



Rooted in Science

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade Name Turgor 0-0-5

SDS Date October 10, 2014

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Turf Nutrient

Uses Advised Against: To be used only where there is a recognized need. Do not exceed the appropriate dose rates.

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer: Floratine Products Group, Inc.
355 East South Street
Collierville, TN 38017
+1 901-853-2898

1.4 Emergency Telephone Number

Emergency Spill Information 1(800) 424-9300 for US and Canada (CHEMTREC)
+1(703) 527-3887 for International Calls (call CHEMTREC collect)

Other Product Information: cs@floratine.com

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

CLP/GHS Classification (1272/2008):

Eye Irritation Category 1 (H318)
Skin Irritation Category 2 (H315)

2.2 Label Elements

Warning!



Hazard Phrases

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Phrases:

P264 Wash thoroughly after handling.
P280 Wear protective gloves and eye protection. .

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P332 + P313 If skin irritation occurs: Get medical attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical attention.

2.3 Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical Name	CAS Number / EINECS Number / REACH Reg. Number	% (w/w)	EU Classification (67/548/EEC)	CLP/GHS Classification (1272/2008)
Potassium Thiosulfate	10294-66-3 233-666-8	20-50%	Not dangerous	Not Hazardous
Potassium Silicate	1312-76-1 / 215-199-1	<20%	Xi R36/38	Eye Irrit. 2 (H319) Skin Irrit. 2 (H315)

See Section 16 for full text of GHS and EU Classifications.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

First Aid

Eye contact: Flush eye with water for 15 minutes while lifting the upper and lower lids. Seek medical attention if irritation persists.

Skin contact: Wash with soap and water. Get medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

Inhalation: Remove victim to fresh air. Get medical attention if irritation persists.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If the person is alert, have them rinse their mouth with water and sip one glass of water. Call a poison center or physician for advice. Never give anything by mouth to an unconscious or drowsy person.

See Section 11 for more detailed information on health effects.

4.2 Most Important symptoms and effects, both acute and delayed: Causes eye irritation and skin irritation. Inhalation of vapors or mists may cause irritation to mucous membranes and upper respiratory tract. Swallowing may cause gastrointestinal irritation with nausea, vomiting and diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed: No immediate medical attention is required.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media: Use any media that is suitable for the surrounding fire. Water can be used to cool fire exposed containers

5.2 Special Hazards Arising from the Substance or Mixture

Unusual Fire and Explosion Hazards: None

Combustion Products: Not combustible.

5.3 Advice for Fire-Fighters: Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate protective equipment. Avoid direct contact with spilled material.

6.2 Environmental Precautions:

Prevent entry in storm sewers and waterways. Report spill as required by local and national regulations.

6.3 Methods and Material for Containment and Cleaning Up:

Collect with an inert absorbent material and place in an appropriate container for disposal. Wash spill site with water. Contain large spills and collect as much liquid as possible into containers for use.

6.4 Reference to Other Sections:

Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

SECTION 7: HANDLING and STORAGE

7.1 Precautions for Safe Handling:

Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Use reasonable care in handling. Do not eat, drink or smoke while using product. Wash thoroughly with soap and water after handling.

7.2 Conditions for Safe Storage, Including any Incompatibilities:

Protect containers from physical damage. Keep from freezing. Keep containers closed. Empty containers retain product residues. Follow all SDS precautions in handling empty containers. Store away from food and feed. Store away from oxidizing materials.

7.3 Specific end use(s):

Industrial uses: None identified

Professional uses: Turf Nutrient

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Chemical Name	US OEL	EU IOEL	UK OEL	Biological Limit Value
Potassium Thiosulfate	None Established	None Established	None Established	None Established
Potassium Silicate	None Established	None Established	None Established	None Established

8.2 Exposure Controls:

Recommended Monitoring Procedures: None.

Appropriate Engineering Controls: Good outdoor ventilation should be adequate under normal conditions.

Personal Protective Measurers

Eye/face Protection: Chemical goggles recommended to prevent eye contact.

Skin Protection: Impervious clothing is recommended to avoid skin contact.

Hands: Impervious gloves are recommended to avoid skin contact.

Respiratory Protection: None needed under normal use conditions with adequate ventilation. If mists are irritating, an approved particulate respirator can be used. Use respirators in accordance with local and national regulations.

Other protection: Suitable washing facilities should be available in the work area.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties

Appearance: Dark Brown Liquid
Odor Threshold: Not applicable
Melting/Freezing Point: Not available
Flash Point: None
Lower Flammability Limit: None
Upper Flammability Limit: None
Vapor Density(Air=1): Not available
Solubility: Complete
Autoignition Temperature: None
Viscosity: Not established
Oxidizing Properties: None
Molecular Formula: Mixture

Odor: Slight ferrous odor.
pH: 11.0
Boiling Point: 107°C
Evaporation Rate: Not available
Vapor Pressure: Greater than 1

Relative Density: 1.20
Octanol/Water Partition Coefficient: Not established
Decomposition Temperature: Not applicable
Explosive Properties: None
Specific Gravity (H₂O= 1): 1.20
Molecular Weight: Mixture

9.2 Other Information: None available

SECTION 10: STABILITY and REACTIVITY

10.1 Reactivity: Not reactive under normal conditions

10.2 Chemical Stability: Stable.

10.3 Possibility of Hazardous Reactions: None known.

10.4 Conditions to Avoid: Avoid excessive heat and freezing.

10.5 Incompatible Materials: Incompatible with oxidizing agents.

10.6 Hazardous Decomposition Products: Decomposition may produce carbon, potassium and sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Potential Health Effects:

Eye Contact: Causes irritation with redness, tearing and stinging.

