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United States

Material Safety Data Sheet

Scotts Miracle-Gro Products Inc.
14111 Scottslawn Road
Marysville, Ohio 43041
United States

24 h. EMERGENCY TELEPHONE NUMBER
CHEMTREC (U.S.) 1-800-424-9300
CHEMTREC (International) 1-703-527-3887
Non-Emergency Calls
1-937-644-0011

Miracle-Gro® All Purpose Water Soluble Plant Food 24-8-16

1. Product and company identification

SKU # : 601320K
MSDS # : 320000005829

2. Hazards identification

Physical state : solid [CRYSTALLINE POWDER.]

Color : Color-Pantone Blue.
Odor : Fertilizer
Precautionary measures : Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency Overview Keep out of reach of children.

Potential acute health effects

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion : No known significant effects or critical hazards.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.
Target organs : Contains material which causes damage to the following organs:
gastrointestinal tract
skin
eyes

Potential chronic health effects : See section 11 for more information.

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : No specific data.
Eyes : No specific data.
Medical conditions aggravated by over-exposure : Pre-existing skin disorders may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
Urea	57-13-6	>40 - <=70
Potassium chloride (KCl)	7447-40-7	>15 - <=30
Silica gel, pptd., cryst.-free	112926-00-8	>1 - <=3
Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, sodium (1:1), (OC-6-21)-	15708-41-5	>1 - <=3

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 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 15 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. 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.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed.

5. Fire-fighting measures

Flammability of the product : No specific fire or explosion hazard.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

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.

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

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. 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

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. 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. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. 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. 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

Occupational exposure limits

Ingredient	Exposure limits
Urea	**AIHA WEEL (1999-01-01)** Time Weighted Average (TWA) 10 mg/m3
Silica gel, pptd., cryst.-free	**OSHA PEL 1989 (1989-03-01)** PEL: Permissible Exposure Level 6 mg/m3
Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-	**NIOSH REL (1994-06-01)** Time Weighted Average (TWA)

.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, sodium (1:1), (OC-6-21)-	1 mg/m3 **OSHA PEL 1989 (1989-03-01)** PEL: Permissible Exposure Level 1 mg/m3 Form: Soluble **ACGIH TLV (1994-09-01)** TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 1 mg/m3

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. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

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

Respiratory : Use a properly fitted, particulate filter 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eyes : Protective eyewear is not required, but may be used in situations were contact is expected.

Skin : No special protective clothing is required.

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	:	solid [CRYSTALLINE POWDER.]
Flash point	:	Not Applicable
Burning time	:	Not Applicable
Auto-ignition temperature	:	Not Applicable
Flammable limits	:	Not Applicable
Density	:	
Color	:	Color-Pantone Blue.
Odor	:	Fertilizer
pH	:	Not Applicable
Boiling/condensation point	:	Not Applicable
Melting/freezing point	:	Not Applicable
Relative density	:	Not Applicable
Vapor pressure	:	Not Applicable
Vapor density	:	Not Applicable
Volatility	:	Not Applicable
Odor threshold	:	Not Applicable
Evaporation rate	:	Not Applicable
Viscosity	:	Not Applicable
Solubility	:	Not Applicable
Solubility in water	:	Not Applicable

10. Stability and reactivity

Chemical stability	:	The product is stable.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
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
Urea	LD50 Oral	Rat	8,471 mg/kg	-
Potassium chloride (KCl)	LD50 Oral	Rat	2,600 mg/kg	-
Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, sodium (1:1), (OC-6-21)-	LD50 Oral	Rat	> 5,000 mg/kg	-
Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, sodium (1:1), (OC-6-21)-	LD50 Dermal	Rat	> 5,000 mg/kg	-

Conclusion/Summary: No known significant effects or critical hazards.

Irritation/Corrosion

Skin: Non-irritating

Eyes: May cause eye irritation.

Irritation/Corrosion

Respiratory — May cause respiratory irritation

Sensitizer

Conclusion/Summary

Skin	Not sensitizing - based on the individual components.
Respiratory	Not sensitizing - based on the individual components.

Chronic toxicity

Conclusion/Summary — No known significant effects or critical hazards.

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure

Conclusion/Summary — No known significant effects or critical hazards.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Silica gel, pptd., cryst.-free		3				

Mutagenicity

Conclusion/Summary — No known significant effects or critical hazards.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure

Conclusion/Summary — No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary — No known significant effects or critical hazards.

12.Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary : No known significant effects or critical hazards.

Persistence/degradability

Conclusion/Summary : No known significant effects or critical hazards.

Partition coefficient: n-octanol/water : No known significant effects or critical hazards.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

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

14.Transport information

Regulatory information	**UN no.**	**Proper shipping name**	**Class**	**PG***	**Note**
DOT		Not Regulated			

PG* : Packing group

15.Regulatory information

United States

U.S. Federal regulations : **United States - TSCA 12(b) - Chemical export notification:** None of the components are listed.
United States - TSCA 8(a) - Inventory update rule (IUR): 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: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Urea: Acu, Del Potassium chloride (KCl): Acu, Del Sulfuric acid ammonium salt (1:2): Acu Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, sodium (1:1), (OC-6-21)-: Acu
United States - EPA Clean water act (CWA) section 311 - Hazardous substances: Listed Benzenesulfonic acid, dodecyl-, sodium salt (1:1)
Clean Air Act (CAA) 112 accidental release prevention: No products were found.

United States inventory (TSCA 8b) : All components are listed or exempted.

State regulations

Massachusetts : The following components are listed: Sulfuric acid ammonium salt (1:2) Silica gel, pptd., cryst.-free

New York : None of the components are listed.

New Jersey : The following components are listed: Sulfuric acid ammonium salt (1:2) Silica gel, pptd., cryst.-free

Pennsylvania : The following components are listed: Sulfuric acid ammonium salt (1:2) Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-.kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, sodium (1:1), (OC-6-21)-

California Prop. 65 : Not listed

International regulations

Canada inventory : All components are listed or exempted.

International lists : **Australia inventory (AICS):** At least one component is not listed.
New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
China inventory (IECSC): At least one component is not listed.
Japan inventory: At least one component is not listed.
Korea inventory: At least one component is not listed.
Philippines inventory (PICCS): At least one component is not listed.
Taiwan inventory (CSNN): Not determined.
Malaysia Inventory (EHS Register): Not determined.

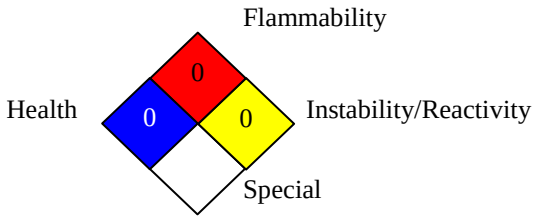
16.Other information

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	0
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.):



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