

# SAFETY DATA SHEET



## XYWAY 3D FUNGICIDE

Version 1.1      Revision Date: 04/27/2022      SDS Number: 50002147      Date of last issue: -  
Date of first issue: 01/17/2020

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### SECTION 1. IDENTIFICATION

#### **Product identifier**

**Product name**      XYWAY 3D FUNGICIDE

#### **Other means of identification**

**Product code**      50002147

**Chemical nature**      Mixture

#### **Recommended use of the chemical and restrictions on use**

**Recommended use**      Can be used as fungicide only.

**Restrictions on use**      Use as recommended by the label.

#### **Details of the supplier of the safety data sheet**

**Manufacturer**      FMC Corporation  
2929 WALNUT ST  
PHILADELPHIA PA 19104  
USA  
(215) 299-6000 (General Information)  
SDS-Info@fmc.com

#### **Emergency telephone**

For leak, fire, spill or accident emergencies, call:  
1 800 / 424-9300 (CHEMTREC - U.S.A.)  
1 703 / 741-5970 (CHEMTREC - International)  
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:  
U.S.A. & Canada: +1 800 / 331-3148  
All other countries: +1 651 / 632-6793 (Collect)

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### SECTION 2. HAZARDS IDENTIFICATION

#### **GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Acute toxicity (Oral)      :    Category 4  
Acute toxicity (Inhalation)      :    Category 4  
Skin irritation      :    Category 2  
Eye irritation      :    Category 2A  
Skin sensitization      :    Category 1B  
Specific target organ toxicity - single exposure      :    Category 3 (Respiratory system)

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### GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H302 + H332 Harmful if swallowed or if inhaled.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

Precautionary Statements :

#### Prevention:

P261 Avoid breathing mist or vapors.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ 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 and soap.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.

#### Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

#### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

None known.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

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### Components

Chemical name	CAS-No.	Concentration (% w/w)
(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol	76674-21-0	$\geq 20$ - $< 30$
sodium decyl sulphate	142-87-0	$\geq 5$ - $< 10$
glycerol	56-81-5	$\geq 5$ - $< 10$
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt	68186-36-7	$\geq 1$ - $< 5$
D-Glucopyranose, oligomeric, C9-11-alkyl glycosides	132778-08-6	$\geq 1$ - $< 5$
sodium dodecyl sulphate	151-21-3	$\geq 1$ - $< 5$

Actual concentration is withheld as a trade secret

### SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Harmful if swallowed or if inhaled.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause respiratory irritation.
- Notes to physician : Treat symptomatically.

### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.

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- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Thermal decomposition can lead to release of irritating gases and vapors.  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides  
Fluorinated compounds
- 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 fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
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### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.
- 

### SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapors/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
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Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
glycerol	56-81-5	TWA (mist, respirable fraction)	5 mg/m <sup>3</sup>	OSHA Z-1
		TWA (mist, total dust)	15 mg/m <sup>3</sup>	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m <sup>3</sup>	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m <sup>3</sup>	OSHA P0

#### Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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Color : No data available

Odor : No data available

pH : 6.99  
(1% solution in water)

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : > 212 °F / > 100 °C

Evaporation rate : No data available

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Density : 9.4628 lb/gal (75.9 °F / 24.4 °C)

Solubility(ies)  
Water solubility : Miscible

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, dynamic : 306.7 mPa.s (69.4 °F / 20.8 °C)  
91.45 mPa.s (105.6 °F / 40.9 °C)

Viscosity, kinematic : No data available

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Explosive properties : Not explosive  
Oxidizing properties : The substance or mixture is not classified as oxidizing.  
Particle size : No data available

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.  
No decomposition if stored and applied as directed.

Chemical stability : The product is chemically stable.  
No decomposition if stored and applied as directed.

Possibility of hazardous reactions : No decomposition if stored and applied as directed.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Strong oxidizing agents  
Copper

Hazardous decomposition products : No decomposition if stored and applied as directed.

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Harmful if swallowed or if inhaled.

#### **Product:**

Acute oral toxicity : LD50 Oral (Rat): ca. 1,030 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2.08 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

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

#### Skin corrosion/irritation

Causes skin irritation.

#### **Product:**

Species : Rabbit  
Result : Moderate skin irritation

Remarks : May cause skin irritation in susceptible persons.

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### Serious eye damage/eye irritation

Causes serious eye irritation.

#### Product:

Species : Rabbit  
Result : Moderate eye irritation  
  
Remarks : May cause irreversible eye damage.

### Respiratory or skin sensitization

#### Skin sensitization

May cause an allergic skin reaction.

