# **CURZATE FUNGICIDE**



Version Revision Date: SDS Number: Date of last issue: -

1.0 04/12/2022 800080000252 Date of first issue: 04/12/2022

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of Canada and may not meet the regulatory requirements in other countries.

#### **SECTION 1. IDENTIFICATION**

Product name : CURZATE FUNGICIDE Other means of identification : No data available

Manufacturer or supplier's details

**COMPANY IDENTIFICATION** 

Manufacturer/importer : CORTEVA AGRISCIENCE CANADA COMPANY

#2450, 215 - 2ND STREET S.W.

CALGARY AB, T2P 1M4

**CANADA** 

**Customer Information** 

Number

: 800-667-3852

E-mail address : solutions@corteva.com

**Emergency telephone** 

number

: CANUTEC

1-888-226-8832

Recommended use of the chemical and restrictions on use

Recommended use : Fungicide

Restrictions on use : Do not use product for anything outside of the above specified

uses.

#### **SECTION 2. HAZARDS IDENTIFICATION**

GHS classification in accordance with the Hazardous Products Regulations

Acute toxicity (Oral) : Category 4

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

**GHS** label elements

Hazard pictograms :





Signal word : Warning

Hazard statements : H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

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Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P261 Avoid breathing dust.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of

the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON

CENTER/ doctor if you feel unwell. Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

None known.

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

#### Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
cymoxanil (ISO)	cymoxanil (ISO)	57966-95-7	60
Sucrose	Sucrose	57-50-1	>= 10 - < 20 *
Alkylnaphthalenesul- fonic acid, polymer with formaldehyde, sodium salt	Alkylnaphtha- lenesulfonic acid, polymer with formalde- hyde, sodium salt	68425-94-5	>= 3 - < 10 *
Fumed silica (generic)	Fumed silica (generic)	112945-52-5	>= 1 - < 3 *
fumaric acid	fumaric acid	110-17-8	>= 1 - < 3 *
Balance	Balance	Not Assigned	> 1

Actual concentration or concentration range is withheld as a trade secret

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#### **SECTION 4. FIRST AID MEASURES**

General advice : Have the product container or label with you when calling a

poison control center or doctor, or going for treatment.

For medical emergencies involving this product, call toll free 1-888-226-8832. See Label for Additional Precautions and Di-

rections for Use.

If inhaled : Move to fresh air.

If person is not breathing, call 111 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

In case of skin contact : Take off all contaminated clothing immediately.

Rinse skin immediately with plenty of water for 15-20 minutes.

Call a poison control center or doctor for treatment advice.

Hold eve open and rinse slowly and gently with water for 15-

In case of eye contact : Hold eye open and rinse slowly and gently with water for 15-

20 minutes.

Remove contact lenses, if present, after the first 5 minutes,

then continue rinsing eye.

Call a poison control center or doctor for treatment advice. If swallowed, call a poison control centre or doctor immediate-

ly.

Have person sip a glass of water if able to swallow.

DO NOT induce vomiting unless directed to do so by a physi-

cian or poison control center.

Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

delayed

If swallowed

Eye contact may provoke the following symptoms:

Conjunctivitis.

Skin contact may provoke the following symptoms:

Local irritation

Inhalation may provoke the following symptoms:

Rhinitis

Ingestion may provoke the following symptoms:

Gastrointestinal disturbance

Nausea Diarrhoea Vomiting

Notes to physician : Treat symptomatically.

#### **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam

Unsuitable extinguishing

media

Dry chemical

Specific hazards during fire-

fighting

Exposure to combustion products may be a hazard to health.

Applying foam will release significant amounts of hydrogen

gas that can be trapped under the foam blanket.

Described the second for the four blanket.

Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion prod: :

ucts

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may

be toxic and/or irritating.

Combustion products may include and are not limited to:

Nitrogen oxides (NOx)

Carbon oxides

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Specific extinguishing meth-

ods

Do not allow extinguishing medium to contact container contents. Most fire extinguishing media will cause hydrogen evolution, and once the fire is put out, may accumulate in poorly ventilated or confined areas and result in flash fire or explo-

sion if ignited.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emer-

gency procedures

Ensure adequate ventilation.

Avoid dust formation. Avoid breathing dust.

Use personal protective equipment.

Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions** 

If the product contaminates rivers and lakes or drains inform

respective authorities.

Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Prevent from entering into soil, ditches, sewers, undwater. See

Section 12, Ecological Information.

