

Safety Data Sheet



Section 1: Identification

Product identifier

- Product Name** • **Lilly Miller Moss Out! For Lawns Concentrate**
- Synonyms** • 100099156; EPA Reg. No.: 802-509; UPC #: 0-70624-00765-5
- Product Description** • Brown to reddish liquid.
- Relevant identified uses of the substance or mixture and uses advised against**
- Recommended use** • Mossicide.
- Restrictions on use** • Keep out of the reach of children. Avoid contact with skin, eyes, or clothing.

Details of the supplier of the safety data sheet

- Manufacturer** • Lilly Miller Brands
1000 Parkwood Circle, Suite 700
Atlanta, GA 30339
United States

www.mossout.com

Emergency telephone number

- Manufacturer** • 1-800-265-0761
- Manufacturer (Transportation)** • 1-800-424-9300 - CHEMTREC
- Manufacturer (Transportation)** • 1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

- OSHA HCS 2012** • Serious Eye Damage 1
Skin Corrosion 1A

Label elements

OSHA HCS 2012

DANGER



Hazard statements • Causes severe skin burns and eye damage.

Precautionary statements

Prevention • Do not breathe dusts or mists.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CONTROL center.
Specific treatment is urgent, see supplemental first aid information in Section 4 - First Aid Measures.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
Store locked up.

Other hazards

OSHA HCS 2012

• This product is toxic to fish. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

• Material does not meet the criteria of a substance.

Mixtures

Composition		
Chemical Name	Identifiers	%
Ferric Sulfate Anhydrous	CAS:10028-22-5	35%
Sulfuric acid	CAS:7664-93-9	0.814%
Other ingredients	NDA	Balance

Section 4: First-Aid Measures

Description of first aid measures

Inhalation

• IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or doctor if you feel unwell.

Skin

• IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse.

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

Ingestion • IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Obtain medical attention immediately if ingested.

Most important symptoms and effects, both acute and delayed

- Causes severe skin burns and eye damage. Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician • Treat symptomatically and supportively.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media • Use water, foam, carbon dioxide, or dry chemical.

Unsuitable Extinguishing Media • Avoid heavy hose streams.

Firefighting Procedures • Contact may irritate or burn skin and eyes.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • At elevated temperatures, product will decompose into iron oxide (rust) and sulfur trioxide (corrosive and toxic).

Hazardous Combustion Products • Decomposes upon heating to produce toxic gases including iron oxides, sulfur oxides.

Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions • Avoid any skin contact. Avoid contact with eyes. Use appropriate Personal Protective Equipment (PPE).

Emergency Procedures • Ventilate closed spaces before entering. Stop leak if you can do it without risk. Stay upwind. Keep unauthorized personnel away. Wear appropriate personal protective equipment (PPE).

Environmental precautions

- Avoid release to the environment.

Methods and material for containment and cleaning up

Containment/Clean-up Measures • Absorb spills with an inert material, clay granules or other inert absorbent material and put in container for disposal. Neutralize spill area with soda ash or sodium bicarbonate.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices. Avoid contact with skin or eyes. Wash thoroughly with soap and water after handling. See product label for additional information. Wear appropriate personal protective equipment, avoid direct contact.

Conditions for safe storage, including any incompatibilities

Storage

- Store in cool, dry, secure place. Keep out of reach of children. Store locked up. Avoid contact with mild steel, copper alloys, galvanized steel, paint, enamel and concrete.

Incompatible Materials or Ignition Sources

- Mild steel, copper alloys, galvanized steel, paint, enamel and concrete.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines • No data available.

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Sulfuric acid (7664-93-9)	TWAs	0.2 mg/m ³ TWA (thoracic fraction)	1 mg/m ³ TWA	1 mg/m ³ TWA

Exposure Limits Supplemental

ACGIH

- Sulfuric acid (7664-93-9): TLV Basis - Critical Effects: (pulmonary function)

Exposure controls

Engineering Measures/Controls

- Use only with adequate ventilation to keep exposures (airborne levels of fume and vapor) below recommended exposure limits.

Personal Protective Equipment

Pictograms



Respiratory

- If handling without sufficient ventilation, wear a NIOSH approved respirator.

Eye/Face

- Wear chemical splash safety goggles.

Hands

- Impervious gloves.

Skin/Body

- If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

Environmental Exposure Controls

- No data available

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Brown to reddish liquid.
Color	Brown to reddish.	Odor	No data available.
Odor Threshold	No data available		
General Properties			
Boiling Point	212 °F(100 °C)	Melting Point/Freezing Point	58 °F(14.4444 °C)
Decomposition Temperature	No data available	pH	1 as is, 4.8 in 1% solution
Specific Gravity/Relative Density	1.57 to 1.62 Water=1	Bulk Density	No data available
Water Solubility	Soluble	Viscosity	No data available
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	No data available	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- Non-reactive under normal handling and storage conditions.