#### Respiratory sensitization

Not classified based on available information.

#### Product:

Test Type : Local lymph node assay (LLNA)  
Species : mice  
Assessment : The product is a skin sensitizer, sub-category 1B.  
Result : Causes skin sensitization.

### Germ cell mutagenicity

Not classified based on available information.

#### Components:

##### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

Genotoxicity in vivo : Test Type: dominant lethal test  
Method: OECD Test Guideline 478  
Result: negative

##### **sodium decyl sulphate:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Result: negative  
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
Result: negative  
Remarks: Based on data from similar materials

Test Type: reverse mutation assay  
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)  
Result: negative

Genotoxicity in vivo : Test Type: dominant lethal test  
Species: Mouse (male and female)  
Application Route: Oral  
Result: negative  
Remarks: Based on data from similar materials



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Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

### **glycerol:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Result: negative

### **sodium dodecyl sulphate:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Test system: Escherichia coli  
Method: OECD Test Guideline 471  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Test system: mouse lymphoma cells  
Result: negative

Genotoxicity in vivo : Test Type: chromosome aberration assay  
Species: Mouse (male and female)  
Application Route: Oral  
Result: negative

### **Carcinogenicity**

Not classified based on available information.

### **Components:**

#### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

Species : Mouse  
Exposure time : 2 Years  
NOAEL : 1.2 mg/kg bw/day  
Result : negative

Species : Rat  
Exposure time : 2 Years  
NOAEL : 1 mg/kg bw/day  
Result : negative

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

#### **sodium decyl sulphate:**

Species : Rat, male and female  
Application Route : Oral  
Exposure time : 2 Years  
Dose : 0, 11, 113, 1125 mg/kg bw  
NOAEL : 1,125 mg/kg bw/day  
Result : negative  
Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Weight of evidence does not support classification as a car-



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Effects on fetal development : Test Type: Two-generation study  
Species: Rat  
Application Route: Oral  
Result: negative

### **sodium dodecyl sulphate:**

Effects on fertility : Test Type: Two-generation study  
Species: Rat  
Application Route: Oral  
General Toxicity Parent: NOAEL: 300 mg/kg body weight  
General Toxicity F1: NOAEL: 300 mg/kg body weight  
Result: negative  
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Oral  
Duration of Single Treatment: 6 - 15 d  
General Toxicity Maternal: NOEL: 250 mg/kg body weight  
Developmental Toxicity: NOEL: 250 mg/kg body weight  
Result: negative  
Remarks: Based on data from similar materials

### **STOT-single exposure**

May cause respiratory irritation.

#### **Components:**

#### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

Assessment : May cause respiratory irritation.

#### **sodium decyl sulphate:**

Assessment : May cause respiratory irritation.

### **STOT-repeated exposure**

Not classified based on available information.

#### **Components:**

#### **sodium dodecyl sulphate:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### **Repeated dose toxicity**

#### **Components:**

#### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

Species : Rat  
NOAEL : 13.3 mg/kg bw/day  
Application Route : Oral - feed

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Exposure time : 90 d  
Symptoms : anemia, Liver effects

Species : Dog  
NOAEL : 5 mg/kg bw/day  
Application Route : Oral  
Exposure time : 90 d  
Symptoms : anemia, Liver effects

### **sodium decyl sulphate:**

Species : Rat, male and female  
NOAEL : 488 mg/kg bw/day  
LOAEL : 1016 mg/kg bw/day  
Application Route : Oral - feed  
Exposure time : 91 d  
Dose : 62,122,245,488,1016,2081mg/kgb  
Target Organs : Liver  
Remarks : Based on data from similar materials

Species : Mouse, male and female  
NOAEL : 400 mg/kg bw/day  
LOAEL : 500 mg/kg bw/day  
Application Route : Dermal  
Dose : 0,200,400,500,600mg/kgbw/day  
Symptoms : Necrosis  
Remarks : Based on data from similar materials

### **glycerol:**

Species : Rat  
LOAEL : 1 mg/kg  
Application Route : Inhalation  
Exposure time : 14 d  
Dose : 0, 1, 1.93, 3.91 mg/L  
Symptoms : respiratory tract irritation, Fatality

Species : Rat  
NOAEL : 0.165 mg/l  
LOAEL : 0.662 mg/l  
Application Route : Inhalation  
Exposure time : 13 w  
Dose : 0, 0.033, 0.165, 0.662 mg/L  
Symptoms : respiratory tract irritation

### **sodium dodecyl sulphate:**

Species : Rat  
NOAEL : 488 mg/kg  
LOAEL : 1,016 mg/kg  
Application Route : Oral - feed  
Exposure time : 13 weeks

### **Aspiration toxicity**

Not classified based on available information.