Methods and materials for containment and cleaning up

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

employed in.

Pick up and arrange disposal without creating dust.

Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-

pressurization of the container.

Keep in suitable, closed containers for disposal.

Sweep up or vacuum up spillage and collect in suitable con-

tainer for disposal.

See Section 13, Disposal Considerations, for additional infor-

mation.

### **SECTION 7. HANDLING AND STORAGE**

Advice on safe handling : Persons susceptible to skin sensitisation problems or asthma,

allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being

used.

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Provide sufficient air exchange and/or exhaust in work rooms.

Avoid formation of respirable particles.

Do not breathe vapours/dust.

Do not smoke.

Handle in accordance with good industrial hygiene and safety

practice.

Avoid exposure - obtain special instructions before use.

Smoking, eating and drinking should be prohibited in the ap-

plication area.

Do not get on skin or clothing. Avoid inhalation of vapour or mist.

Do not swallow.

Avoid contact with skin and eyes.

Avoid contact with eyes.

Take care to prevent spills, waste and minimize release to the

environment.

Use appropriate safety equipment. For additional information,

refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage : Store in a closed container.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage. Keep in properly labelled containers.

Store in accordance with the particular national regulations.

Materials to avoid : Strong oxidizing agents

Packaging material : Unsuitable material: None known.

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

## Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Sucrose	57-50-1	TWA	10 mg/m3	CA AB OEL
		TWA (Total dust)	10 mg/m3	CA BC OEL
		TWA (respirable dust fraction)	3 mg/m3	CA BC OEL
		TWAEV	10 mg/m3	CA QC OEL
		TWA	10 mg/m3	ACGIH
Fumed silica (generic)	112945-52-5	TWAEV (respirable dust)	6 mg/m3	CA QC OEL
fumaric acid	110-17-8	TWA	10 mg/m3	Dow IHG

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection : Where there is potential for airborne exposures in excess of

applicable limits, wear approved respiratory protection with

dust/mist cartridge.

Provide adequate ventilation.

Hand protection

Remarks : Use gloves chemically resistant to this material. Examples of

preferred glove barrier materials include: Butyl rubber. Natu-

Eve protection

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ral rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). 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 instruc-

tions/specifications provided by the glove supplier.
: Use safety glasses (with side shields).

Skin and body protection : Shoes plus socks

Long sleeved shirt and long pants

Applicators and other handlers must wear:

PPE required for early entry to treated areas that is permitted inaccordance with Provincial and Territorial management programs, and thatinvolves contact with anything that has

been treated, such as plants, soil, or water, is:

Coveralls worn over long-sleeved shirt and long pants Chemical resistant gloves made of any waterproofmaterial

Shoes plus socks

Protective measures : Use this product in accordance with its label.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do

not reuse them.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hotwater. Keep and wash PPE separately from

other laundry.

Hygiene measures : Wash hands thoroughly with soap and water after handling

and before eating, drinking, chewing gum, using tobacco, or

using the toilet.

Remove personal protective equipment immediately after

handling this product.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : solid, granules

Colour : brown

Odour : very faint

Odour Threshold : not determined

pH : No data available

Melting point/range : No data available

Freezing point Not applicable

Boiling point/boiling range : Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

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Flammability (solid, gas) : The product is not flammable.

Upper explosion limit / Upper

flammability limit

: Not applicable

Lower explosion limit / Lower

flammability limit

Not applicable

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : No data available

Density : No data available

Bulk density : 768 kg/m3

Solubility(ies)

Water solubility : dispersible

Partition coefficient: n-

octanol/water

Not applicable

Auto-ignition temperature : Not applicable

Viscosity

Viscosity, dynamic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

#### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : No decomposition if stored and applied as directed.

Stable under normal conditions.

Possibility of hazardous reac-

tions

Stable under recommended storage conditions.

No hazards to be specially mentioned.

None known. None known.

Conditions to avoid : None known Incompatible materials : Strong acids

Strong bases

Hazardous decomposition

products

Decomposition products depend upon temperature, air supply

and the presence of other materials.

