



## Safety Data Sheet

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### Product identifier

Product Name: SuGrow® Manganese Sulfate 35%

#### Recommended use of the chemical and restrictions on use

Recommended Use: General Fertilizer Product  
Recommended Restrictions: Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

#### Details of the supplier of the safety data sheet

Supplier Name: QC LLC  
Supplier Address: 5566 Nash Rd  
Cape Girardeau, MO 63701  
Supplier Phone Number: 800-666-5766 Fax: 919-535-3652  
Contact Phone: 573-335-6700  
Supplier Email: [Info@qccorporation.com](mailto:Info@qccorporation.com)

Emergency telephone number CHEMTREC (800) 424-9300

### 2. HAZARDS IDENTIFICATION

#### Classification

Physical hazards: Not classified.  
Health hazards: Carcinogenicity Category 1A  
Environmental hazards: Not classified.  
OSHA defined hazards: Not classified.

#### GHS Label elements, including precautionary statements



Pictogram:

Signal word: Danger

Hazard statement(s): May cause cancer.

Appearance: granular      Physical State: solid      Odor: none

Precautionary statements:      Prevention:

Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

If exposed or concerned: Get medical advice/attention.

**Storage:**

Store locked up.

**Disposal:**

Dispose of waste and residues in accordance with local authority requirements.

**Hazards not otherwise classified (HNOC):** None known.

**Other information:**

None.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	CAS-No.	Weight %	Trade Secret
Manganese Sucrate-Complex Mixture of Manganese Oxide and Sugar	N/A	75 - 90%	*
Other components below reportable levels		15 - 20%	*

\* The exact percentage (concentration) of composition has been withheld as a trade secret.

Impurities	CAS-No.	Weight %
Silica, Crystalline (Quartz)	14808-60-7	1 - 2%

**Composition comments:** Occupational Exposure Limits for constituents are listed in Section 8. Occupational Exposure Limits for impurities are listed in Section 8.

**4. FIRST AID MEASURES**

**Description of first aid measures**

**General advice:** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**In case of eye contact:** Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

**If inhaled:** Move person into fresh air. Call a physician if symptoms persist.

**In case of skin contact:** Wash off with soap and water. Get medical attention if irritation develops and persists.

**If swallowed:** Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms and effects, both acute and delayed:** Dusts may irritate the respiratory tract, skin and eyes.

**Indication of any immediate medical attention and special treatment needed:** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**Note to Physician:** Treat symptomatically.

## 5. FIREFIGHTING MEASURES

### Extinguishing media

**Suitable extinguishing media:** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Special hazards arising from the substance or mixture:** During fire, gases hazardous to health may be formed.

**Advice for firefighters:** Material can be slippery when wet. Use water spray to cool unopened containers.

**Further information:** Use standard firefighting procedures and consider the hazards of other involved materials. No unusual fire or explosion hazards noted.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Keep unnecessary personnel away. Material can be slippery when wet. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection see Section 8.

**Environmental precautions:** Collect and dispose of spillage as indicated in section 13 of the SDS. Do not flush into surface water or sanitary sewer system.

**Methods and materials for containment and cleaning up:** Stop the follow of material, if this is without risk. Collect dust using a vacuum cleaner equipped with HEPA filter.

**Large Spills:** Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid the generation of dusts during clean-up. Following product recover, flush area with water.

**Small Spills:** Sweep up or vacuum up spillage and collect in suitable container for disposal.

**Reference to other sections:** For disposal see Section 13.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.

**Conditions for safe storage, including any incompatibilities:** Keep locked up or in an area accessible only to qualified or authorized persons. Store in original container. Keep container tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

**Specific end use(s):** Apart from the uses mentioned in Section 1 no other specific uses are stipulated.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

#### Occupational Exposure Limits

Ingredient	CAS-No	ACGIH:	OSHA:	NIOSH:
Manganese (II) oxide	1344-43-0	0.1 mg/m <sup>3</sup> TWA Inhalable Fraction.  0.02 mg/m <sup>3</sup> Respirable Fraction.	5 mg/m <sup>3</sup> Ceiling	3 mg/m <sup>3</sup> STEL Fume.  1 mg/m <sup>3</sup> TWA Fume.
Impurities	CAS-No	ACGIH:	OSHA:	NIOSH:

Silica; Crystalline (Quartz)	14808-60-7	0.025 mg/m <sup>3</sup> TWA Respirable Fraction.	0.1 mg/m <sup>3</sup> TWA 2.4 mppcf Respirable.	0.05 mg/m <sup>3</sup> TWA Respirable dust.
			0.3 mg/m <sup>3</sup> Total Dust.	

## Exposure Controls

**Biological limit values:** No biological exposure limits noted for the ingredient(s)

**Appropriate engineering controls:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures. Local exhaust ventilations or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentration of dust particulates below the Occupation Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

## Personal Protective Equipment

**General hygiene considerations:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Eye/face protection:** Safety glasses with side-shields or goggles.

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body protection:** Where suitable protective clothing.

**Respiratory protection:** Wear NIOSH/MSHA approved air-purifying respirator with cartridges/canisters if there is a risk of exposure to dust/fume at levels exceeding exposure limits.

