

1 Identification

· **Product identifier**

· **Trade name:** Torino® FUNGICIDE

EPA Registration no.: 8033-103-10163

· **CAS Number:** Active Ingredient: Cyflufenamid (10.0%), CAS:180409-60-3

· **Application of the substance / the mixture** Agricultural Fungicide

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

· **Manufacturer/Supplier:**

Gowan Company

P.O. Box 5569

Yuma, Arizona 85366-5569

(928) 783-8844

· **Information department:** sds@gowanco.com

· **Emergency telephone number:**

Chemtrec® Emergency Telephone 24 - Hours: (Spills, leak or fire) Inside U.S. & Canada: (800) 424-9300
Outside the U.S. & Canada: +011 (703) 527-3887

For medical emergency (Prosar®): (888) 478-0798

2 Hazard(s) identification

· **Classification of the substance or mixture**



Acute Tox. 4 H302 Harmful if swallowed.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**

Propylene glycol

· **Hazard statements**

H302 Harmful if swallowed.

· **Precautionary statements**

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**

Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes or clothing.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

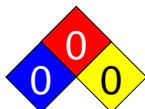
Printing date 03/07/2019

Reviewed on 03/07/2019

Trade name: Torino® FUNGICIDE
EPA Registration no.: 8033-103-10163

(Contd. of page 1)

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
 Fire = 0
 Reactivity = 0

HAZARD INDEX:

- 4 Severe Hazard
- 3 Serious Hazard
- 2 Moderate Hazard
- 1 Slight Hazard
- 0 Minimal Hazard

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable in US.
- **vPvB:** Not applicable in US.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
CAS: 180409-60-3	Cyflufenamid	<div style="display: inline-block; border: 1px solid red; padding: 2px;">!</div> Acute Tox. 4, H332; Eye Irrit. 2B, H320
		10.0%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
- Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- You may also contact 1-888-478-0798 for emergency medical treatment information.
- **After inhalation:**
- Move person to fresh air.
 - If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
 - Call poison control center or doctor for further treatment advice.
- **After skin contact:**
- Take off contaminated clothing.
 - Rinse skin immediately with plenty of water for 15-20 minutes.
 - Call a poison control center or doctor for treatment advice.
- **After eye contact:**
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
 - Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.
 - Call a poison control center or doctor for treatment advice.
- **After swallowing:**
- Call a poison control center or doctor immediately for treatment advice.
 - Have person sip a glass of water if able to swallow.
 - Do not induce vomiting unless told to do so by a poison control center or doctor.
 - Do not give anything to an unconscious person.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/07/2019

Reviewed on 03/07/2019

Trade name: Torino® FUNGICIDE
EPA Registration no.: 8033-103-10163

(Contd. of page 2)

- **Information for doctor:**
 - **Most important symptoms and effects, both acute and delayed** Unknown
 - **Indication of any immediate medical attention and special treatment needed**
There is no specific antidote. All treatments should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:** water spray, carbon dioxide, dry chemical powder or ploymer foam.
- **Special hazards arising from the substance or mixture**
May involve harmful and irritant gas/fume in heating or combustion.
- **Advice for firefighters**
Move containers away from fire area if it can be done witout risk. If possible to remove containers from fire zone, cool them with water.
 - **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Remove persons from danger area.
Wear protective clothing.
- **Environmental precautions:**
This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Prevent from releasing in to the environment.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Pick up mechanically.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
 - **Precautions for safe handling**
Keep receptacle tightly sealed.
Avoid contact with eyes, skin or clothing. Avoid breathing vapors, Avoid releasing to this product to environment.
 - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
Store in a cool, dry place.
Store unused product in original container only, out of reach of children and animals.
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:** Do not storage in or around home

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/07/2019

Reviewed on 03/07/2019

Trade name: Torino® FUNGICIDE
EPA Registration no.: 8033-103-10163

(Contd. of page 3)

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

· **Material of gloves**

Chemical resistant gloves

If you want more options for chemical resistant materials, follow the instructions for category A on an EPA chemical resistance category selection chart.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

· **Body protection:** Wear long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:**

Viscous liquid

· **Color:**

Opaque

· **Odor:**

Mildly aromatic

· **Odor threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

· **Melting point/Melting range:**

Not applicable

· **Boiling point/Boiling range:**

Not available

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/07/2019

Reviewed on 03/07/2019

Trade name: Torino® FUNGICIDE
EPA Registration no.: 8033-103-10163

(Contd. of page 4)