Decomposition products can include and are not limited to:

Nitrogen oxides (NOx)

Carbon oxides

### **SECTION 11. TOXICOLOGICAL INFORMATION**

## **Acute toxicity**

**Product:** 

Acute oral toxicity : LD50 (Rat, male and female): 433 mg/kg

Method: OECD Test Guideline 401

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Acute inhalation toxicity : LC50 (Rat, male and female): > 5.0 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Method: OECD Test Guideline 402

**Components:** 

cymoxanil (ISO):

Acute oral toxicity : LD50 (Rat): 960 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Sucrose:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Acute oral toxicity : LD50 (Rat): > 4,500 mg/kg

Fumed silica (generic):

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

fumaric acid:

Acute oral toxicity : LD50 (Rat, male): 10,700 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 1.306 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Symptoms: No deaths occurred at this concentration. Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: The LC50 value is greater than the Maximum At-

tainable Concentration.

Acute dermal toxicity : LD50 (Rabbit): > 20,000 mg/kg

Skin corrosion/irritation

**Product:** 

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation





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Components:

Sucrose:

**Species** Rabbit

Result No skin irritation

Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Rabbit **Species** 

Result No skin irritation

Serious eye damage/eye irritation

**Product:** 

**Species** Rabbit

No eye irritation Result

Method **OECD Test Guideline 405** 

**Components:** 

Sucrose:

**Species** Rabbit

No eye irritation Result

Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

**Species** Rabbit Result Eye irritation

fumaric acid:

**Species** Rabbit Result Eye irritation

Respiratory or skin sensitisation

**Product:** 

Test Type **Maximisation Test** 

**Species** Guinea pig

Assessment May cause sensitisation by skin contact.

Method **OECD Test Guideline 406** 

**Components:** 

cymoxanil (ISO):

**Species** Guinea pig

Assessment Does not cause skin sensitisation.

fumaric acid:

**Species** Guinea pig

Does not cause skin sensitisation. Assessment

Germ cell mutagenicity

**Components:** 

cymoxanil (ISO):

Germ cell mutagenicity -

In vitro genetic toxicity studies were negative in some cases Assessment

and positive in other cases., Animal genetic toxicity studies

were negative.

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Sucrose:

Germ cell mutagenicity -

Assessment

: In vitro genetic toxicity studies were inconclusive., Animal

genetic toxicity studies were inconclusive

Fumed silica (generic):

Germ cell mutagenicity -

Assessment

In vitro genetic toxicity studies were negative., Animal genetic

toxicity studies were negative.

fumaric acid:

Germ cell mutagenicity -

Assessment

In vitro genetic toxicity studies were negative.

Carcinogenicity

**Components:** 

cymoxanil (ISO):

Carcinogenicity - Assess-

ment

Did not cause cancer in laboratory animals.

fumaric acid:

Carcinogenicity - Assess-

ment

Did not cause cancer in laboratory animals.

Reproductive toxicity

Components:

cymoxanil (ISO):

Reproductive toxicity - Assessment

Suspected human reproductive toxicant

Did not cause birth defects or any other fetal effects in labora-

tory animals.

fumaric acid:

Reproductive toxicity - As-

sessment

In animal studies, did not interfere with reproduction.

Did not cause birth defects or any other fetal effects in labora-

tory animals.

STOT - single exposure

**Product:** 

Assessment : Evaluation of available data suggests that this material is not

an STOT-SE toxicant.

**Components:** 

Sucrose:

Assessment : Evaluation of available data suggests that this material is not

an STOT-SE toxicant.

Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Assessment : Available data are inadequate to determine single exposure

specific target organ toxicity.

Fumed silica (generic):

Assessment : Evaluation of available data suggests that this material is not

an STOT-SE toxicant.

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fumaric acid:

Assessment : Evaluation of available data suggests that this material is not

an STOT-SE toxicant.

Repeated dose toxicity

**Components:** 

cymoxanil (ISO):

Remarks : In animals, effects have been reported on the following or-

gans: Blood Thymus.

Fumed silica (generic):

Remarks : No relevant data found.

fumaric acid:

Remarks : Based on available data, repeated exposures are not antici-

pated to cause significant adverse effects.

**Aspiration toxicity** 

**Product:** 

Based on physical properties, not likely to be an aspiration hazard.

**Components:** 

cymoxanil (ISO):

Based on physical properties, not likely to be an aspiration hazard.

Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Based on physical properties, not likely to be an aspiration hazard.

Fumed silica (generic):

Based on physical properties, not likely to be an aspiration hazard.

fumaric acid:

Based on physical properties, not likely to be an aspiration hazard.

