

**BRAVO ZNC**

Version 1.1      Revision Date: 10/11/2019      SDS Number: S00055824539      This version replaces all previous versions.

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**SECTION 1. IDENTIFICATION**

Product name : BRAVO ZNC  
Design code : A7867G  
Product Registration number : 33515  
Other means of identification : No data available

**Manufacturer or supplier's details**

Company name of supplier : Syngenta Canada Inc.  
Address : 140 Research Lane, Research Park  
Guelph ON N1G 4Z3  
Canada  
Telephone : 1-87-SYNGENTA (1-877-964-3682)  
Telefax : 1-519-823-0504  
Emergency telephone number : 1-800-327-8633 (FAST MED)

**Recommended use of the chemical and restrictions on use**

Recommended use : Fungicide

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**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the Hazardous Products Regulations**

Acute toxicity (Inhalation) : Category 4  
Eye irritation : Category 2A  
Skin sensitisation : Category 1  
Carcinogenicity : Category 2  
Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

**GHS label elements**

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.

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P202 Do not handle until all safety precautions have been read and understood.  
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
 P264 Wash skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.  
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.

### Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Components

| Chemical name        | CAS-No.   | Concentration (% w/w) |
|----------------------|-----------|-----------------------|
| chlorothalonil (ISO) | 1897-45-6 | 38.4911               |
| zinc oxide           | 1314-13-2 | >= 5 - < 10           |
| propane-1,2-diol     | 57-55-6   | >= 1 - < 5            |

Actual concentration or concentration range is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.

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|   |   |   |
|---|---|---|
| If inhaled  | : | Move the victim to fresh air.<br>If breathing is irregular or stopped, administer artificial respiration.<br>Keep patient warm and at rest.<br>Call a physician or poison control centre immediately. |
| In case of skin contact                                     | : | Take off all contaminated clothing immediately.<br>Wash off immediately with plenty of water.<br>If skin irritation persists, call a physician.<br>Wash contaminated clothing before re-use.          |
| In case of eye contact                                      | : | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.<br>Remove contact lenses.<br>Immediate medical attention is required.  |
| If swallowed  | : | If swallowed, seek medical advice immediately and show this container or label.<br>Do NOT induce vomiting.  |
| Most important symptoms and effects, both acute and delayed | : | Nonspecific<br>No symptoms known or expected.   |
| Notes to physician  | : | There is no specific antidote available.<br>Treat symptomatically.  |

### SECTION 5. FIREFIGHTING MEASURES

|   |   |  |
|---|---|--|
| Suitable extinguishing media                  | : | Extinguishing media - small fires<br>Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.<br>Extinguishing media - large fires<br>Alcohol-resistant foam<br>or<br>Water spray                          |
| Unsuitable extinguishing media                | : | Do not use a solid water stream as it may scatter and spread fire.   |
| Specific hazards during fire-fighting         | : | As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).<br>Exposure to decomposition products may be a hazard to health. |
| Further information                           | : | Do not allow run-off from fire fighting to enter drains or water courses.<br>Cool closed containers exposed to fire with water spray.  |
| Special protective equipment for firefighters | : | Wear full protective clothing and self-contained breathing apparatus.  |

### SECTION 6. ACCIDENTAL RELEASE MEASURES

|   |   |   |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Refer to protective measures listed in sections 7 and 8.  |
| Environmental precautions   | : | Prevent further leakage or spillage if safe to do so.<br>Do not flush into surface water or sanitary sewer system.<br>If the product contaminates rivers and lakes or drains inform respective authorities. |

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Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Clean contaminated surface thoroughly.  
Clean with detergents. Avoid solvents.  
Retain and dispose of contaminated wash water.

### SECTION 7. HANDLING AND STORAGE

Advice on safe handling : No special protective measures against fire required.  
Avoid contact with skin and eyes.  
When using do not eat, drink or smoke.  
For personal protection see section 8.