Chemical stability

- Stable under normal temperatures and pressures.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Keep away from fire.

Incompatible materials

- Avoid contact with mild steel, copper alloys, galvanized steel, paint, enamel and concrete.

Hazardous decomposition products

- Decomposes upon heating to produce toxic vapors/gases which include oxides of sulfur.

Section 11 - Toxicological Information

Information on toxicological effects

GHS Properties	Classification
	OSHA HCS 2012 • Acute Toxicity - Dermal - Classification criteria not met; Acute

Acute toxicity	Toxicity - Inhalation - Classification criteria not met; Acute Toxicity - Oral - Classification criteria not met
Skin corrosion/Irritation	OSHA HCS 2012 • Skin Corrosion 1A
Serious eye damage/Irritation	OSHA HCS 2012 • Serious Eye Damage 1
Skin sensitization	OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization	OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	OSHA HCS 2012 • Classification criteria not met
STOT-SE	OSHA HCS 2012 • Classification criteria not met
STOT-RE	OSHA HCS 2012 • Classification criteria not met

Potential Health Effects

Inhalation

- Acute (Immediate)** • May cause respiratory irritation.
- Chronic (Delayed)** • No data available

Skin

- Acute (Immediate)** • May cause severe skin burns.
- Chronic (Delayed)** • No data available

Eye

- Acute (Immediate)** • May cause serious eye damage.
- Chronic (Delayed)** • No data available

Ingestion

- Acute (Immediate)** • Ingestion may irritate the gastrointestinal tract. May cause burns to the digestive tract.
- Chronic (Delayed)** • No data available

Mutagenic Effects

- No data available.

Carcinogenic Effects

- IARC and NTP have classified "strong inorganic acid mists containing sulfuric acid" as known as human carcinogens. No definitive casual relationship between sulfuric acid mist exposure and respiratory cancer has been shown. No other components present at 0.1% or greater are listed by IARC, OSHA or NTP.

Reproductive Effects

- No data available.

Section 12 - Ecological Information

Toxicity

- No data available

Persistence and degradability

- No data available.

Bioaccumulative potential

- No data available.

Mobility in Soil

- No data available.

Other adverse effects

- No data available.

Potential Environmental Effects

- This pesticide is toxic to fish.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	UN3264	Corrosive liquid, acidic, inorganic, n.o.s. (ferric sulfate)	8	III	RQ Ferric Sulfate = 1,000 lbs. RQ Sulfuric acid = 1,000 lbs.
IMO/IMDG	UN3264	Corrosive liquid, acidic, inorganic, n.o.s. (ferric sulfate)	8	III	Not Applicable
IATA/ICAO	UN3264	Corrosive liquid, acidic, inorganic, n.o.s. (ferric sulfate)	8	III	Not Applicable

Special precautions for user • None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • No data available

Other information

DOT • Environmental Hazards: RQ Ferric Sulfate = 1,000 lbs. Environmental Hazards: RQ Sulfuric acid = 1,000 lbs.

IMO/IMDG • No data available

IATA/ICAO • No data available

Section 15 - Regulatory Information

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

SARA Hazard Classifications • Acute

FIFRA – Pesticide Labeling

This chemical is a pesticide product registered by the United States Environmental Protection Agency 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

WARNING**Precautionary Statements** • KEEP OUT OF THE REACH OF CHILDREN.**Hazards to Humans and Domestic Animals**

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear such as goggles or safety glasses, long-sleeved shirt and long pants, socks, shoes and gloves. Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Do not allow persons or pets in treated areas until sprays have dried.

First Aid •

Have product container or label with you when calling a poison control center or doctor, or going for treatment. 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 center or doctor for treatment advice. If swallowed: 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 by mouth to an unconscious person. If inhaled: 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 a poison control center or doctor for further treatment advice. If on skin or on clothing: 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.

Environmental Hazards •

This product is toxic to fish. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage ditches.

Inventory		
Component	CAS	TSCA
Ferric Sulfate Anhydrous	10028-22-5	Yes
Sulfuric acid	7664-93-9	Yes

United States**Environment****U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

• Ferric Sulfate Anhydrous	10028-22-5	1000 lb final RQ; 454 kg final RQ
• Sulfuric acid	7664-93-9	1000 lb final RQ; 454 kg final RQ

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Ferric Sulfate Anhydrous	10028-22-5	Not Listed
• Sulfuric acid	7664-93-9	1000 lb EPCRA RQ

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Ferric Sulfate Anhydrous	10028-22-5	Not Listed
• Sulfuric acid	7664-93-9	1.0 % de minimis concentration (acid aerosols including mists, vapors, gas,

fog, and other airborne forms
of any particle size)

Section 16 - Other Information

- Revision Date** • 26/February/2016
- Last Revision Date** • 26/February/2016
- Preparation Date** • 26/February/2016
- Disclaimer/Statement of Liability** • The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.