**SECTION 12. ECOLOGICAL INFORMATION** 

**Ecotoxicity** 

**Product:** 

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 35 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

GLP: yes

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 10.7 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

GLP: yes

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Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

GLP: yes

**Components:** 

cymoxanil (ISO):

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 13.5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 27 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EbC50 (Pseudokirchneriella subcapitata (green algae)): 0.35

mg/

End point: Biomass Exposure time: 72 h

M-Factor (Acute aquatic tox-

icity)

Toxicity to daphnia and other :

aquatic invertebrates (Chronic toxicity)

NOEC (Daphnia magna (Water flea)): 0.067 mg/l

End point: number of offspring

Exposure time: 21 d

Method: OECD Test Guideline 211 or Equivalent

LOEC (Daphnia magna (Water flea)): 0.15 mg/l

End point: number of offspring

Exposure time: 21 d

Method: OECD Test Guideline 211 or Equivalent

M-Factor (Chronic aquatic

toxicity)

1

Toxicity to soil dwelling or-

ganisms

NOEC (Eisenia fetida (earthworms)): < 500 mg/kg

Exposure time: 14 d End point: mortality Method: Other guidelines

Toxicity to terrestrial organ-

isms

LC50 (Colinus virginianus (Bobwhite quail)): > 2,250 mg/kg

Exposure time: 1 d End point: mortality

NOEC (Apis mellifera (bees)): 25 micrograms/bee

Exposure time: 1 d End point: mortality

LC50 (Colinus virginianus (Bobwhite quail)): 2,847 ppm

Exposure time: 5 d End point: mortality

Sucrose:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l

Exposure time: 72 h Test Type: static test

Method: Method Not Specified.

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Fumed silica (generic):

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l

Exposure time: 96 h

Method: Method Not Specified. Remarks: For similar material(s):

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: Method Not Specified. Remarks: For similar material(s):

fumaric acid:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l

Exposure time: 96 h Test Type: semi-static test

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (water flea Daphnia magna): 212 mg/l

Exposure time: 48 h Test Type: semi-static test Method: EPA-660/3-75-009

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100

mg/l

End point: Growth rate Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 100

mg/l

End point: Growth rate Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): > 300 mg/l

End point: Respiration rates.

Exposure time: 3 h Test Type: static test

Method: OECD Test Guideline 209

Persistence and degradability

**Product:** 

Biodegradability : Result: Not readily biodegradable.

**Components:** 

cymoxanil (ISO):

Biodegradability : aerobic

Inoculum: activated sludge, domestic, non-adapted

Concentration: 20 mg/l

Result: Readily biodegradable.

Biodegradation: 11 % Exposure time: 28 d

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Method: OECD Test Guideline 301B or Equivalent

Remarks: 10-day Window: Fail

aerobic

Inoculum: activated sludge, domestic, non-adapted

Concentration: 2 mg/l

Result: Readily biodegradable.

Biodegradation: 14 % Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

Remarks: 10-day Window: Fail

Sucrose:

ThOD : 1.12 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)

Sensitiser: OH radicals

Concentration: 1,500,000 1/cm3 Rate constant: 1.1479E-10 cm3/s

Method: Estimated.

Fumed silica (generic):

Biodegradability : Remarks: Biodegradation is not applicable.

fumaric acid:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 67.5 % Exposure time: 28 d

Method: OECD Test Guideline 301B Remarks: 10-day Window: Pass

Bioaccumulative potential

**Components:** 

cymoxanil (ISO):

Partition coefficient: n-

octanol/water

log Pow: 4.7 (20 °C)

pH: 7

Method: OECD Test Guideline 107 or Equivalent

GLP: yes

Remarks: Bioconcentration potential is moderate (BCF be-

tween 100 and 3000 or Log Pow between 3 and 5).

Sucrose:

Bioaccumulation : Bioconcentration factor (BCF): 3

Method: Estimated.

Partition coefficient: n-

octanol/water

: Remarks: Bioconcentration potential is low (BCF < 100 or Log

Pow < 3).

Potential for mobility in soil is very high (Koc between 0 and

50).

log Pow: -3.7 - -3.67 Method: Estimated.

Remarks: Bioconcentration potential is low (BCF < 100 or Log

Pow < 3).

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Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Partition coefficient: n-

octanol/water

: Remarks: No data available for this product.

Fumed silica (generic):

Partition coefficient: n-

octanol/water

Remarks: No relevant data found.

fumaric acid:

Bioaccumulation Species: Fish

Bioconcentration factor (BCF): 3

Method: Estimated.