Conditions for safe storage : No special storage conditions required.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Keep out of the reach of children.  
Keep away from food, drink and animal feedingstuffs.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

| Components           | CAS-No.   | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis     |
|----------------------|-----------|-------------------------------|--|-----------|
| chlorothalonil (ISO) | 1897-45-6 | TWA                           | 0.1 mg/m <sup>3</sup>                          | Syngenta  |
| zinc oxide           | 1314-13-2 | TWA (Respirable)              | 2 mg/m <sup>3</sup>                            | CA AB OEL |
|                      |           | STEL (Respirable)             | 10 mg/m <sup>3</sup>                           | CA AB OEL |
|                      |           | TWA (Respirable)              | 2 mg/m <sup>3</sup>                            | CA BC OEL |
|                      |           | STEL (Respirable)             | 10 mg/m <sup>3</sup>                           | CA BC OEL |
|                      |           | TWAEV (Fumes)                 | 5 mg/m <sup>3</sup>                            | CA QC OEL |
|                      |           | TWAEV (total dust)            | 10 mg/m <sup>3</sup>                           | CA QC OEL |
|                      |           | STEV (Fumes)                  | 10 mg/m <sup>3</sup>                           | CA QC OEL |
|                      |           | TWA (Respirable fraction)     | 2 mg/m <sup>3</sup>                            | ACGIH     |
|                      |           | STEL (Respirable fraction)    | 10 mg/m <sup>3</sup>                           | ACGIH     |
| propane-1,2-diol     | 57-55-6   | TWA (Vapour and aerosols)     | 50 ppm<br>155 mg/m <sup>3</sup>                | CA ON OEL |
|                      |           | TWA (aerosol)                 | 10 mg/m <sup>3</sup>                           | CA ON OEL |

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**Engineering measures** : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.

Where necessary, seek additional occupational hygiene advice.

### Personal protective equipment

**Respiratory protection** : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
Suitable respiratory equipment:  
Respirator with a half face mask  
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

**Hand protection**

**Remarks** : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

**Eye protection** : Tightly fitting safety goggles  
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

**Skin and body protection** : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate:

Impervious clothing

**Protective measures** : The use of technical measures should always have priority over the use of personal protective equipment.

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When selecting personal protective equipment, seek appropriate professional advice.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

|  |   |  |
|--|---|--|
| Appearance                                       | : | suspension, viscous                                      |
| Colour   | : | grey   |
| Odour  | : | Weak, uncharacteristic                                   |
| Odour Threshold                                  | : | No data available  |
| pH   | : | 7.5 - 9.5  |
| Melting point/range                              | : | -5 °C  |
| Boiling point/boiling range                      | : | No data available  |
| Flash point                                      | : | No data available  |
| Evaporation rate                                 | : | No data available  |
| Flammability (solid, gas)                        | : | No data available  |
| Upper explosion limit / Upper flammability limit | : | No data available  |
| Lower explosion limit / Lower flammability limit | : | No data available  |
| Vapour pressure                                  | : | No data available  |
| Relative vapour density                          | : | No data available  |
| Density  | : | 1.299 g/cm <sup>3</sup>                                  |
| Solubility(ies)                                  | : |  |
| Solubility in other solvents                     | : | dispersible<br>Solvent: Water                            |
| Partition coefficient: n-octanol/water           | : | No data available  |
| Auto-ignition temperature                        | : | No data available  |
| Decomposition temperature                        | : | No data available  |
| Viscosity  | : |  |
| Viscosity, dynamic                               | : | No data available  |
| Explosive properties                             | : | Not explosive  |
| Oxidizing properties                             | : | The substance or mixture is not classified as oxidizing. |

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**SECTION 10. STABILITY AND REACTIVITY**

|                                    |   |   |
|------------------------------------|---|---|
| Reactivity                         | : | None reasonably foreseeable.                                |
| Chemical stability                 | : | Stable under normal conditions.                             |
| Possibility of hazardous reactions | : | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid                | : | No decomposition if used as directed.                       |
| Incompatible materials             | : | None known.   |
| Hazardous decomposition products   | : | No hazardous decomposition products are known.              |

**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Ingestion  
Inhalation  
Skin contact  
Eye contact  
Skin contact  
Eye contact

