

SAFETY DATA SHEET



TRILOGY™ STRESSGARD FUNGICIDE

Version 3.0 / CDN
102000021914

1/13
Revision Date: 05/05/2020
Print Date: 05/06/2020

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

Product identifier

Trade name TRILOGY™ STRESSGARD FUNGICIDE
Product code (UVP) 79883684
SDS Number 102000021914
PCP Registration No. 29870

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

Carcinogenicity: Category 2
Acute toxicity(Inhalation): Category 4
Reproductive toxicity: Category 2, Effects on or via lactation

Labelling in accordance with Part 3 of the Hazardous Products Regulations



Signal word: Warning

Hazard statements

Suspected of causing cancer.

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Harmful if inhaled.
Suspected of damaging fertility or the unborn child.
May cause harm to breast-fed children.

Precautionary statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid contact during pregnancy/ while nursing.
Do not breathe spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Use only outdoors or in a well-ventilated area.
IF exposed or concerned: Get medical advice/ attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
Store locked up.
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
Iprodione	36734-19-7	29.41
Triticonazole	131983-72-7	3.14
Trifloxystrobin	141517-21-7	1.47
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	10.0

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. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. 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 Dangerous gases are evolved in the event of a fire.

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 No data available

Auto-ignition temperature No data available

Lower explosion limit No data available

Upper explosion limit No data available

Explosivity Not applicable

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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.

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
Iprodione	36734-19-7	1.7 mg/m ³ (TWA)		OES BCS*

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Triticonazole	131983-72-7	4 mg/m3 (TWA)		OES BCS*
Trifloxystrobin	141517-21-7	2.7 mg/m3 (SK-SEN)		OES BCS*
Distillates (petroleum), solvent-dewaxed light paraffinic (Mist.)	64742-56-9	5 mg/m3 (TWA)	07 2009	CAD AB OEL
Distillates (petroleum), solvent-dewaxed light paraffinic (Mist.)	64742-56-9	10 mg/m3 (STEL)	07 2009	CAD AB OEL
Distillates (petroleum), solvent-dewaxed light paraffinic (Mist.)	64742-56-9	1 mg/m3 (TWA)	09 2011	CAD BC OEL
Distillates (petroleum), solvent-dewaxed light paraffinic (Mist.)	64742-56-9	0.2 mg/m3 (TWA)	09 2011	CAD BC OEL
Distillates (petroleum), solvent-dewaxed light paraffinic (Inhalable fraction.)	64742-56-9	5 mg/m3 (TWA)	03 2011	CAD MB OEL
Distillates (petroleum), solvent-dewaxed light paraffinic (Inhalable fraction.)	64742-56-9	5 mg/m3 (TWA)	06 2015	CAD ON OEL
Distillates (petroleum), solvent-dewaxed light paraffinic (Inhalable fraction.)	64742-56-9	5 mg/m3 (TWA)	06 2015	CAD ON OEL
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	10 mg/m3 (15 MIN ACL)	05 2009	CAD SK OEL
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	5 mg/m3 (8 HR ACL)	05 2009	CAD SK OEL
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	10 mg/m3 (STEL)	09 2017	OEL (QUE)

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(Mist.)				
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	5 mg/m ³ (TWA)	09 2017	OEL (QUE)
(Mist.)				

*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

Chemical resistant goggles must be worn.

Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures

Keep and wash PPE separately from other laundry. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	green
Physical State	Liquid
Odor	characteristic
Odour Threshold	No data available
pH	5.0 - 7.5 (100 %) (23 °C)
Viscosity, kinematic	No data available
Vapor Pressure	No data available
Vapor Density (Air = 1)	No data available
Density	1.16 g/cm ³ (20 °C)
Evaporation rate	No data available
Boiling Point	No data available
Melting / Freezing Point	No data available

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Water solubility	dispersible
Minimum Ignition Energy	Not applicable
Decomposition temperature	Stable under normal conditions.
Self-accelerating decomposition temperature (SADT)	No data available
Partition coefficient: n-octanol/water	Not applicable
Viscosity	500 - 1,000 cps (25 °C)
Flammability	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not applicable
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	Inhalation, Ingestion, Eye contact
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Immediate Effects

Ingestion May be harmful if swallowed.

Inhalation May be harmful if inhaled.