Partition coefficient: n-

octanol/water

Remarks: Bioconcentration potential is low (BCF < 100 or Log

Pow < 3).

log Pow: 4.02

Method: OECD Test Guideline 107

**Balance:** 

Partition coefficient: n-

octanol/water

Remarks: No relevant data found.

Mobility in soil

**Product:** 

Distribution among environ-

mental compartments

Remarks: Under actual use conditions, there is no reasonable expectation of any movement of the product from the top soil

layer.

**Components:** 

cymoxanil (ISO):

Distribution among environ-

mental compartments

Koc: 2.7 - 87.1

Sucrose:

Distribution among environ-

mental compartments

Koc: 3.16

Method: Estimated.

Remarks: Potential for mobility in soil is very high (Koc be-

tween 0 and 50).

Fumed silica (generic):

Distribution among environ-

mental compartments

Remarks: Expected to be relatively immobile in soil (Koc >

5000).

fumaric acid:

Distribution among environ-

mental compartments

Koc: 7.33

Method: Estimated.

**Balance:** 

Distribution among environ-

mental compartments

Remarks: No relevant data found.

# **CURZATE FUNGICIDE**



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#### Other adverse effects

#### **Components:**

cymoxanil (ISO):

Results of PBT and vPvB

assessment

: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

Sucrose:

Results of PBT and vPvB

assessment

This substance has not been assessed for persistence, bioac-

cumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Results of PBT and vPvB

assessment

: This substance has not been assessed for persistence, bioac-

cumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

Fumed silica (generic):

Results of PBT and vPvB

assessment

This substance has not been assessed for persistence, bioac-

cumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

fumaric acid:

Results of PBT and vPvB

assessment

: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Regulation: (Update: 07/27/2012, DJ)

Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

Balance:

Results of PBT and vPvB

assessment

: This substance has not been assessed for persistence, bioac-

cumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

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#### **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Disposal methods**

Waste from residues If wastes and/or containers cannot be disposed of according

to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regu-

If the material as supplied becomes a waste, follow all appli-

cable regional, national and local laws.

#### **SECTION 14. TRANSPORT INFORMATION**

### International Regulations

**UNRTDG** 

**UN** number UN 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Cymoxanil)

Class 9 Packing group Ш Labels 9

**IATA-DGR** 

UN 3077 UN/ID No.

Proper shipping name Environmentally hazardous substance, solid, n.o.s.

(Cymoxanil)

Class 9 Ш Packing group

Labels Miscellaneous

Packing instruction (cargo

aircraft)

Packing instruction (passen-

ger aircraft)

956

956

**IMDG-Code** 

**UN** number **UN 3077** 

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Cymoxanil)

Class 9 Packing group Ш Labels 9 **EmS Code** F-A, S-F Marine pollutant yes

Remarks Stowage category A

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

Not applicable for product as supplied.

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### **National Regulations**

**TDG** 

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Cymoxanil)

Class : 9
Packing group : III
Labels : 9
ERG Code : 171

Marine pollutant : yes(Cymoxanil)

#### **Further information**

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

For Canadian Ground transportation TDG Exemption: 1.45.1 Marine Pollutants (Part 3, Documentation, and Part 4, Dangerous Goods Safety Marks, do not apply if they are in transport solely on land by road vehicle or railway vehicle).

#### 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.

#### **SECTION 15. REGULATORY INFORMATION**

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

DSL : This product contains the following components listed on the

Canadian NDSL. All other components are on the Canadian

DSL.

Pest Control Products Act ( PCPA ) Registration Number : 26284

Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.

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 (PCPA). There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control products label:

PCPA Label Hazard Communications:

Read the label and booklet before using.

DANGER POISON EYE IRRITANT

FATAL OR POISONOUS IF SWALLOWED

Toxic to aquatic organisms.

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#### **SECTION 16. OTHER INFORMATION**

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

#### 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 QC OEL : Québec. Regulation respecting occupational health and safe-

ty, Schedule 1, Part 1: Permissible exposure values for air-

borne contaminants

Dow IHG : Dow Industrial Hygiene Guideline
ACGIH / TWA : 8-hour, time-weighted average
CA AB OEL / TWA : 8-hour Occupational exposure limit
CA BC OEL / TWA : 8-hour time weighted average

CA QC OEL / TWAEV : Time-weighted average exposure value

Dow IHG / TWA : Time weighted average

AIIC - Australian Inventory of Industrial Chemicals; 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; TECI - Thailand Existing Chemicals Inventory; 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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Product code: GF-4175

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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.

**CA / 6N**