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### Components:

#### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

The substance does not have properties associated with aspiration hazard potential.

### Neurological effects

#### Components:

#### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

No neurotoxicity observed in animal studies.

### Further information

#### Product:

Remarks : No data available

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

- |  |   |   |
|--|---|---|
| Toxicity to fish   | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 61 mg/l<br>Exposure time: 96 h  |
| Toxicity to daphnia and other aquatic invertebrates                    | : | EC50 (Daphnia magna (Water flea)): > 78 mg/l<br>Exposure time: 48 h   |
| Toxicity to algae/aquatic plants                                       | : | IC50 (Selenastrum capricornutum (green algae)): 12 mg/l<br>Exposure time: 96 h<br><br>IC50 (Scenedesmus subspicatus): 1.9 mg/l<br>Exposure time: 72 h |
| Toxicity to fish (Chronic toxicity)                                    | : | NOEC (Oncorhynchus mykiss (rainbow trout)): 6.2 mg/l<br>Exposure time: 28 d   |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 0.31 mg/l<br>Exposure time: 21 d   |
| Toxicity to soil dwelling organisms                                    | : | NOEC (Eisenia fetida (earthworms)): 0.01 mg/cm <sup>2</sup><br>Exposure time: 180 d   |
| Toxicity to terrestrial organisms                                      | : | LD50 (Apis mellifera (bees)): > 50 $\mu$ g/bee<br>End point: Acute contact toxicity<br><br>LD50 (Apis mellifera (bees)): > 2 $\mu$ g/bee              |

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End point: Acute oral toxicity

LD50 (Anas platyrhynchos (Mallard duck)): > 5,000 mg/kg

### **sodium decyl sulphate:**

- Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 13 mg/l  
Exposure time: 48 h  
Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 470 mg/l  
Exposure time: 24 h
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 8.64 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 1.357 mg/l  
Exposure time: 42 d  
Test Type: flow-through test  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.4 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211
- Toxicity to microorganisms : EC50 (activated sludge): 135 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Remarks: Based on data from similar materials

### **glycerol:**

- Toxicity to fish : LC50 (Fish): 885 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,955 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : EC50 (Scenedesmus capricornutum (fresh water algae)): 2,900 mg/l  
Exposure time: 192 h
- Toxicity to microorganisms : EC10 (Pseudomonas putida): 10,000 mg/l  
Exposure time: 16 h

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt:**

#### **Ecotoxicology Assessment**

- Acute aquatic toxicity : Toxic effects cannot be excluded
- Chronic aquatic toxicity : Toxic effects cannot be excluded

### **D-Glucopyranose, oligomeric, C9-11-alkyl glycosides:**

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Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 2.95 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Crustaceans): 26.2 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (Diatom)): 9.05 mg/l  
Exposure time: 72 h  
Method: ISO 10253

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 560 mg/l

### **sodium dodecyl sulphate:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 29 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Method: OECD Test Guideline 203

LC50 (Fish): 3.6 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Ceriodaphnia dubia (water flea)): 5.55 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 53 mg/l  
Exposure time: 72 h  
Test Type: static test

NOEC (Desmodesmus subspicatus (green algae)): 30 mg/l  
Exposure time: 72 h  
Test Type: static test

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 1.357 mg/l  
Exposure time: 42 d  
Test Type: flow-through test  
Method: No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 0.88 mg/l  
Exposure time: 7 d  
Test Type: flow-through test

Toxicity to microorganisms : EC50 (activated sludge): 135 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition

### **Persistence and degradability**

#### **Product:**

Biodegradability : Remarks: Product is not expected to be biodegradable.

#### **Components:**

**(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

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Biodegradability : Result: Not readily biodegradable.

### **sodium decyl sulphate:**

Biodegradability : Inoculum: activated sludge  
Result: Readily biodegradable.  
Biodegradation: 98 %  
Exposure time: 30 d  
Method: OECD Test Guideline 301D

### **glycerol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 94 %  
Exposure time: 24 h

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega-hydroxy-, phosphate, potassium salt:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 80 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
Remarks: Based on data from similar materials

### **D-Glucopyranose, oligomeric, C9-11-alkyl glycosides:**

Biodegradability : Result: Readily biodegradable.

