



Rival 10G Superflow Granular Herbicide Safety Data Sheet

Issue Date: 2017-12-21

Supersedes Date: 2017-05-17

{Reserved}

1. Identification

Product Name: Rival 10G Superflow Granular Herbicide

PCP Registration No.: 18926

Refer to the approved product label for handling and use instructions.

Product Type: Herbicide

Supplier: Nufarm Agriculture Inc.
Suite 350, 2618 Hopewell Place NE
Calgary, Alberta, T1Y 7J7, Canada
1-800-868-5444

Telephone Numbers: 24 Hour Emergency Response Number, Chemtrec, 1-800-424-9300.
For medical emergencies, ProPharma Group, 1-877-325-1840.
For product and use information, Nufarm Agriculture Inc.,
1-800-868-5444.

2. Hazard Identification

Classified according to UN GHS Version 5.

Physical Hazards:

None

Health Hazards:

Acute toxicity (Inhalation)	Category 4
Eye irritation	Category 2B
Skin irritation	Category 3
Skin sensitizer	Category 1B

Environmental Hazards:

Hazardous to aquatic environment, acute Category 1

Signal Word:

WARNING

Hazard Statements:

Harmful if inhaled. Causes eye irritation. Causes mild skin irritation. May cause an allergic skin reaction. Very toxic to aquatic life.



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Precautionary Statements:

Causes skin and eye irritation. Avoid contact with skin, eyes and clothing. Wear goggles or face shield during mixing/loading. Wear a long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. After use, wash hands and other exposed skin. Remove and wash contaminated clothing before reuse. Avoid breathing dust. Use only outdoors or in a well-ventilated area. This product contains an active ingredient which is toxic to aquatic organisms.

3. Composition / Information on Ingredients

Hazardous Components	CAS No.	Wt. %
Trifluralin	1582-09-8	9.5-10.5
Chemical Synonyms: 2,6-dinitro- <i>N,N</i> -dipropyl-4-(trifluoromethyl)benzenamine		
Crystalline silica, quartz (as component of clay)	14808-60-7	<5
Chemical Synonyms: Silicone dioxide; SiO ₂ ; CAS No. 7631-86-9		

Other ingredients are considered non-hazardous.

Content as Expressed on Product Label

Trifluralin ... 10.0%

4. First Aid Measures

If swallowed, call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If in eyes, 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 poison control centre or doctor for treatment advice.

If inhaled, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

5. Fire-fighting Measures

Extinguishing Media: Product does not burn. Use extinguishing media appropriate to surrounding fire conditions.

Special Firefighting Procedures: Firefighters should wear self-contained breathing apparatus

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and full protective clothing when fighting chemical fires. Minimize and contain water runoff.

Flash Point:..... Non-flammable

Conditions of Flammability: None

Hazardous Decomposition Products:... Under fire conditions, may produce gases such as fluorinated hydrocarbons, nitrogen oxides and carbon oxides.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 1 Flammability: 1 Reactivity: 0

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. Accidental Release Measures

Use safety equipment and procedures appropriate to the size of the spill. Keep unnecessary people away. Contain and sweep up material of small spills. Do not vacuum up material to prevent generation of fine dust. For large spills outdoors, cover to protect from moisture, and contain the spill area to prevent spread or dispersion. Avoid contamination of natural waters and sewers. Contain all affected material in a closed, labeled container for proper disposal. Isolate from other waste materials. Clean contaminated area such as hard surfaces with detergent and water, collecting cleaning solution for proper disposal. Large spills to soil or similar surfaces may necessitate removal of top soil.

7. Handling and Storage

Handling: Avoid contact with skin, eyes and clothing. After use, wash hands and other exposed skin. Wear coveralls or a long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. Remove and wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Avoid breathing dust.

Storage: Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. Do not store under direct sunlight. Store in areas of cool temperatures. Do not store in granular applicators for a prolonged period of time (maximum 24 hours).

8. Exposure Controls / Personal Protection

Engineering Controls: Use only outdoors or in a well-ventilated area.

Personal Protective Equipment: Goggles or face shield, coveralls or a long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal.

Exposure Guidelines:

Component	TWA*	STEL**	Reference/Note
Trifluralin	NE	NE	None found
Crystalline silica, quartz	0.025 mg/m ³	NE	WorkSafeBC, 2015

*Time-weighted Average, 8-hour unless otherwise noted.

**Short Term Exposure Limit

NE = Not Established

Refer to approved product label for additional exposure control guidance.

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9. Physical and Chemical Properties

NOTE: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification. If no value is determined for the formulation, the value listed is the most relevant value of the predominant ingredient(s).

Appearance (physical state, colour, etc.)	grey/green granule
Odour	none noticeable
Odour threshold	not available
pH	not available
Melting point / Freezing point	not applicable
Initial boiling point and boiling range	not applicable
Flash point	not applicable, non-flammable
Evaporation rate	not applicable
Flammability (solids, gases)	not applicable
Upper / Lower flammability or explosive limits	not applicable
Vapour pressure	6.1 mPa @ 25C (trifluralin)
Vapour density	not available
Relative density	650 kg/m ³
Solubility(ies)	granules not soluble, disintegrate
Partition coefficient: n-octanol/water	logP = 4.83 @ 20C (trifluralin)
Autoignition temperature	not available
Decomposition temperature	not available
Viscosity	not applicable

10. Stability and Reactivity

Reactivity: Not reactive.

