

# ACROS ORGANICS

## Material Safety Data Sheet

Creation Date 07-Jul-2009

Revision Date 08-Jun-2011

Revision Number 2

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	<b>Manganese(II) sulfate monohydrate</b>	
<b>Cat No.</b>	<b>AC205900000, AC205900010, AC205900050, AC205905000; AC205900000; AC205900010; AC205900050; AC205905000</b>	
<b>Synonyms</b>	Manganous sulfate monohydrate	
<b>Recommended Use</b>	Laboratory chemicals	
<b>Company</b> Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	<b>Entity / Business Name</b> Acros Organics One Reagent Lane Fair Lawn, NJ 07410	<b>Emergency Telephone Number</b> For information in the US, call: 001-800- ACROS-01 For information in Europe, call: +32 14 57 52 11  Emergency Number, Europe: +32 14 57 52 99 Emergency Number, US: 001-201-796-7100  CHEMTREC Phone Number, US: 001-800- 424-9300 CHEMTREC Phone Number, Europe: 001- 703-527-3887

### 2. HAZARDS IDENTIFICATION

#### WARNING!

#### Emergency Overview

Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. May cause central nervous system effects. May cause skin, eye, and respiratory tract irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Hygroscopic.

**Appearance** Off-white

**Physical State** Powder Solid

**odor** No information available

**Target Organs** Central nervous system (CNS), Liver, Kidney

**Potential Health Effects**

**Acute Effects**

**Principle Routes of Exposure**

<b>Eyes</b>	May cause irritation.
<b>Skin</b>	May cause irritation. May be harmful in contact with skin.
<b>Inhalation</b>	May be harmful if inhaled. May cause irritation of respiratory tract.
<b>Ingestion</b>	May be harmful if swallowed. May cause central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Effects**

Tumorigenic effects have been reported in experimental animals.. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects. May cause adverse kidney effects. Danger of serious damage to health by prolonged exposure.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Haz/Non-haz**

Component	CAS-No	Weight %
Manganese sulfate monohydrate	10034-96-5	100
Manganese(II) sulfate	7785-87-7	-

**4. FIRST AID MEASURES**

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Notes to Physician</b>	Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

<b>Flash Point</b>	No information available.
<b>Method</b>	No information available.
<b>Autoignition Temperature</b>	No information available.
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Suitable Extinguishing Media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..
<b>Unsuitable Extinguishing Media</b>	No information available.

**Hazardous Combustion Products** No information available.

**Sensitivity to mechanical impact** No information available.  
**Sensitivity to static discharge** No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**NFPA**                      **Health 1**                      **Flammability 0**                      **Instability 0**                      **Physical hazards N/A**

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions** Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.

**Environmental Precautions** Should not be released into the environment.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

**7. HANDLING AND STORAGE**

**Handling** Use only under a chemical fume hood. Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Measures** Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese sulfate monohydrate	TWA: 0.2 mg/m <sup>3</sup>	(Vacated) Ceiling: 5 mg/m <sup>3</sup>	IDLH: 500 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>
Manganese(II) sulfate	TWA: 0.2 mg/m <sup>3</sup>	(Vacated) Ceiling: 5 mg/m <sup>3</sup>	IDLH: 500 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Manganese sulfate monohydrate	TWA: 5 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Manganese(II) sulfate	TWA: 5 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>

**NIOSH IDLH:** Immediately Dangerous to Life or Health

**Personal Protective Equipment**

**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State</b>	Powder Solid
<b>Appearance</b>	Off-white
<b>odor</b>	No information available
<b>Odor Threshold</b>	No information available.
<b>pH</b>	3 - 3.5 5% aq. sol.
<b>Vapor Pressure</b>	No information available.
<b>Vapor Density</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Boiling Point/Range</b>	850°C / 1562°F
<b>Melting Point/Range</b>	700°C / 1292°F
<b>Decomposition temperature</b>	No information available.
<b>Flash Point</b>	No information available.
<b>Evaporation Rate</b>	No information available.
<b>Specific Gravity</b>	No information available.
<b>Solubility</b>	No information available.
<b>log Pow</b>	No data available
<b>Molecular Weight</b>	169.02
<b>Molecular Formula</b>	Mn O4 S . H2 O

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Hygroscopic.
<b>Conditions to Avoid</b>	Avoid dust formation. Incompatible products. Excess heat. Exposure to moisture.
<b>Incompatible Materials</b>	Reducing agents, Oxidizing agents, Peroxides, Organic materials, Strong bases
<b>Hazardous Decomposition Products</b>	Sulfur oxides, Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions .</b>	None under normal processing..

**11. TOXICOLOGICAL INFORMATION**

**Acute Toxicity**

**Product Information** No acute toxicity information is available for this product

**Component Information**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Manganese(II) sulfate	2150 mg/kg ( Rat )	Not listed	Not listed

**Irritation** No information available.

**Toxicologically Synergistic Products** No information available.

**Chronic Toxicity**

**Carcinogenicity** There are no known carcinogenic chemicals in this product

**Sensitization** No information available.

**Mutagenic Effects** Mutagenic effects have occurred in microorganisms.

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects** Developmental effects have occurred in experimental animals.

**Teratogenicity** Teratogenic effects have occurred in experimental animals..

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.. The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information.

**Endocrine Disruptor Information** No information available

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available

**Mobility** No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

14. TRANSPORT INFORMATION

DOT

UN-No UN3077  
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.  
 Proper technical name (Manganese sulfate)  
 Hazard Class 9  
 Packing Group III

TDG

UN-No UN3077  
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.  
 Hazard Class 9  
 Packing Group III

IATA

UN-No 3077  
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.\*  
 Hazard Class 9  
 Packing Group III

IMDG/IMO

UN-No 3077  
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 Hazard Class 9  
 Packing Group III

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Manganese sulfate monohydrate	-	-	-	-	-		X	X	X	X	-
Manganese(II) sulfate	X	X	-	-	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)** Not applicable

**SARA 313**

Not applicable

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Manganese sulfate monohydrate	10034-96-5	100	1.0
Manganese(II) sulfate	7785-87-7	-	1.0

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**

Not applicable

**Clean Air Act**

Not applicable

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Manganese sulfate monohydrate	X		-
Manganese(II) sulfate	X		-

**OSHA**

Not applicable

**CERCLA**

Not Applicable

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Not applicable

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Manganese sulfate monohydrate	-	-	X	X	-
Manganese(II) sulfate	-	-	X	X	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): N

DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

D2A Very toxic materials



**16. OTHER INFORMATION**

**Prepared By** Regulatory Affairs  
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**Revision Summary** "\*\*\*\*", and red text indicates revision

**Disclaimer**

The information provided on 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 and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**