· Flash point:	Not flammable
· Flammability (solid, gaseous):	Not available
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
· Density at 20 °C (68 °F):	1.04 g/cm ³ (8.6788 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water:	Dispersible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No significant oxidation/reduction chemical incompatibility is observed.
- **Chemical stability** Stable under normal storage and use conditions.
- **Thermal decomposition / conditions to be avoided:** Avoid excessive heat and flame.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Avoid excessive heat and flame. Organic peroxide, strong acids or bases
- **Incompatible materials:** Organic peroxide, strong acids or bases.
- **Hazardous decomposition products:**
CO, NO_x, HF and organic compounds on combustion. May generate harmful and irritant gas/fume in heating or combustion

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	>2.64 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Minimal

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/07/2019

Reviewed on 03/07/2019

Trade name: Torino® FUNGICIDE
EPA Registration no.: 8033-103-10163

(Contd. of page 5)

- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 - **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)
None of the ingredients are listed.

· NTP (National Toxicology Program)
None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

12 Ecological information

- **Toxicity**

Acute Toxicity to Fish (rainbow trout); LC50 (96hr) >95.7 mg/L

Acute Toxicity to Daphnia; EC50 (48hr) 18.1 mg/L

Acute Toxicity to Algae; ErC50 (72hr) >14.6 mg/L

- **Aquatic toxicity:** This pesticide is toxic to fish and aquatic invertebrates
- **Persistence and degradability** Not readily biodegradable (as active ingredient)
- **Behavior in environmental systems:**

- **Components:**

1. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.

2. Do not contaminate water when disposing of equipment washwater or rinsate.

3. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas

- **Bioaccumulative potential** BCF 449 at 10 µg/l (28 Days) (as active ingredient)
- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Do not discharge into waterway or sewer systems unless permission has been obtained by the local authority and suitable dilution has been established.

Obey all Federal, State and local regulations for health, safety, and environmental protection in treating the waste.

- **Uncleaned packagings:**

- **Recommendation:**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents in application equipment or a

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/07/2019

Reviewed on 03/07/2019

Trade name: Torino® FUNGICIDE
EPA Registration no.: 8033-103-10163

(Contd. of page 6)

*mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip.
 Repeat this procedure two more times.*

14 Transport information

· UN-Number · DOT, ADR, ADN, IMDG, IATA	Not classified as dangerous goods in DOT Void
· UN proper shipping name · ADR, ADN, IMDG, IATA	Not regulated Not regulated
· Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	Void
· Packing group · ADR, IMDG, IATA	Not applicable Void
· Environmental hazards: · Marine pollutant:	Not applicable. Not applicable
· Special precautions for user	Not applicable
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
· UN "Model Regulation":	Not regulated

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

EPA /FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency (EPA) 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.

· **SARA Title III**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

None of the ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/07/2019

Reviewed on 03/07/2019

Trade name: Torino® FUNGICIDE
EPA Registration no.: 8033-103-10163

(Contd. of page 7)

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

Not applicable

· **Signal word**

(US EPA) CAUTION

· **Hazard-determining components of labeling:**

Propylene glycol

· **Hazard statements**

Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco. Wear long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves. Remove and wash contaminated clothing before reuse.
H302 Harmful if swallowed.

· **Precautionary statements**

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Supply Chain

· **Contact:** sds@gowanco.com

· **Date of preparation / last revision** 03/07/2019 / 6

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/07/2019

Reviewed on 03/07/2019

Trade name: Torino® FUNGICIDE
EPA Registration no.: 8033-103-10163

(Contd. of page 8)

· Abbreviations and acronyms:

ADR: *Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

IMDG: *International Maritime Code for Dangerous Goods*

DOT: *US Department of Transportation*

IATA: *International Air Transport Association*

ACGIH: *American Conference of Governmental Industrial Hygienists*

EINECS: *European Inventory of Existing Commercial Chemical Substances*

ELINCS: *European List of Notified Chemical Substances*

CAS: *Chemical Abstracts Service (division of the American Chemical Society)*

NFPA: *National Fire Protection Association (USA)*

LC50: *Lethal concentration, 50 percent*

LD50: *Lethal dose, 50 percent*

PBT: *Persistent, Bioaccumulative and Toxic*

vPvB: *very Persistent and very Bioaccumulative*

NIOSH: *National Institute for Occupational Safety*

OSHA: *Occupational Safety & Health*

TLV: *Threshold Limit Value*

PEL: *Permissible Exposure Limit*

REL: *Recommended Exposure Limit*

Acute Tox. 4: *Acute toxicity – Category 4*

Eye Irrit. 2B: *Serious eye damage/eye irritation – Category 2B*

· **Sources** Torino® is a registered trademark of Nippon Soda Co., Ltd.

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