



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Product Name: SOLAR[®] IRON

Other Identification: 7-7-7, homogeneous granules

Recommended Use: Mixed granular fertilizer for plant and landscape use.

Manufacturer / Supplier of the Safety Data Sheet:

SeaSource, Inc.
Salt Lake City, UT 84124
Telephone: (801) 273-5660
Emergency Telephone Number: CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

GHS – US labeling

Hazard pictograms (GHS-US)



Signal word: Warning

Hazard statements: H320: Causes eye irritation
H325: May cause respiratory irritation

Precautionary statements (GHS-US)

P261 - Avoid breathing dust.
P264 - Wash hands and exposed skin thoroughly after handling.
P271 - Use only outdoors or in a well ventilated area.
P304+P340 - If inhaled and breathing difficulty occurs, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison control center or doctor if you feel unwell.
P337+P313 - If eye irritation persists, get medical attention.
P403+ P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose in accordance with federal, state and local regulations.

Other hazards:

No additional information available.

Unknown acute toxicity (GHS-US)

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME:	CAS number:	%
Potassium magnesium sulfate	14977-37-8	28
Limestone	471-34-1	20
Monoammonium Phosphate	7722-76-1	14
Iron Oxide Saccharated	8047-67-4	10
Urea	57-13-6	10
Leonardite	129521-66-0	4
Urea-Form	9011-05-6	3
Sulfate of Potash	7778-80-5	3
Ferrous Sulfate	7782-63-0	2
Manganese Sulfate	7785-87-7	1.5
Zinc Sulfate	7446-20-0	1.5
Copper Sulfate	7758-98-7	0.4
Additional Ingredients not classified, physical hazard or health hazard:		
Fermented Kelp	84775-78-0	
Soy Protein	9010-10-0	
Molasses	68476-78-8	
SOLAR [®] Aerator Signaling Molecules		

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Allow the person to rest. Call a physician if symptoms develop.

Skin Contact: Remove affected clothing and wash all exposed skin areas with mild soap and water, followed by a warm water rinse.

Eye Contact: Rise eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Contact a physician if discomfort or irritation persists.

Ingestion: Rise mouth. Drink plenty of water. Do not induce vomiting. If you feel unwell, seek medical attention.

Most important symptoms and effects, both acute and delayed: Nuisance dust irritation may occur with nasal discomfort.

Indication of any immediate medical attention and special treatment needed: Treat symptoms. Consult a physician if discomfort or irritation persists.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Use extinguishing media suitable to local circumstances and the surrounding environment. Options include water, CO₂, dry powder or foam.

Unsuitable extinguishing media: Do not use a heavy water jet stream.

Specific hazards arising from the substance: In the event of fire, do not breathe fumes.

Firefighting instructions: Use standard firefighting procedures and consider the hazards of other involved materials. Do not enter fire area without proper protective equipment, including respiratory protection.

General fire hazards: No unusual or explosion hazards noted.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Use dust mask and gloves as needed or other reasonable personal protective equipment as required to prevent contact with eyes or skin. Remove ignition sources prior to clean-up. Ensure adequate ventilation.

Environmental precautions: Prevent entry to sewers and public waters. Inform appropriate supervisory personnel of all environmental releases.

Methods and material for containment and clean-up: Use reasonable personal protective equipment as required to avoid breathing dust. Sweep into suitable containers. Minimize generation of dust.

7. HANDLING AND STORAGE

Precautions for safe handling: Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required to avoid breathing products dusts and to prevent eye contact. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for safe storage, including any incompatibilities: Keep containers tightly closed in a cool, well-ventilated area. Keep out of the reach of children. Store away from strong acids or other reactive substances.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Controls

	OSHA PEL	ACGIH TLV
Urea (57-13-6)	15 mg/m ³ (particulate) 5 mg/m ³ (respirable)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Urea-Form (9011-05-6)	15 mg/m ³ (particulate) 5 mg/m ³ (respirable)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Sulfate of Potash (7778-80-5)	15 mg/m ³ (particulate) 5 mg/m ³ (respirable)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Limestone (471-34-1)	15 mg/m ³ (particulate) 5 mg/m ³ (respirable)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Monoammonium Phosphate (7722-76-1)	15 mg/m ³ (particulate) 5 mg/m ³ (respirable)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Potassium magnesium sulfate (14977-37-8)	15 mg/m ³ (particulate) 5 mg/m ³ (respirable)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Iron Oxide Saccharated (8047-67-4)	10 mg/m ³ (particulate) 5 mg/m ³ (respirable)	5 mg/m ³ (respirable fraction)
Ammonium sulfate (7783-20-2)	15 mg/m ³ (particulate) 5 mg/m ³ (respirable)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Leonardite (129521-66-0)	15 mg/m ³ (particulate) 5 mg/m ³ (respirable)	10 mg/m ³ (inhalable fraction) 3 mg/m ³ (respirable fraction)
Ferrous Sulfate (7782-63-0)	None listed	1 mg/m ³ (inhalable fraction) 1 mg/m ³ (respirable fraction) Listed under Soluble Iron Salts
Manganese Sulfate (7785-87-7)	5 mg/m ³ (particulate) 5 mg/m ³ (respirable)	5 mg/m ³ (inhalable fraction) 1 mg/m ³ (respirable fraction)
Zinc Sulfate (7446-20-0)	None listed	None listed
Copper Sulfate (7758-98-7)	1 mg/m ³ (respirable as fume)	2 mg/m ³ (respirable fraction as fume)

