

## TARIAN

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

#### Product identifier

Trade name TARIAN

EPA Registration No. 264-779-2935

#### 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 Wilbur-Ellis Company LLC  
16300 Christensen Rd. Ste 135  
Tukwila, WA 98188  
USA

Responsible Department Email: SDS@wilburellis.com

#### Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days) Chemtrec - Domestic (800) 424-9300

Product Information Telephone Number (800) 500-1698

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### SECTION 2: HAZARDS IDENTIFICATION

#### Classification in accordance with regulation HCS 29CFR §1910.1200

Eye irritation: Category 2A

Acute toxicity(Inhalation): Category 4

Specific target organ toxicity - single exposure: Category 3

Reproductive toxicity: Category 1B, Effects on or via lactation

#### Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Danger

Hazard statements

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Causes serious eye irritation.  
Harmful if inhaled.  
May cause respiratory irritation.  
May damage fertility or the unborn child.  
May cause harm to breast-fed children.

### Precautionary statements

Wash thoroughly after handling.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.  
Do not breathe dust or mist.  
Use only outdoors or in a well-ventilated area.  
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 eat, drink or smoke when using this product.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/ attention.  
IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.  
Specific treatment (see supplemental first aid instructions on this label).  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER/doctor/physician if you feel unwell.  
Store in a well-ventilated place. Keep container tightly closed.  
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.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Trifloxystrobin	141517-21-7	11.4
Propiconazole	60207-90-1	11.4
N-Methyl-2-pyrrolidone	872-50-4	49.4

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## 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.

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<b>Skin contact</b>	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.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.
<b>Most important symptoms and effects, both acute and delayed</b>	
<b>Symptoms</b>	To date no symptoms are known.
<b>Indication of any immediate medical attention and special treatment needed</b>	
<b>Risks</b>	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
<b>Treatment</b>	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

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## SECTION 5: FIREFIGHTING MEASURES

### Extinguishing media

**Suitable** Carbon dioxide (CO<sub>2</sub>), Dry chemical, Alcohol-resistant foam

**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** Avoid contact with spilled product or contaminated surfaces. Evacuate personnel to safe areas. Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray.

**Flash point** > 93.4 °C

**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. Contaminated soil may have to be removed and disposed. 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.

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## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Maintain exposure levels below the exposure limit through the use of general and local 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. Before removing gloves clean them with soap and water. Remove contaminated clothing immediately and dispose of safely. 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.

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

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

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Components	CAS-No.	Control parameters	Update	Basis
Trifloxystrobin	141517-21-7	2.7 mg/m <sup>3</sup> (SK-SEN)		OES BCS*
N-Methyl-2-pyrrolidone	872-50-4	4 mg/m <sup>3</sup> /1 ppm (TWA PEL)	10 2014	US CA OEL
N-Methyl-2-pyrrolidone	872-50-4	40 mg/m <sup>3</sup> /10 ppm (TWA)	2010	WEEL
N-Methyl-2-pyrrolidone	872-50-4	19 ppm (TWA)		OES BCS*

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

## Biological occupational exposure limits

Components	CAS-No.	Parameters	Biological specimen	Sampling time	Conc.	Basis
N-Methyl-2-pyrrolidone	872-50-4	5-Hydroxy-N-methyl-2-pyrrolidone	Urine	Sampling time: End of shift.	100 mg/l	ACGIH BEI

## 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

Tightly fitting safety goggles

### 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	brown
Physical State	Liquid
Odor	characteristic
Odour Threshold	No data available
pH	6 - 8 (1 %) (25 °C) (as aqueous solution)

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<b>Viscosity, kinematic</b>	No data available
<b>Vapor Pressure</b>	0.0000034 hPa (ca. 25 °C)
<b>Vapor Density (Air = 1)</b>	No data available
<b>Density</b>	1.09 g/cm <sup>3</sup> (20 °C)
<b>Evaporation rate</b>	No data available
<b>Boiling Point</b>	No data available
<b>Melting / Freezing Point</b>	No data available
<b>Water solubility</b>	ca. 0.00061 g/l
<b>Minimum Ignition Energy</b>	Not applicable
<b>Decomposition temperature</b>	Stable under normal conditions.
<b>Self-accelerating decomposition temperature (SADT)</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	4.5 (25 °C)
<b>Flammability</b>	No data available
<b>Flash point</b>	> 93.4 °C
<b>Auto-ignition temperature</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Explosivity</b>	Not applicable
<b>Particle size</b>	No data available

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## 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.

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<b>Conditions to avoid</b>	freezing Extremes of temperature and direct sunlight.
<b>Incompatible materials</b>	No incompatible materials known.
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

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## SECTION 11: TOXICOLOGICAL INFORMATION

<b>Exposure routes</b>	Eye contact, Ingestion, Skin contact, Inhalation
<b>Immediate Effects</b>	
<b>Eye</b>	Causes substantial but temporary eye injury. Severe eye irritation.
<b>Skin</b>	May cause slight irritation.
<b>Ingestion</b>	Harmful if swallowed.

