



MATERIAL SAFETY DATA SHEET

Howard Johnson's Turf & Ornamental with trace PKG Fertilizers

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Section 1: Product Identification

Product Name: Howard Johnson's Turf and Ornamental with Trace Pkg Fertilizer
 EPA Reg. Number: None
 Chemical Name: Mixtures. Granular fertilizers, various grades.
 Shipping Information: Not regulated by U.S. DOT for all modes of transportation within the U.S.

Section 2: Composition/Information on Ingredients

<u>Chemical Name</u>	<u>CAS Registry Number</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>SARA 313 Reportable</u>
Ammonium Phosphate	10124-31-9	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	No
Copper Oxide	1317-39-1	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Copper Sulfate	7758-98-7	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Iron Oxide	1332-37-2	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Iron Sulfate	7720-78-7	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Manganese Sulfate	7785-87-7	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Manganese Oxide	1344-43-0	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Sodium Borate	11130-12-4	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Sodium Molybdate	7631-95-0	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Zinc Oxide	1314-13-2	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	
Zinc Sulfate	7733-02-0	15mg/m3 (Total) 5mg/m3(respirable)	10mg/m3 (inhalable) 3 mg/m3 (respirable)	

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Sulfate of Potash	7778-80-5	15mg/m ³ (Total) 5mg/m ³ (respirable)	10mg/m ³ (inhalable) 3 mg/m ³ (respirable)	
Ureaform	9011-05-6	15mg/m ³ (Total) 5mg/m ³ (respirable)	10mg/m ³ (inhalable) 3 mg/m ³ (respirable)	
Crystalline Silica (quartz)*	14808-60-7	0.1 mg/m ³	0.1 mg/m ³	No

*May be present as a naturally occurring mineral in the fertilizer ingredients used in this formulation. The respirable portion of crystalline silica in this product is very small, and excessive inhalation is unlikely under normal conditions of use.

Section 3: Physical and Chemical Properties

Physical Form:	Granular solid	Bulk Density:	Not established
pH:	Not applicable	Refractive Index:	Not applicable
Boiling Point:	Not applicable	Freezing Point:	Not applicable
Solubility in Water:	Insoluble	Viscosity:	Free-flowing granules
Vapor Pressure:	Not determined	Vapor Density:	Not determined
Percent Volatile:	None	Evaporation Rate:	Not determined

Appearance and Odor: Multi-colored granules with a mild, characteristic fertilizer odor.

Section 4: Fire and Explosion Hazard Data

Flash Point (°F):	Not flammable	Flash Point Method:	Not applicable
Auto Ignition Temp. (°F):	Not applicable	Burning Rate:	Not applicable
Explosive Limits:	Upper Limit (UEL): Not applicable	Lower Limit (LEL):	Not applicable
Extinguishing Media:	Water, carbon dioxide, dry chemical or foam.		
Special Firefighting Procedures:	Fire fighters should wear full protective gear and self-contained breathing apparatus.		
Unusual Fire or Explosion Hazards:	None.		



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Section 5: Health Hazard Data

Primary Routes of Entry: Inhalation, ingestion, skin or eye contact.

Signs and Symptoms of Over-Exposure:

Eye Contact:	Acute: Mild, reversible irritation to the eye.	Chronic: None known.
Skin Contact:	Acute: May cause mechanical irritation.	Chronic: None known.
Inhalation:	Acute: Excessive inhalation of fertilizer dust may irritate nose, throat, or upper respiratory tract.	Chronic: Excessive inhalation of crystalline silica (quartz) may cause lung injury.
Ingestion:	Acute: Ingestion of fertilizer components may cause nausea, vomiting, cramps or diarrhea.	Chronic: None known.

Emergency First Aid Procedures:

Eye Contact:	Hold eyelids open and flush with lots of water for 15 minutes. If irritation persists after flushing, get medical attention.
Skin Contact:	Remove contaminated clothing and wash skin with soap and water. If irritation develops after washing, get medical attention.
Inhalation:	Remove person to fresh air. If breathing has stopped, give artificial respiration and get immediate medical attention.
Ingestion:	Call a physician or poison control center. Give person 1 or 2 glasses of water to drink. If irritation persists, seek medical attention.
Medical conditions aggravated by exposure:	Existing skin irritation, cuts or scrapes may be aggravated by contact with fertilizer. Pulmonary or respiratory disease may be aggravated by inhalation of dust.
Target Organs:	None known.
Carcinogens:	Crystalline silica (quartz) component is classified as a carcinogen by NTP and IARC.

Section 6: Reactivity Data

Stability:	Stable.
Chemical incompatibilities:	Strong Oxidizers.
Conditions to avoid:	None – product is stable.
Hazardous Decomposition	Thermal decomposition (burning) may produce CO, CO ₂ , and

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Products: NO_x.
Hazardous Polymerization: Will not occur.

Section 7: Accidental Release Procedures

Large Spill or Leak Procedures: Isolate and contain spill. Remove unauthorized persons from spill area. Do not walk through spilled materials. Wear suitable protective gear. Carefully sweep or scoop spilled material and place in a closed, labeled container for use or disposal. Scrub contaminated surfaces with detergent and water, and collect wash water solution for proper disposal according to label directions. Do not allow spilled material to enter streams, sewers or other waters.

Small Spill or Leak Procedures: Wear protective clothing as recommended on label. Sweep up spilled material for use according to label directions.

Waste Disposal Methods: Consult state or local environmental agency for disposal of waste generated by a spill. Wastes from the use of this product according to label directions may be disposed as specified on product label.

Section 8: Exposure Controls and Personal Protection

Engineering Controls – Ventilation: This product is designed for outdoor use only, and ventilation is not normally required. Local exhaust may be necessary when handling this product in an enclosed area.

Administrative Controls: Follow all precautions and directions for use on product label.

Protective Clothing and Equipment: Wash thoroughly after handling and before eating, drinking, smoking or using the toilet.

Respiratory Protection: For normal handling and use, a respirator is not required. For excessively dusty conditions, use a dust mask approved by MSHA/NIOSH. See OSHA regulations in 29 CFR § 1910.134 before using any respirator or dust mask.

Eye Protection: Good safety practices suggest the use of goggles to prevent contact with eyes.

Hand Protection: Good safety practices suggest the use of chemical-resistant (natural rubber) gloves, to prevent skin contact.

Skin Protection: Wear long-sleeved shirt and long trousers to reduce skin contact.

Contaminated Equipment: Launder contaminated clothing separately from street clothes. Clean contaminated boots/shoes and other equipment with detergent and water immediately after use.

Safety Stations: Clean water should be available to flush eyes and/or skin in case of accidental contact.

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Section 9: Handling and Storage Precautions

Handling Precautions:	Wear appropriate protective gear when handling open containers. Do not take internally. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling.
Storage Requirements:	Store in a locked, dry area, away from feed or food, and out of reach of children, pets and domestic animals. Keep containers tightly closed when not in use. Store in original container only. Do not remove or destroy product label. Dispose of empty containers as specified on product label.

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By, Director of Regulatory Affairs

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