



Issuing Date 22-Sep-2009

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Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

**Product Name** Manganese Sulfate, Monohydrate  
**Product Code(s)** 0248  
**Recommended Use** For Further Manufacturing Use Only  
Not for Human or Animal Drug Use  
**Synonyms** MANGANESE SULFATE MONOHYDRATE \* MANGANESE(2 ) SULFATE MONOHYDRATE \* MANGANOUS SULFATE MONOHYDRATE \* SULFURIC ACID, MANGANESE(2 ) SALT (1: 1), MONOHYDRATE \*  
**Company**  
AMRESKO, LLC  
6681 Cochran Road  
Solon, Ohio 44139  
**Emergency Telephone Number** Chemtrec 1-800-424-9300  
**Company Phone Number** 1-800-448-4442  
**E-mail Address** info@amresco-inc.com

2. HAZARDS IDENTIFICATION

GHS - Classification

**Classification** Skin Irritant 2 Eye Irritant 2  
**Signal Word** Warning



**Hazard Statements** H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation

**Precautionary Statements** P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P304 + P340 - IF  
INHALED: Remove victim to fresh air and keep at rest in a position 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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
Manganese sulfate monohydrate	-	Not available	10034-96-5	95-100	Xn; R48/20/22 N; R51-53

### 4. FIRST AID MEASURES

**Eye Contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin Contact** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

**Inhalation** Move to fresh air. If breathing becomes difficult, give oxygen.

**Ingestion** Clean mouth with water and afterwards drink plenty of water.

**Notes to Physician** Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flammable Properties** Not flammable.

**Flash Point** Not determined

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Hazardous Combustion Products** Sulfur oxides.

**Explosion Data**

**Sensitivity to Mechanical Impact** Not sensitive.

**Sensitivity to Static Discharge** Not sensitive.

**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.

### 6. ACCIDENTAL RELEASE MEASURES

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

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning Up** Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

**7. HANDLING AND STORAGE**

**Handling** Handle in accordance with good industrial hygiene and safety practice. Protect from light. Hygroscopic.

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

**Incompatible Products** Strong acids. Protect from moisture. Protect from light.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese sulfate monohydrate 10034-96-5	TWA: 0.2 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>

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems.

**Personal Protective Equipment**

**Eye/Face Protection**

Safety glasses with side-shields.

**Skin and Body Protection**

Wear protective gloves/clothing.

**Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Off-White
Odor	No information available
Odor Threshold	No information available
Decomposition Temperature °C	No information available
Freezing Point	No information available
Initial Boiling Point	No information available
Physical State	Powder Crystalline
pH	No data available
Flash Point	Not determined
Autoignition Temperature	No data available
Boiling Point/Range	850 °C
Melting Point/Range	700 °C
Flammability Limits in Air	<b>Upper</b> No data available <b>Lower</b> No data available
Explosive Properties	No information available
Oxidizing Properties	No information available
Evaporation Rate	No data available
MMHG @ 37.8 C	No data available
Vapor Density	No data available
Specific Gravity	No data available
Density	3.25
Solubility	No information available
Partition Coefficient (n-octanol/water)	No data available
Viscosity	No information available

## 10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	Strong acids. Protect from moisture. Protect from light.
Conditions to Avoid	None known based on information supplied.
Hazardous Decomposition Products	Sulfur oxides.
Hazardous Polymerization	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

Product Information	Causes skin, eye and respiratory tract irritation.
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Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Manganese sulfate monohydrate	2150 mg/kg ( Rat )		

### Chronic Toxicity

Chronic Toxicity	No known effect based on information supplied.
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Target Organ Effects	Central nervous system (CNS), Lungs.
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**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method** Dispose of material in accordance with all federal, state, and local regulations.

**Contaminated Packaging** Dispose of in accordance with all federal, state and local regulations.

**14. TRANSPORT INFORMATION**

**IATA** Not regulated

**DOT** Not regulated

**15. REGULATORY INFORMATION**

**REACH Title VII Restrictions** No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Manganese sulfate monohydrate	>=1	Not applicable	Not applicable	Not applicable	311	Not applicable
Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II	
Manganese sulfate monohydrate 10034-96-5 ( 95-100 )	Not applicable	Not applicable	Not applicable	Not applicable	>= 1.0 %	

**International Inventories**

TSCA Does not Comply  
EINECS/ELINCS Does not Comply  
ENCS Complies  
IECSC Complies  
KECL Does not Comply

PICCS Complies  
 AICS Complies

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Manganese sulfate monohydrate	10034-96-5	95-100	1.0

**SARA 311/312 Hazard Categories**

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

**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).

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Manganese sulfate monohydrate	10034-96-5	95-100	Present (includes any unique chemical substance that contains Manganese as part of its infrastructure)			

**CERCLA**

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Manganese sulfate monohydrate			X	X	

**International Regulations**

**Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Manganese sulfate monohydrate		Mexico: TWA 0.2 mg/m <sup>3</sup>

**Canada**

WHMIS Hazard Class  
D2B Toxic materials



## 16. OTHER INFORMATION

Issuing Date 22-Sep-2009

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Revision Note  
No information available

Recommended Restrictions No information available

### Disclaimer

The information provided on this MSDS 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**