### Information on toxicological effects

<b>Acute oral toxicity</b>	LD50 (male Rat) 4,757 mg/kg LD50 (female Rat) 4,830 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (Rat) > 2.2 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. highest concentration tested No deaths
<b>Acute dermal toxicity</b>	LD50 (Rat) > 5,050 mg/kg
<b>Skin corrosion/irritation</b>	Slight irritant effect - does not require labelling. (Rabbit)
<b>Serious eye damage/eye irritation</b>	Severe eye irritation. (Rabbit)
<b>Respiratory or skin sensitisation</b>	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

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

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

### Assessment carcinogenicity

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

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**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.

**Assessment toxicity to reproduction**

Trifloxystrobin 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 Trifloxystrobin 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.  
Propiconazole did not cause developmental toxicity in rats and rabbits.

**Further information**

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

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## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity to fish**

LC50 (Oncorhynchus mykiss (rainbow trout)) 0.015 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient trifloxystrobin.

LC50 (Oncorhynchus mykiss (rainbow trout)) 4.3 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient propiconazole.

**Chronic toxicity to fish**

Oncorhynchus mykiss (rainbow trout)

flow-through test

NOEC: ca. 0.183 mg/l

The value mentioned relates to the active ingredient trifloxystrobin.

Cyprinodon variegatus (sheepshead minnow)

NOEC: 0.068 mg/l

Exposure time: 95 d

The value mentioned relates to the active ingredient propiconazole.

**Toxicity to aquatic invertebrates**

EC50 (Daphnia magna (Water flea)) 0.016 mg/l

Exposure time: 48 h

The value mentioned relates to the active ingredient trifloxystrobin.



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

EC50 (Daphnia magna (Water flea)) 10.2 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient propiconazole.

EC50 (Mysidopsis bahia (mysid shrimp)) 0.51 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient propiconazole.

**Chronic toxicity to aquatic invertebrates** NOEC (Mysidopsis bahia (mysid shrimp)): 0.11 mg/l  
Exposure time: 28 d  
The value mentioned relates to the active ingredient propiconazole.

**Toxicity to aquatic plants** IC50 (Desmodesmus subspicatus (green algae)) 0.0053 mg/l  
Exposure time: 72 h  
The value mentioned relates to the active ingredient trifloxystrobin.  
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  
Propiconazole:  
Not rapidly biodegradable

**Koc** Trifloxystrobin: Koc: 2377  
Propiconazole: Koc: 1086

**Bioaccumulation** Trifloxystrobin: Bioconcentration factor (BCF) 431  
Does not bioaccumulate.  
Propiconazole: Bioconcentration factor (BCF) 180  
Does not bioaccumulate.

**Mobility in soil** Trifloxystrobin: Slightly mobile in soils  
Propiconazole: Slightly mobile in soils

**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.  
Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.  
Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.  
Apply this product as specified on the label.

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## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**

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<b>Product</b>	Do not contaminate water, food, or feed by disposal. Dispose in accordance with all local, state/provincial and federal regulations. Follow container label instructions for disposal of wastes generated during use in compliance with the product label.
<b>Contaminated packaging</b>	Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke. Follow advice on product label and/or leaflet.
<b>RCRA Information</b>	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.

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## SECTION 14: TRANSPORT INFORMATION

<b>49CFR</b>	Not dangerous goods / not hazardous material
<b>IMDG</b>	
UN number	<b>3082</b>
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN, PROPICONAZOLE SOLUTION)

<b>IATA</b>	
UN number	<b>3082</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN, PROPICONAZOLE 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
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## SECTION 15: REGULATORY INFORMATION

**EPA Registration No.** 264-779-2935

### US Federal Regulations

#### TSCA list

N-Methyl-2-pyrrolidone	872-50-4
Castor oil, ethoxylated	61791-12-6
Poly(oxy-1,2-ethanediyl), $\alpha$ -(1-oxododecyl)- $\omega$ -[(1-oxododecyl)oxy]-	9005-02-1

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

Yes. 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

Yes

Yes

### US States Regulatory Reporting

#### CA Prop65

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

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

N-Methyl-2-pyrrolidone	872-50-4	Developmental toxin.
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### US State Right-To-Know Ingredients

N-Methyl-2-pyrrolidone	872-50-4	MN, NJ
Propiconazole	60207-90-1	NJ

None.

### EPA/FIFRA Information:

This chemical is a pesticide product registered 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:** Warning!

**Hazard statements:** Causes substantial but temporary eye injury.  
Harmful if swallowed.

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## SECTION 16: OTHER INFORMATION

### Abbreviations and acronyms

49CFR Code of Federal Regulations, Title 49

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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 - 1      Others - none

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

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

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

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