

Material Safety Data Sheet



Musketeer Turf Growth Regulator

1. Product and company identification

Product name	: Musketeer Turf Growth Regulator
EPA Registration Number	: 67690-57
Material uses	: Turf PGR.
Supplier/Manufacturer	: SePRO Corporation 11550 North Meridian Street Suite 600 Carmel, IN 46032 U.S.A. Tel: 317-580-8282 Toll free: 1-800-419-7779 Fax: 317-428-4577 Monday - Friday, 8am to 5pm E.S.T. www.sepro.com
Responsible name	: KMK Regulatory Services Inc.
In case of emergency	: INFOTRAC - 24-hour service 1-800-535-5053

2. Hazards identification

Physical state	: Liquid. [Golden.]
Color	: Golden.
Odor	: Fruity.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview	: WARNING! COMBUSTIBLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION. Combustible liquid. May be harmful if absorbed through skin or if swallowed. Severely irritating to eyes. Moderately irritating to the skin. Slightly irritating to the respiratory system. Keep away from heat, sparks and flame. Do not ingest. Do not get in eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry	: Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects	
Inhalation	: Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Harmful if swallowed.
Skin	: May be harmful in contact with skin. Moderately irritating to skin.
Eyes	: Severely irritating to eyes.
Potential chronic health effects	
Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.

- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Over-exposure signs/symptoms**
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : No known significant effects or critical hazards.
- Skin** : Adverse symptoms may include the following:
irritation
redness
- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Medical conditions aggravated by over-exposure** : None known.

See toxicological information (Section 11)

3 . Composition/information on ingredients

United States			
Name	CAS number	%	
Active ingredient:			
5-Pyrimidinemethanol, alpha-(1-methylethyl)-alpha-(4-(trifluoromethoxy)phenyl)-	56425-91-3	5.6	
1H-1,2,4-Triazole-1-ethanol, beta-((4-chlorophenyl)methyl)-alpha-(1,1-dimethylethyl)-,(R*,R*)-(+)-	76738-62-0	5.6	
4-(Cyclopropyl-Alpha-Hydroxymethylene)-3,5-Dioxo-Cyclohexanecarboxylic Acid Ethyl Ester	95266-40-3	1.4	
Inert ingredient:			
Proprietary Alcohol	---	13	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5 . Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase may occur and the container may burst, with the risk of a subsequent explosion.

Extinguishing media

Suitable : Use dry chemical, CO₂, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and

can be hazardous. Do not reuse container.

- Storage** : Protect from freezing. Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Applicators should refer to the product label for personal protective equipment.**
- Respiratory** : Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

- Physical state** : Liquid. [Golden.]
- Flash point** : Open cup: >76°C (>170°F)
- Color** : Golden.
- Odor** : Fruity.
- pH** : 5 to 7 [Conc. (% w/w): 1%]
- Relative density** : 8 lbs/gal.
- Solubility** : Emulsifies in water.

10 . Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Proprietary Alcohol 1H-1,2,4-Triazole-1-ethanol, beta-((4-chlorophenyl)methyl)-alpha-(1,1-dimethylethyl)-, (R*,R*)-(+)-	LD50 Dermal	Rabbit	1970 mg/kg	-
	LD50 Oral	Rat	3730 mg/kg	-
	LC50 Inhalation Vapor	Rat	369 g/m ³	4 hours
	LD50 Oral	Rat	1300 mg/kg	-

Chronic toxicity

There is no data available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Proprietary Alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Rabbit	-	415 mg	-
	Eyes - Moderate irritant	Rabbit	-	20 µg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Severe irritant	Rabbit	-	0.5 mL	-

Sensitizer

Skin : There is no data available.

Respiratory : There is no data available.

Carcinogenicity

There is no data available.

Mutagenicity

There is no data available.

Teratogenicity

There is no data available.

Reproductive toxicity

There is no data available.

12 . Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Proprietary Alcohol 1H-1,2,4-Triazole-1-ethanol, beta-((4-chlorophenyl)methyl)-alpha-(1,1-dimethylethyl)-, (R*,R*)-(+)-	Acute LC50 10 mg/L Fresh water	Fish - <i>Lepomis macrochirus</i> - 0.1 g	96 hours
	Acute EC50 41.5 mg/L Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	96 hours
	Acute LC50 28.7 mg/L Fresh water	Daphnia - <i>Daphnia magna</i> - <24 hours	48 hours
	Acute LC50 23.6 mg/L Fresh water	Fish - <i>Lepomis macrochirus</i>	96 hours

Persistence/degradability

There is no data available.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		Not regulated for a material classed as a combustible liquid in a non-bulk packaging. (Packaging having <= 450 L water capacity).
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

Exemption to the above classification may apply.

AERG : Not available.

15 . Regulatory information

HCS Classification : Combustible liquid
Irritating material

U.S. Federal regulations : TSCA 8(a) IUR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Proprietary Alcohol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Proprietary Alcohol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 : Not listed

Class II Substances

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: Proprietary Alcohol

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : The following components are listed: Proprietary Alcohol

California Prop. 65

No products were found.

16 . Other information

Label requirements : COMBUSTIBLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.

Hazardous Material Information System (U.S.A.) : **Health** : 2 **Flammability** : 2 **Physical hazards** : 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) : **Health** : 2 **Flammability** : 2 **Instability** : 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

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Revised Section(s) : Not applicable.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.