE POLLUTANT</i>
· IATA	<i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</i>

· **Transport hazard class(es)**· **ADR, IMDG, IATA**

· Class	<i>9 Miscellaneous dangerous substances and articles</i>
· Label	<i>9</i>

· **Packing group**· **ADR, IMDG, IATA** *II*

· Environmental hazards:	<i>Product contains environmentally hazardous substances: chlorothalonil (ISO), zoxamide (ISO)</i>
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· Marine pollutant:	<i>Yes</i>
	<i>Symbol (fish and tree)</i>

· Special marking (ADR):	<i>Symbol (fish and tree)</i>
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· Special marking (IATA):	<i>Symbol (fish and tree)</i>
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· **Special precautions for user***Warning: Miscellaneous dangerous substances and articles*

· Danger code (Kemler):	<i>60</i>
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· EMS Number:	<i>F-A,S-F</i>
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· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	<i>Not applicable</i>
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· **Transport/Additional information:**· **ADR**

· Excepted quantities (EQ)	<i>Code: E4</i>
	<i>Maximum net quantity per inner packaging: 1 ml</i>
	<i>Maximum net quantity per outer packaging: 500 ml</i>

· **IMDG**

· Limited quantities (LQ)	<i>100 ml</i>
· Excepted quantities (EQ)	<i>Code: E4</i>
	<i>Maximum net quantity per inner packaging: 1 ml</i>
	<i>Maximum net quantity per outer packaging: 500 ml</i>

· **UN "Model Regulation":**

<i>US DOT for Non Bulk:</i>	<i>Not regulated</i>
<i>All OTHERS including Bulk containers:</i>	<i>UN3082, Environmentally hazardous substances, liquid, n.o.s., 9, II</i>

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

EPA /FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA

Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 8)

hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

· **SARA Title III**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

1897-45-6 chlorothalonil (ISO)

· **TSCA (Toxic Substances Control Act):**

1897-45-6 chlorothalonil (ISO)

· **Proposition 65**

· **Chemicals known to cause cancer:**

1897-45-6 chlorothalonil (ISO)

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

Not applicable



GHS07

· **Signal word**

(US EPA) CAUTION

Warning

· **Hazard-determining components of labeling:**

chlorothalonil (ISO)

· **Hazard statements**

Harmful if absorbed through the skin or inhaled.

Causes moderate eye irritation.

Avoid contact with skin, eyes, or clothing.

Avoid breathing spray mist of vapor.

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

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA

Printing date 08/31/2015

Reviewed on 08/31/2015

Trade name: Zing!® Fungicide
EPA Registration No.: 10163-331

(Contd. of page 9)

Remove contaminated clothing and wash before reuse.

Harmful if swallowed or if inhaled.

· Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash thoroughly after handling.

If swallowed: Call a poison center/doctor if you feel unwell.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a poison center/doctor if you feel unwell.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Supply Chain

· Contact: sds@gowanco.com

· Date of preparation / last revision 08/31/2015 / 5

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity, Hazard Category 4

Acute Tox. 2: Acute toxicity, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

· Sources Zing!® is a registered trademark used under license by Gowan Company, LLC.

· * Data compared to the previous version altered.