

## **DELARO® 325 SC FUNGICIDE**

Version 1.0 / USA Revision Date: 11/14/2022 102000060360 Print Date: 03/16/2023

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

**Product identifier** 

Trade name DELARO® 325 SC FUNGICIDE

Product code (UVP) 89309638

**SDS Number** 102000060360

**EPA Registration No.** 264-1055

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 LP

800 North Lindbergh Blvd. St. Louis, MO 63167

USA

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

1-866-99BAYER (1-866-992-2937)

#### **SECTION 2: HAZARDS IDENTIFICATION**

Classification in accordance with regulation HCS 29CFR §1910.1200

Skin sensitisation: Category 1

Reproductive toxicity: Effects on or via lactation

Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Warning Hazard statements



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

#### **Precautionary statements**

Do not breathe dust or mist.

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.

IF exposed or concerned: Get medical advice/ attention.

Protect from sunlight.

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	
Prothioconazole	178928-70-6	16.0	
Trifloxystrobin	141517-21-7	13.7	
Alcohols, coco, ethoxylated (>2EO)	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.



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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.

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 (NOx)

Advice for firefighters

Special protective

equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. 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.

## Specific hazards from the substance or mixture which can increase the fire

Flash point >100 °C / 212 °F

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



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#### **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 a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and

feed. Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing. 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
Prothioconazole	178928-70-6	1.4 mg/m3		OES BCS*



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		(SK-ABS)	
Trifloxystrobin	141517-21-7	2.7 mg/m3 (SK-SEN)	OES BCS*

<sup>\*</sup>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 gloves (barrier laminate, butyl rubber, nitrile

rubber or Viton)

**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**

#### Information on basic physical and chemical properties

Form suspension

Colour white to beige

Odour weak, characteristic
Odour Threshold No data available

**pH** 5.0 - 7.0 (100 %) (23 °C)

Melting point/rangeNo data availableBoiling PointNo data availableFlash point> 100 °C / 212 °F

No flash point - Determination conducted up to the boiling point.

Flammability No data available
Auto-ignition temperature 385 °C / 725 °F
Thermal decomposition No data available

Minimum ignition energy No data available
Self-accelarating No data available



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decomposition temperature

(SADT)

Upper explosion limitNo data availableLower explosion limitNo data availableVapour pressureNo data availableEvaporation rateNo data availableRelative vapour densityNo data availableRelative densityNo data available

**Density** ca.  $1.10 \text{ g/cm}^3 (20 \text{ °C})$ 

Water solubility dispersible

Partition coefficient: n-

octanol/water

Prothioconazole: log Pow: 3.82 (20 °C) (pH 7)

Trifloxystrobin: log Pow: 4.5 (25 °C)

Viscosity, dynamic 350 - 550 mPa.s (20 °C)

Velocity gradient 20 /s 150 - 250 mPa.s (20 °C) Velocity gradient 100 /s

Viscosity, kinematic 407 mm<sup>2</sup>/s (20 °C) Shear rate of 20/sec

177 mm<sup>2</sup>/s (20 °C) Shear rate of 100/sec 374 mm<sup>2</sup>/s (40 °C) Shear rate of 20/sec 174 mm<sup>2</sup>/s (40 °C) Shear rate of 100/sec

Surface tension 34 mN/m (25 °C)

Oxidizing properties No oxidizing properties

**Explosivity** Not explosive

92/69/EEC, A.14 / OECD 113

Other information Further safety related physical-chemical data are not known.

## **SECTION 10: STABILITY AND REACTIVITY**

**Reactivity** Stable under normal conditions.

**Chemical stability** Stable under recommended storage conditions.

Possibility of hazardous

reactions

No hazardous reactions known.



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**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, Skin contact, Inhalation, Ingestion

**Immediate Effects** 

**Eye** May cause temporary eye irritation.

**Skin** May be harmful in contact with skin. May cause sensitisation by skin

contact.

IngestionHarmful if swallowed.InhalationHarmful if inhaled.

Information on toxicological effects

Acute oral toxicity LD50 cut-off (Rat) >= 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 Skin: Sensitising (Guinea pig)

sensitisation OECD Test Guideline 406, Magnusson & Kligman test

#### Assessment STOT Specific target organ toxicity - single exposure

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

## Assessment STOT Specific target organ toxicity – repeated exposure

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

# Assessment mutagenicity

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

Trifloxystrobin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

#### Assessment carcinogenicity

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



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

**ACGIH** 

None.

**NTP** 

None.

**IARC** 

None.

## Assessment toxicity to reproduction

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.

Trifloxystrobin caused reduced body weight development in offspring during lactation only at doses also producing systemic toxicity in adult rats.

#### Assessment developmental toxicity

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

Trifloxystrobin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Trifloxystrobin 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)) 0.038 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.

Growth rate; Exposure time: 72 h

ErC50 (Skeletonema costatum) 0.03278 mg/l

Exposure time: 72 h



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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** Prothioconazole:

Not rapidly biodegradable

Trifloxystrobin:

Not rapidly biodegradable

**Koc** Prothioconazole: Koc: 1765

Trifloxystrobin: Koc: 2377

**Bioaccumulation** Prothioconazole: Bioconcentration factor (BCF) 19

Does not bioaccumulate.

Trifloxystrobin: Bioconcentration factor (BCF) 431

Does not bioaccumulate.

Mobility in soil Prothioconazole: Slightly mobile in soils

Trifloxystrobin: Slightly mobile in soils

Results of PBT and vPvB assessment

PBT and vPvB assessment Prothioconazole: This substance is not considered to be persistent,

bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

Trifloxystrobin: This substance is not considered to be persistent,

bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

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** Dispose in accordance with all local, state/provincial and federal

regulations.



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Contaminated packaging Consult state and local regulations regarding the proper disposal of

container.

Follow advice on product label and/or leaflet.

RCRA Information Characterization and proper disposal of this material as a special or

hazardous waste is dependent upon Federal, State and local laws and

are the user's responsibility. RCRA classification may apply.

#### **SECTION 14: TRANSPORT INFORMATION**

**49CFR** Not dangerous goods / not hazardous material

**IMDG** 

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.

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

**POISON** 

#### SECTION 15: REGULATORY INFORMATION

**EPA Registration No.** 264-1055

**US Federal Regulations** 

**TSCA list** 

Water 7732-18-5 1,2-Propanediol 57-55-6 Alcohols, coco, ethoxylated (>2EO) 61791-13-7 Polyethylene-polypropylene copolymer 9003-11-6



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## US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No export notification needs to be made.

SARA Title III - Section 302 - Notification and Information

Not applicable.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

# US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

#### **US State Right-To-Know Ingredients**

1,2-Propanediol 57-55-6 MN, RI

Environmental CERCLA

None.

Clean Water Section 307(a)(1)

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

#### **EPA/FIFRA Information:**

This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

**Hazard statements:** Causes 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.

#### **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



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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 Fourth 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,

\* = chronic health hazard

Reason for Revision: New Safety Data Sheet.

**Revision Date: 11/14/2022** 

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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