

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

1/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name DELARO® 325 SC FUNGICIDE
Product code (UVP) 05907454, 81684685
SDS Number 102000010777
PCP Registration No. 31533

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

Use Fungicide
Restrictions on use See product label for restrictions.
Information on supplier
Supplier Bayer CropScience Inc
#200, 160 Quarry Park Blvd, SE
Calgary, Alberta T2C 3G3
Canada
Responsible Department Email: SDSINFO.BCS-NA@bayer.com
Emergency telephone no.
Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577
Product Information Telephone Number 1-888-283-6847

SECTION 2: HAZARDS IDENTIFICATION

Classified in accordance with Part 2 of the Hazardous Products Regulations
Skin sensitisation: Category 1
Reproductive toxicity: Effects on or via lactation

Labelling in accordance with Part 3 of the Hazardous Products Regulations



Signal word: Warning

Hazard statements

May cause an allergic skin reaction.
May cause harm to breast-fed children.

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

2/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

Precautionary statements

Do not breathe mist or vapours.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
Obtain special instructions before use.
Avoid contact during pregnancy/ while nursing.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF ON SKIN: Wash with plenty of water/ soap.
If skin irritation or rash occurs: Get medical advice/ attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Trifloxystrobin	141517-21-7	13.7
Prothioconazole	178928-70-6	16.0
Fatty alcohol polyglycol ether	61791-13-7	7.5

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

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 physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Rinse out mouth and give water in small sips to drink. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

3/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

Most important symptoms and effects, both acute and delayed

Symptoms	To date no symptoms are known.
Indication of any immediate medical attention and special treatment needed	
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable High volume water jet

Special hazards arising from the substance or mixture In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Carbon dioxide (CO₂), Sulphur oxides, Nitrogen oxides (NO_x)

Advice for firefighters

Special protective equipment for firefighters Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point > 100 °C
No flash point - Determination conducted up to the boiling point.

Auto-ignition temperature 385 °C / 725 °F

Lower explosion limit No data available

Upper explosion limit No data available

Explosivity Not explosive
92/69/EEC, A.14 / OECD 113

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

4/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.

Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Trifloxystrobin	141517-21-7	2.7 mg/m ³ (SK-SEN)		OES BCS*
Prothioconazole	178928-70-6	1.4 mg/m ³		OES BCS*

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

5/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

		(SK-ABS)		
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*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Chemical resistant nitrile rubber gloves
Eye protection	Safety glasses with side-shields
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to beige
Physical State	suspension
Odor	weak characteristic
Odour Threshold	No data available
pH	5.5 - 7.0 (100 %) (23 °C)
Viscosity, kinematic	No data available
Vapor Pressure	No data available
Vapor Density (Air = 1)	No data available
Density	ca. 1.10 g/cm ³ (20 °C)
Evaporation rate	No data available
Boiling Point	No data available
Melting / Freezing Point	No data available
Water solubility	dispersible
Minimum Ignition Energy	No data available
Decomposition temperature	Stable under normal conditions.

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

6/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

Self-accelarating decomposition temperature (SADT)	No data available
Partition coefficient: n-octanol/water	Not applicable
Viscosity	350 - 500 mPa.s (20 °C) Velocity gradient 20 /s 150 - 250 mPa.s (20 °C) Velocity gradient 100 /s
Flammability	No data available
Flash point	> 100 °C No flash point - Determination conducted up to the boiling point.
Auto-ignition temperature	385 °C / 725 °F
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113
Particle size	No data available
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	No incompatible materials known.
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Eye contact, Ingestion, Inhalation, Skin contact
Immediate Effects	
Eye	Moderate eye irritation.

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

7/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

Skin May cause slight irritation. Harmful if absorbed through skin.

Ingestion Harmful if swallowed.

Inhalation Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity LD50 (Rat) \geq 5,000 mg/kg

Acute inhalation toxicity LC50 (Rat) > 2.189 mg/l
Exposure time: 4 h
Highest attainable concentration.