Chemical Stability: Stable under normal handling and storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Avoid temperatures >40C. Do not store near heat sources.

Incompatible Materials: Avoid contact with strong acidic or oxidizing agents.

Hazardous Decomposition Products: Under fire conditions, may produce gases such as fluorinated hydrocarbons, nitrogen oxides and carbon oxides.

11. Toxicological Information

Likely routes of exposure: Inhalation, ingestion, skin and eye contact.

Eye contact: Causes eye irritation.

Skin contact: Causes mild skin irritation. May cause an allergic skin reaction.

Ingestion: May be harmful if swallowed. No significant adverse health effects are expected if only small amounts are swallowed.

Inhalation: Harmful if inhaled.

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Medical Conditions Aggravated by Exposure: Skin exposure may aggravate preexisting skin conditions. Inhalation of dust may aggravate preexisting respiratory conditions.

Toxicological Data:

Data are from laboratory studies conducted on similar products.

Acute oral LD₅₀ (mg/kg) >5000 (Rat)
Acute dermal LD₅₀ (mg/kg) >5000 (Rat)
Acute inhalation LC₅₀ (mg/l) >2.0 (Rat, 4-hour exposure)
Skin corrosion/irritation Considered as slightly irritating to skin (Rabbit)
Serious eye damage/irritation Considered as moderately irritating to the eye (Rabbit)
Respiratory or skin sensitization ... Considered as a contact dermal sensitizer (Guinea pig)
Germ cell mutagenicity The weight of evidence is that trifluralin is non-genotoxic.
Carcinogenicity Trifluralin is not anticipated to be a carcinogenic risk to humans. This product contains clay, which may include a small amount of crystalline silica (quartz) as a naturally-occurring contaminant. Inhalation of crystalline silica may cause pulmonary fibrosis (silicosis). The International Agency for Research on Cancer (IARC) has concluded there is limited evidence of the carcinogenicity of crystalline silica to humans (Group 1).
Reproductive toxicity Trifluralin is not considered a reproductive toxin.

12. Ecological Information

Ecotoxicity:

Data are for trifluralin, from published sources.

Aquatic Invertebrate: 48-Hour EC₅₀ (mg/L) 0.245 (*Daphnia*)

Fish: 96-Hour LC₅₀ (mg/L) 0.088 (Rainbow Trout), 0.089 (Bluegill Sunfish)

Algae: 7-Day EC₅₀ (mg/L) 12.2 (*Selenastrum*)

Birds: Oral LD₅₀ (mg/kg) >2000 (Bobwhite Quail); 5-Day Dietary LC₅₀ >5000 (Mallard Duck, Bobwhite Quail)

Bees: Oral and Contact LD₅₀ >100 µg/bee

Persistence and Degradability: Trifluralin is considered persistent to moderately persistent in soil. Persistence in soils is variable, depending on soil characteristics and environmental conditions. Typical DT₅₀ in soils ranges 57-126 days. Trifluralin is stable to hydrolysis at environmentally relevant pHs. Degradation is more rapid under anaerobic conditions. Trifluralin is highly volatile even after incorporation into the soil matrix. Volatility is one of the main dissipation routes for trifluralin. Volatilization increases with increasing soil moisture levels, temperature and rainfall, and decreases with the organic matter content in soils.

Mobility in Soil: Trifluralin is highly adsorptive and relatively immobile in soil.

Bioaccumulation Potential: Trifluralin has the potential to bioaccumulate, but will depurate.

13. Disposal Considerations

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Disposal should be made in accordance with federal, provincial

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and local regulations. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean up of spills.

NON-REUSABLE BAGS:

- Do not reuse this bag for any purpose.
- Thoroughly empty contents of the bag into the application device.
- Make the empty bag unsuitable for further use.
- Dispose of the bag in accordance with provincial requirements.

REUSABLE BAGS:

The outer bag is reusable. Do not damage. For disposal, the outer bag may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this outer bag for any other purpose.

- Thoroughly empty contents of the bag into the application device.
- Dispose of the liner in accordance with provincial requirements.
- Return the outer bag to the point of purchase.

14. Transport Information

Canadian TDG Description (Road & Rail):

Not regulated

United States DOT Description:

< 100 pounds per completed package : Not Regulated

≥ 100 pounds per completed package UN3077, Environmentally hazardous substances, solid, n.o.s., (Trifluralin), 9, III, RQ

IMDG : Not Regulated

IATA: Not Regulated

15. Regulatory Information

Pest Control Products Act Registration Number: 18926

Read the approved label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information

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required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control product label:

POTENTIAL SKIN SENSITIZER

WHMIS exempt.

16. Other Information

This Safety Data Sheet (SDS) is designed to comply with the Globally Harmonized System (GHS) of classification, and the *Hazardous Products Regulations*.

This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use. The product labeling provides that information specifically for product use as intended.

Company and published information is used in the development of this SDS. The information herein is presented in good faith and believed accurate at the date of publication. However, no warranty, expressed or implied, is given.

Revisions to the last issue: Addition of PMRA guidance info to Section 15.

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