Individual Protection Measures

Eye protection: Wear safety glass or goggles if eye contact is likely.

Hand protection: Wear protective gloves.

Respiratory protection: Wear appropriate mask.

General Hygiene: Do not eat, drink or smoke during use. Always observe good personal hygiene measures, such as washing hands after handling. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Appearance	Granules
Color	Dark brown
Odor	Slight
Odor Threshold	Not available
pH	Not applicable
Melting point/freezing point	Not applicable
Boiling point/boiling range	Not applicable
Flash point	Not available
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Flammability limit in air	
Upper flammability limit	Not available
Lower flammability limit	Not available
Explosive limits	Not available
Vapor Pressure	Not available
Vapor density	Not available
Relative density	Not available
Density	53 lbs per square foot
Specific gravity	Not available
Solubility	Partially soluble in soil and water
Viscosity	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Oxidizing properties	Not available

10. STABILITY AND REACTIVITY

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.

Conditions to avoid: Extremely high temperatures.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Not classified

	LD50 Rat Oral	LD50 Rat Dermal
Urea (57-13-6)	8471 mg/kg	8200 mg/kg
Urea-Form (9011-05-6) Formaldehyde	200 mg/kg	
Sulfate of Potash (7778-80-5)	6600 mg/kg	9400 mg/kg (Rabbit Dermal)
Limestone (471-34-1)	6450 mg/kg	
Monoammonium Phosphate (7722-76-1)	5750 mg/kg	7940 mg/kg
Potassium magnesium sulfate (14977-37-8)	3000 mg/kg	5000 mg/kg (Rabbit Dermal)
Iron Oxide Saccharated (8047-67-4)	N/A	
Ammonium sulfate (7783-20-2)	2840 mg/kg	4540 mg/kg
Leonardite (129521-66-0)		0.536 mg/kg
Ferrous Sulfate (7782-63-0)	319 mg/kg	No data
Manganese Sulfate (7785-87-7)	2150 mg/kg	Not listed
Zinc Sulfate (7446-20-0)	1260 mg/kg	Not listed
Copper Sulfate (7758-98-7)	472 mg/kg	Not listed

Routes of exposure: Ingestion, eyes (contact), skin (contact), dust inhalation.

Skin corrosion/irritation: Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation: Causes eye irritation.

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified.

Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity (single exposure): Not classified.

Specific target organ toxicity (repeated exposure): Not classified.

Aspiration hazard: Not classified.

Potential adverse human health effects and symptoms: Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Fertilizers may be harmful to aquatic life with short term effects, causing algal bloom and increased BOD, depending on the amount released.

Persistence and degradability: Not established

Bioaccumulation: Not expected to bioaccumulate based on composition.

Mobility in soil: No additional information available.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletions, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS

Disposal of wastes: This product is a non-hazardous waste material suitable for approved solid waste landfills. Dispose in a safe manner in accordance with local and national regulations.

Hazardous waste code: No EPA Waste Numbers are applicable for this product's components. The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues/unused products: Dispose of in accordance with local regulations.

Contaminated packaging: Since emptied containers may retain product residue, follow label warning even after container is emptied.

14. TRANSPORT INFORMATION

DOT: Not regulated as dangerous goods.

IATA: Not regulated as dangerous goods.

IMDG: Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not established.

15. REGULATORY INFORMATION

TSCA (USA): Complies.

General Product Information: This product is not federally regulated as a hazardous material.

CERCLA Hazardous Substance List (40 CFR 302.4): Not listed.

SARA 304 Emergency release notification: Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA): This product contains no chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal regulations, Part 372.

SARA 311/312 Hazardous chemical: No

Other Federal regulations

Clean Air Act: No information available.

Clean Water Act: This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Safe Drinking water Act (SDWA): Not regulated.

US state regulations – general: This product is not regulated by any State as a hazardous material.

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100): Not listed.

US. California Proposition 65: California Safe Drinking Water and Toxic Enforcement Act of 1986: This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

16. OTHER INFORMATION

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Disclaimer: The information in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use processing storage, transportation, disposal and release. *NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION HEREIN PROVIDED.* It is the user's responsibility as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.