### **sodium dodecyl sulphate:**

Biodegradability : aerobic  
Inoculum: activated sludge, non-adapted  
Concentration: 20 mg/l  
Result: Readily biodegradable.  
Biodegradation: 95 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

### **Bioaccumulative potential**

#### **Product:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

#### **Components:**

#### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

Bioaccumulation : Species: Salmo gairdneri  
Bioconcentration factor (BCF): 7  
Remarks: Bioaccumulation is unlikely.  
See section 9 for octanol-water partition coefficient.

Partition coefficient: n-octanol/water : log Pow: 2.29

### **sodium decyl sulphate:**



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Partition coefficient: n-octanol/water : log Pow: 1.72 (77 °F / 25 °C)  
pH: 7.94 - 7.95

### **glycerol:**

Partition coefficient: n-octanol/water : log Pow: -1.75 (77 °F / 25 °C)  
pH: 7.4

### **D-Glucopyranose, oligomeric, C9-11-alkyl glycosides:**

Partition coefficient: n-octanol/water : log Pow: 3.7  
Method: OECD Test Guideline 117

### **sodium dodecyl sulphate:**

Partition coefficient: n-octanol/water : log Pow: -2.03 (68 °F / 20 °C)

### **Mobility in soil**

#### **Product:**

Mobility : Remarks: This chemical is known to leach through soil into ground water under certain conditions.

#### **Components:**

##### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

Distribution among environmental compartments : Remarks: medium mobility in soil

### **Other adverse effects**

#### **Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life.  
Toxic to aquatic life with long lasting effects.

#### **Components:**

##### **(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life with long lasting effects.

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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.
- 

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

- UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Flutriafol)  
Class : 9  
Packing group : III  
Labels : 9

##### IATA-DGR

- UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(Flutriafol)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964

##### IMDG-Code

- UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Flutriafol)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

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

Not applicable for product as supplied.

#### Domestic regulation

#### 49 CFR

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UN/ID/NA number : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (Flutriafol)  
Class : 9  
Packing group : III  
Labels : CLASS 9  
ERG Code : 171  
Marine pollutant : yes

### 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

### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ethylbenzene	100-41-4	100	100 (F003)

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Specific target organ toxicity (single or repeated exposure)

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

glycerol                                      56-81-5                                      >= 5 - < 10 %

### Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

sodium hydroxide                              1310-73-2                                      >= 0 - < 0.1 %  
ethylbenzene                                      100-41-4                                      >= 0 - < 0.1 %

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The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

sodium hydroxide	1310-73-2	>= 0 - < 0.1 %
ethylbenzene	100-41-4	>= 0 - < 0.1 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

### US State Regulations

#### Massachusetts Right To Know

glycerol	56-81-5
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#### Pennsylvania Right To Know

water	7732-18-5
(RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol	76674-21-0
sodium decyl sulphate	142-87-0
glycerol	56-81-5
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt	68186-36-7
sodium sulphate	7757-82-6

#### Maine Chemicals of High Concern

Product does not contain any listed chemicals

#### Vermont Chemicals of High Concern

ethylbenzene	100-41-4
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#### Washington Chemicals of High Concern

ethylbenzene	100-41-4
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#### California Prop. 65

WARNING: This product can expose you to chemicals including ethylbenzene, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California Permissible Exposure Limits for Chemical Contaminants

glycerol	56-81-5
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#### The ingredients of this product are reported in the following inventories:

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIRC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL.  (RS)-2,4'-difluoro- $\alpha$ -(1H-1,2,4-triazol-1-ylmethyl)benzhydryl alcohol
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory

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KECI : Not in compliance with the inventory  
PICCS : Not in compliance with the inventory  
IECSC : Not in compliance with the inventory  
NZIoC : Not in compliance with the inventory  
TECI : Not in compliance with the inventory

### TSCA list

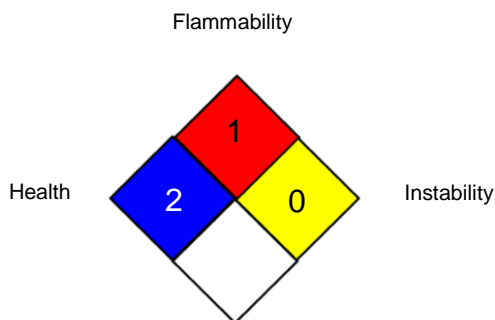
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



0 No health threat, 1 Slightly Hazardous, 2 Hazardous, 3 Extreme danger, 4 Deadly

#### HMIS® IV:

HEALTH	/	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)  
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants  
OSHA P0 / TWA : 8-hour time weighted average  
OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of

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the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; 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

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**End of Material Safety Data Sheet**