Acute dermal toxicity LD50 (Rat) > 4,000 mg/kg

Skin corrosion/irritation No skin irritation (Rabbit)

Serious eye damage/eye irritation slight irritation (Rabbit)

Respiratory or skin sensitisation Skin: Sensitising (Guinea pig)
OECD Test Guideline 406, Magnusson & Kligman test

Assessment STOT Specific target organ toxicity – single exposure

Trifloxystrobin: Based on available data, the classification criteria are not met.
Prothioconazole: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Trifloxystrobin did not cause specific target organ toxicity in experimental animal studies.
Prothioconazole did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Trifloxystrobin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.
Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Trifloxystrobin caused reduced body weight development in offspring during lactation only at doses also

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

8/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

|| Producing systemic toxicity in adult rats.

Prothioconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Prothioconazole is related to parental toxicity.

Assessment developmental toxicity

Trifloxystrobin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Trifloxystrobin are related to maternal toxicity.

Prothioconazole caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Prothioconazole are related to maternal toxicity.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 0.125 mg/l
Exposure time: 96 h

Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) 0.126 mg/l
Exposure time: 48 h

|| LC50 (Mysidopsis bahia (mysid shrimp)) 0.00862 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient trifloxystrobin.

Toxicity to aquatic plants IC50 (Raphidocelis subcapitata (freshwater green alga)) 0.68 mg/l
Growth rate; Exposure time: 72 h

ErC50 (Skeletonema costatum) 0.03278 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient prothioconazole.

EC10 (Skeletonema costatum) 0.01427 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient prothioconazole.

|| EC10 (Desmodesmus subspicatus (green algae)) 0.0025 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient trifloxystrobin.

Biodegradability Trifloxystrobin:
Not rapidly biodegradable
Prothioconazole:
Not rapidly biodegradable

Koc Trifloxystrobin: Koc: 2377
Prothioconazole: Koc: 1765

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

9/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

Bioaccumulation	Trifloxystrobin: Bioconcentration factor (BCF) 431 Does not bioaccumulate. Prothioconazole: Bioconcentration factor (BCF) 19 Does not bioaccumulate.
Mobility in soil	Trifloxystrobin: Slightly mobile in soils Prothioconazole: Slightly mobile in soils
Additional ecological information	No other effects to be mentioned.
Environmental precautions	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 from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not allow product to enter streams, sewers or other waterways. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Do not contaminate water, food, or feed by disposal. Dispose in accordance with all local, state/provincial and federal regulations. Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility. Follow advice on product label and/or leaflet.
Contaminated packaging	Consult state and local regulations regarding the proper disposal of container. Follow advice on product label and/or leaflet.

SECTION 14: TRANSPORT INFORMATION

TDG

UN number	3082
Labels	9
Packaging group	III
Marine pollutant	Marine pollutant
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN, PROTHIOCONAZOLE)

49CFR Not dangerous goods / not hazardous material

IMDG

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
102000010777

10/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

UN number **3082**
Class 9
Packaging group III
Marine pollutant YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(TRIFLOXYSTROBIN, PROTHIOCONAZOLE SOLUTION)

IATA

UN number **3082**
Class 9
Packaging group III
Environm. Hazardous Mark YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(TRIFLOXYSTROBIN, PROTHIOCONAZOLE SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Further Information Exempt from regulation when transported by road or rail, in accordance with TDG Regulations 1.45.1. This exemption provides that this product does not require dangerous goods shipping documentation or safety marks when transported on land by road or rail.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

PCP Registration No. 31533

PMRA Information:

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

This chemical is a pest control product regulated 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:

SAFETY DATA SHEET



DELARO® 325 SC FUNGICIDE

Version 4.0 / CDN
10200010777

11/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

Signal word: Caution!

Hazard statements: Moderate eye irritation.
Harmful if swallowed, inhaled or absorbed through the skin.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 11: Toxicological Information. Section 12. Ecological information. Reviewed and updated for general editorial purposes.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

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This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are

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Version 4.0 / CDN
102000010777

12/12
Revision Date: 06/24/2020
Print Date: 06/25/2020

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