**Acute toxicity****Product:**

|                           |   |   |
|---------------------------|---|---|
| Acute oral toxicity       | : | LD50 (Rat, male and female): 4,200 mg/kg<br>Remarks: Based on data from similar materials   |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): > 1.96 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Assessment: The component/mixture is moderately toxic after short term inhalation.<br>Remarks: Based on data from similar materials |
| Acute dermal toxicity     | : | LD50 (Rat, male and female): > 20,000 mg/kg<br>Remarks: Based on data from similar materials  |

**Components:****chlorothalonil (ISO):**

|                           |   |  |
|---------------------------|---|--|
| Acute oral toxicity       | : | LD50 (Rat, male and female): > 5,000 mg/kg   |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): 0.10 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist |
| Acute dermal toxicity     | : | LD50 (Rat, male and female): > 5,000 mg/kg   |

**Skin corrosion/irritation****Product:**

|         |   |                    |
|---------|---|--------------------|
| Species | : | Rabbit             |
| Result  | : | No skin irritation |

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Remarks : Based on data from similar materials

### Components:

#### chlorothalonil (ISO):

Species : Rabbit  
Result : No skin irritation

#### Serious eye damage/eye irritation

### Product:

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days  
Remarks : Based on data from similar materials

### Components:

#### chlorothalonil (ISO):

Species : Rabbit  
Result : Risk of serious damage to eyes.

#### Respiratory or skin sensitisation

### Product:

Test Type : Buehler Test  
Species : Guinea pig  
Result : May cause sensitisation by skin contact.  
Remarks : Based on data from similar materials

### Components:

#### chlorothalonil (ISO):

Species : Guinea pig  
Result : May cause sensitisation by skin contact.  
Remarks : In very rare cases may cause an allergic response of the respiratory system.

#### Germ cell mutagenicity

### Components:

#### chlorothalonil (ISO):

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

#### Carcinogenicity

### Components:

#### chlorothalonil (ISO):

Carcinogenicity - Assessment : Chlorothalonil causes kidney tumours in rats and mice via a non-gentoxic mode of action secondary to target organ toxicity.



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, Limited evidence of carcinogenicity in animal studies

### Reproductive toxicity

#### Components:

#### chlorothalonil (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

#### STOT - single exposure

#### Components:

#### chlorothalonil (ISO):

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

### Repeated dose toxicity

#### Components:

#### chlorothalonil (ISO):

Remarks : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.195 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.18 mg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 0.52 mg/l  
Exposure time: 72 h  
Remarks: Based on data from similar materials

#### Components:

#### chlorothalonil (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.039 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.07 mg/l  
Exposure time: 48 h

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- Toxicity to algae/aquatic plants : ErC50 (Navicula pelliculosa (Freshwater diatom)): 0.02 mg/l  
Exposure time: 96 h
- NOEC (Navicula pelliculosa (Freshwater diatom)): 0.0035 mg/l  
End point: Growth rate  
Exposure time: 96 h
- ErC50 (Skeletonema costatum (marine diatom)): 0.017 mg/l  
Exposure time: 96 h
- NOEC (Skeletonema costatum (marine diatom)): 0.012 mg/l  
End point: Growth rate  
Exposure time: 96 h
- M-Factor (Acute aquatic toxicity) : 10
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.003 mg/l  
Exposure time: 297 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.035 mg/l  
Exposure time: 21 d
- NOEC (Americamysis): 0.00083 mg/l  
Exposure time: 28 d
- M-Factor (Chronic aquatic toxicity) : 100

### zinc oxide:

#### Ecotoxicology Assessment

- Acute aquatic toxicity : Very toxic to aquatic life.
- Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

#### Persistence and degradability

##### Components:

##### chlorothalonil (ISO):

- Stability in water : Degradation half life: < 5 d (20 °C)  
Remarks: Product is not persistent.