Information on toxicological effects

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

Acute inhalation toxicity LC50 (Rat) > 2.54 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
highest concentration tested

Acute dermal toxicity (male/female combined Rat) > 5,000 mg/kg

Skin corrosion/irritation Slight irritant effect - does not require labelling. (Rabbit)

Serious eye damage/eye irritation Minimally irritating. (Rabbit)

Respiratory or skin sensitisation Skin: Non-sensitizing. (Guinea pig)

Assessment STOT Specific target organ toxicity – single exposure

Iprodione: 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

Iprodione caused specific target organ toxicity in experimental animal studies in rats in the following organ(s): Adrenal gland.
Triticonazole 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

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

Iprodione caused at high dose levels an increased incidence of tumours in the following organ(s): Liver, Testes. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.
Triticonazole was not carcinogenic in lifetime feeding studies in rats and mice.
Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

Distillates (petroleum), solvent-dewaxed light paraffinic 64742-56-9 Group A4

NTP

Distillates (petroleum), solvent-dewaxed light paraffinic 64742-56-9

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IARC

Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	Overall evaluation: 3
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	Overall evaluation: 1

OSHA

None.

Assessment toxicity to reproduction

Iprodione did not cause reproductive toxicity in a two-generation study in rats.

Triticonazole did not cause reproductive toxicity in a two-generation study in rats.

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

Assessment developmental toxicity

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

Triticonazole did not cause developmental toxicity in rats and rabbits.

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

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)) 4.1 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient iprodione.

LC50 (Lepomis macrochirus (Bluegill sunfish)) 3.7 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient iprodione.

LC50 (Lepomis macrochirus (Bluegill sunfish)) > 8.9 mg/l

The value mentioned relates to the active ingredient triticonazole.

NOEC (Lepomis macrochirus (Bluegill sunfish)) 8.9 mg/l

The value mentioned relates to the active ingredient triticonazole.

LC50 (Oncorhynchus mykiss (rainbow trout)) > 3.6 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient triticonazole.

NOEC (Oncorhynchus mykiss (rainbow trout)) 1.4 mg/l

The value mentioned relates to the active ingredient triticonazole.

LC50 (Cyprinodon variegatus (sheepshead minnow)) > 9.1 mg/l

Exposure time: 96 h

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	The value mentioned relates to the active ingredient triticonazole.
	NOEC (Cyprinodon variegatus (sheepshead minnow)) 5.7 mg/l The value mentioned relates to the active ingredient triticonazole.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 0.25 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient iprodione.
	EC50 (Daphnia (water flea)) 9.0 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient triticonazole.
	NOEC (Daphnia (water flea)) 3.2 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient triticonazole.
	EC50 (Mysidopsis bahia (mysid shrimp)) 1.9 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient triticonazole.
Toxicity to aquatic plants	(Desmodesmus subspicatus (green algae)) 15.3 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient iprodione.
	EC50 (Algae) > 1 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient triticonazole.
Biodegradability	Iprodione: Not rapidly biodegradable Triticonazole: Not rapidly biodegradable Trifloxystrobin: Not rapidly biodegradable
Koc	Iprodione: Koc: 202 - 543 Triticonazole: Koc: 563 Trifloxystrobin: Koc: 2377
Bioaccumulation	Iprodione: Bioconcentration factor (BCF) 70 Does not bioaccumulate. Triticonazole: Bioconcentration factor (BCF) 94 Does not bioaccumulate. Trifloxystrobin: Bioconcentration factor (BCF) 431 Does not bioaccumulate.
Mobility in soil	Iprodione: Moderately mobile in soils Triticonazole: Moderately mobile in soils Trifloxystrobin: Slightly mobile in soils
Additional ecological information	Exposed treated seed may be hazardous to birds.
Environmental precautions	Do not apply directly to water, to areas where surface water is present

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or to intertidal areas below the mean high water mark.
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 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.

Contaminated packaging Do not re-use empty containers.
Triple rinse containers.
Puncture container to avoid re-use.
Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.
If burned, stay out of smoke.
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. (IPRODIONE, TRITICONAZOLE)

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. (IPRODIONE, TRITICONAZOLE SOLUTION)

IATA

UN number	3082
Class	9
Packaging group	III
Environm. Hazardous Mark	YES

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Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(IPRODIONE, TRITICONAZOLE 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.

SECTION 15: REGULATORY INFORMATION

PCP Registration No. 29870

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

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NFPA 704 (National Fire Protection Association):

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

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

Health - 1 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 8: Exposure Controls / Personal Protection.
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.

Revision Date: 05/05/2020

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