Skin contact: Skin contact may cause irritation.

Inhalation: Excessive inhalation of mists may cause upper respiratory tract irritation.

Ingestion: Swallowing may cause gastrointestinal effects including nausea and diarrhea

Acute toxicity: No data available for the product.

Potassium Thiosulfate: Oral rat LD₅₀>5000 mg/kg; Dermal rabbit LD₅₀ >2000 mg/kg;

Inhalation rat LC₅₀ >5.5 mg/L/4 hr.

Potassium Silicate: Oral rat LD₅₀ >5000 mg/kg; Dermal rat LD₅₀ >5000 mg/kg; Inhalation rat LC₅₀ >2.06 mg/L/4 hr.

Skin corrosion/irritation: Potassium thiosulfate is not irritating to skin based on similar structural materials.

Potassium Silicate is moderately irritating to rabbit skin.

Eye damage/ irritation: Potassium thiosulfate is not irritating to eyes based on similar structural materials. Potassium silicate is severely irritating to rabbit eyes.

Respiratory Irritation: No data available. Expected to cause only temporary irritation.

Respiratory Sensitization: No data available

Skin Sensitization: Potassium silicate was negative in a Buehler test with guinea pigs.

Germ Cell Mutagenicity: Potassium silicates negative in an in vitro mammalian cell gene mutation assay, in vitro mammalian chromosome aberration test and an in vivo chromosome aberration assay (based on a structurally similar chemical).

Carcinogenicity: No data available. None of the components of this product are listed as carcinogens by IARC, NTP, OSHA or the EU Dangerous Substances Directive.

Reproductive Toxicity: In a developmental study, rats were administered potassium silicate (a structurally similar chemical) from day 0 -18 of gestation. No treatment-related effects were observed in either the mother or offspring. NOAEL for maternal toxicity 12.5 mg/kg, NOAEL >200 mg/kg for developmental toxicity

Specific Target Organ Toxicity:

Single Exposure: No data available

Repeat Exposure: No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity: No data available

Potassium Silicate: 48 hr LC50 *Leuciscus idus* >146 mg/L; 24 hr EC50 *daphnia magna* >14 mg/L

12.2 Persistence and degradability: Biodegradation is not applicable to inorganic substances such as potassium thiosulfate and potassium silicate.

12.3 Bioaccumulative Potential: No data available. Not expected to be bioaccumulative.

12.4 Mobility in Soil: In the soil, product follows natural cycle to provide plant nutrients.

12.5 Results of PVT and vPvB assessment: Not required.

12.6 Other Adverse Effects: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Dispose in accordance with local/ and national regulations. Not considered hazardous waste according to EU regulations.

SECTION 14: TRANSPORTATION INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	None	Not Regulated			
IMDG	None	Not Regulated			
IATA/ICAO	None	Not Regulated			

14.6 Special Precautions for User: None

14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code: Not determined.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

US Regulations

CERCLA Section 103: The normal application of fertilizers is exempt from CERCLA reporting. If an accidental release occurs, contact Floratine Products Group for information.

SARA Hazard Category (311/312): Acute Health

SARA 313: Products used in routine agricultural operations and fertilizers held for resale by retailers is excluded from SARA 313 reporting. Contact Floratine Products Group for additional information.

California Proposition 65: This product contains the following substances known to the State of California to cause cancer and/or reproductive harm (birth defects): None known.

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

International Chemical Inventories

US EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory or exempt.

SECTION 16: OTHER INFORMATION

CLP/GHS Classification and H Phrases for Reference (See Section 3)

Eye Irrit 2 Eye Irritation Category 2
Skin Irrit 2 Skin Irritation Category 2
H315 Causes skin irritation.
H319 Causes serious eye irritation.

This safety data sheet provides health and safety information. The product is to be used in applications consistent with best farming practice. Individuals handling this product should be informed under COSHH of the recommended safety precautions and should have access to this information. The product information data sheet is to the best of Floratine's knowledge correct as at the date of publication. Neither Floratine, importer or local supplier accepts liability for any loss or damage resulting from reliance on this information. Further information on this product may be obtained from the supplier whose name, address and telephone number will be found on the product container. The information provided herein is offered solely for your consideration, investigation and verification. This information herein is provided by Floratine in good faith as accurate at the time of writing but without guarantee. This information includes information which has been generated by other parties and provided to Floratine and which Floratine has not independently verified. The information provided herein relates only to the specific product designated and may not be valid if the product is used in combination with any other materials or in any process