#### Bioaccumulative potential

##### Components:

##### chlorothalonil (ISO):

- Bioaccumulation : Remarks: Low bioaccumulation potential.
- Partition coefficient: n-octanol/water : log Pow: 2.94 (25 °C)

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### Mobility in soil

#### Components:

##### chlorothalonil (ISO):

|   |   |   |
|---|---|---|
| Distribution among environmental compartments | : | Remarks: Chlorothalonil has low to slight mobility in soil.   |
| Stability in soil                             | : | Dissipation time: 7 d<br>Percentage dissipation: 50 % (DT50)<br>Remarks: Product is not persistent. |

### Other adverse effects

#### Product:

|                                   |   |   |
|-----------------------------------|---|---|
| Additional ecological information | : | Classification of the product is based on the summation of the concentrations of classified components. |
|-----------------------------------|---|---|

#### Components:

##### chlorothalonil (ISO):

|                                    |   |   |
|------------------------------------|---|---|
| Results of PBT and vPvB assessment | : | This substance is not considered to be very persistent and very bioaccumulating (vPvB). This substance is not considered to be persistent, bioaccumulating and toxic (PBT). |
|------------------------------------|---|---|

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

|                        |   |   |
|------------------------|---|---|
| Waste from residues    | : | Refer to the product label for specific disposal/recycling information<br>Do not contaminate ponds, waterways or ditches with chemical or used container.<br>Do not dispose of waste into sewer.<br>Where possible recycling is preferred to disposal or incineration.<br>If recycling is not practicable, dispose of in compliance with local regulations. |
| Contaminated packaging | : | Refer to the product label for specific disposal/recycling information<br>Empty remaining contents.<br>Triple rinse containers.<br>Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>Do not re-use empty containers.  |

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

|                      |   |   |
|----------------------|---|---|
| UN number            | : | UN 3082   |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(CHLOROTHALONIL) |

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 Packing group : III  
 Labels : 9

### IATA-DGR

UN/ID No. : UN 3082  
 Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (CHLOROTHALONIL)  
 Class : 9  
 Packing group : III  
 Labels : Class 9 - Miscellaneous dangerous substances and articles  
 Packing instruction (cargo aircraft) : 964  
 Packing instruction (passenger aircraft) : 964  
 Environmentally hazardous : yes

### IMDG-Code

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 EmS Code : F-A, S-F  
 Marine pollutant : yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### TDG

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 ERG Code : 171  
 Marine pollutant : yes(CHLOROTHALONIL)

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

Class 9 Exemption from Part 3, Documentation, and Part 4, Dangerous Goods Safety Marks, if transported solely on land by road vehicle or railway vehicle.

1.45.1. SOR/2008-34

## SECTION 15. REGULATORY INFORMATION

Warning, contains the allergen 1,2-benzisothiazolin-3-one

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This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label: Read the label, authorised under the Pest Control Products Act, prior to using or handling the pest control product

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

### Warning

Skull and crossbones

poison

Eye irritant

Potential skin sensitiser

- Canadian PBT Chemicals** : This product contains the following components on the DSL that are classified as Persistent, Bioaccumulative and/or Toxic (PBT) under CEPA:  
octamethylcyclotetrasiloxane
- NPRI Components** : zinc oxide  
trisodium nitrilotriacetate

### The components of this product are reported in the following inventories:

- DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.  
Oxirane, 2-methyl-, polymer with oxirane

### Canadian lists

The following substance(s) is/are subject to a Significant New Activity Notification:  
chlorothalonil (ISO) 1897-45-6

## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

- ACGIH : USA. ACGIH Threshold Limit Values (TLV)
- CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
- CA BC OEL : Canada. British Columbia OEL
- CA ON OEL : Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
- CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
- ACGIH / TWA : 8-hour, time-weighted average
- ACGIH / STEL : Short-term exposure limit
- CA AB OEL / TWA : 8-hour Occupational exposure limit
- CA AB OEL / STEL : 15-minute occupational exposure limit
- CA BC OEL / TWA : 8-hour time weighted average
- CA BC OEL / STEL : short-term exposure limit
- CA ON OEL / TWA : Time-Weighted Average Limit (TWA)
- CA QC OEL / TWAEV : Time-weighted average exposure value
- CA QC OEL / STEV : Short-term exposure value

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AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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