**Control of environmental exposure:** Do not let product enter drains.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

Physical State:	Solid	
Appearance:	Granular	Odor: None
Color:	Dark Grey to Black	Odor Threshold: No data available

### Property

Property	Values
pH	6-10
Melting/freezing point	>2000 °F (>1093 °C)
Boiling point/boiling range	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Flammability Limit in Air	
Upper flammability limit	No data available
Lower flammability limit	N/A
Vapor pressure	0.00004 hPa estimated
Vapor density	No data available
Specific Gravity	No data available
Water solubility	No data available

### Property

Property	Values
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available

Kinematic viscosity	No data available
Dynamic viscosity	No data available
Explosive properties	No data available
Oxidizing properties	Not considered an oxidizer

**Other Information**

Bulk density 98 lb/ft<sup>3</sup> estimated

**10. STABILITY AND REACTIVITY**

**Reactivity:** Stable under normal storage conditions.

**Chemical Stability:** yes.

**Possibility of Hazardous Reactions:** No dangerous reaction known under conditions of normal use.

**Hazardous:** Polymerization: No data available.

**Conditions to Avoid:** Contact with incompatible materials.

**Incompatible Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Other decomposition products – no data available. In the event of a fire see Section 5.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product information**

Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
Eye contact	Dust may irritate the eye.
Skin contact	Dust or powder may irritate the skin.
Ingestion	Expected to be low ingestion hazard.

**Information on toxicological effects**

Acute Toxicity	No data available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

**Delayed and immediate effects as well as chronic effects from short & long-term exposure**

Mutagenic effects:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity:	In June 2003, SCOEL (The EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and apparently, not in employees without silicosis exposed to silica dust in quarries and in ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94- final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

**Silica, Crystalline (Quartz) 14808-60-7**  
US NTP: Known to be Human Carcinogen.  
IARC: 1 Carcinogenic to humans.

STOT-single exposure: Not classified.  
STOT-repeated exposure: Not classified.  
Chronic toxicity: Prolonged inhalation may be harmful.  
Target organ exposure: No data available.  
Aspiration hazard: Not an aspiration hazard.

**Numerical measure of toxicity product information**

The following values are calculated based on Section 3 of the GHS document: No data available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity:** This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and Degradability:** No data available.

**Bioaccumulation:** No data available.

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

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal methods** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Since emptied containers may retain product residue, follow label warning even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION**

**DOT (Land)** Not regulated as dangerous goods.  
**DOT (Vessel)** Not regulated as dangerous goods.  
**IMO/IMDG (Vessel)** Not regulated as dangerous goods.  
**IATA (Air)** Not regulated as dangerous goods.

**15. REGULATORY INFORMATION**

**US Federal Regulations** This product is a "hazardous Chemical" defined by OSHA Hazard Communication Standard 29 CFR 1910.1200. One or more components are not listed on TSCA.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
Not Regulated.

**SARA of 1986:**

Immediate Hazard	No
Delayed Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

**SARA 304:** Not Regulated.

**SARA 311/312 Hazard Categories** No

**SARA 313** Manganese (II) Oxide 1344-43-0. 75-85% by weight

**OSHA (29 CFR 1910.1001-1050)** Not Listed.

**CERCLA (40 CFR 302.4)** Manganese (II) Oxide 1344-43-0 Listed

**Other federal regulations:**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Manganese (II) Oxide 1344-43-0.

**US State Regulations**

**US California Controlled Substances. CA Dept of Justice (CA Health and Safety Code Section 11100)**  
Not Listed

**US California Candidate Chemicals List Safer Consumer Products Regulations (CA Code Reg Title 22, 69502.3 Subd. A)**

Silica, crystalline (Quartz) 14808-60-7

**California Prop. 65 Components** WARNING: This product contains a chemical known to the State of California to cause cancer.

Silica, crystalline (Quartz) 14808-60-7  
Listed: October 1, 1988

**US State Right-to-Know Regulations**

**Massachusetts RTK-Substance List**

Silica, crystalline (Quartz) 14808-60-7

**New Jersey Worker & Community RTK**

Manganese (II) Oxide 1344-43-0.  
Silica, crystalline (Quartz) 14808-60-7

**Pennsylvania Worker & Community RTK**

Silica, crystalline (Quartz) 14808-60-7

**Rhode Island RTK**

Manganese (II) Oxide 1344-43-0.  
Silica, crystalline (Quartz) 14808-60-7

**California Proposition 65**

Silica, crystalline (Quartz) 14808-60-7

**International Inventories:**

Country(s) or region	Inventory Name	On Inventory (Y/N)*
Australia	Australian Inventory of Chemical Substances(AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No

Japan	Inventory of Existing and New Chemical Substances(ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country.

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing county.

## 16. OTHER INFORMATION

### Further information

This SDS summarizes to the best of our knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since QC LLC cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. QC LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.qccorporation.com](http://www.qccorporation.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

**Issuing Date** 5-15-2015

**Revision Date** 14, July- 2015

**Revision Number** 3