Section 1 - Chemical Product and Company Identification

MSDS Name: Manganese(II) Sulfide, -325 mesh, 98%
Catalog Numbers: AC316710000, AC316710050
Synonyms: Manganese monosulfide

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticalaan 3a
2440 Geel, Belgium

Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99

CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 18820-29-6
Chemical Name: Manganese(II)sulfide
%

EINECS#: 242-599-3

Hazard Symbols: None listed
Risk Phrases: 10 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW


Potential Health Effects

Eye: Causes eye irritation.
Skin: Causes skin irritation.
Ingestion: May cause irritation of the digestive tract.
Inhalation: Causes respiratory tract irritation.
Chronic: Chronic manganese toxicity through inhalation may result in "manganism", which is a disease of the central nervous system involving psychic and neurological disorders.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use foam, dry chemical, or carbon dioxide.

Autoignition Temperature: Not available.
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
NFPA Rating: Not published

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Do not expose to air. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese(II)sulfide</td>
<td>0.2 mg/m³ TWA (as Mn) (listed under Manganese, inorganic compounds).</td>
<td>1 mg/m³ TWA (as Mn) (listed under Manganese compounds, n.o.s.).500 mg/m³ IDLH (as Mn)</td>
<td>5 mg/m³ Ceiling</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Manganese(II)sulfide: None listed

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Personal Protective Equipment
Eyes: 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: Wear appropriate gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.

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

Section 9 - Physical and Chemical Properties

Physical State: Crystals
Color: red
Odor: Not available
pH: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: Not available
Decomposition Temperature: Not available
Solubility in water: Insoluble
Specific Gravity/Density:
Molecular Formula: MnS
Molecular Weight: 87.00

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Incompatible materials, exposure to air.

Incompatibilities with Other Materials: Not available

Hazardous Decomposition Products: Oxides of sulfur.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 18820-29-6: None listed
LD50/LC50: RTECS: Not available.
Carcinogenicity: Manganese(II)sulfide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Not available
Risk Phrases:

R 10 Flammable.
R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 7 Keep container tightly closed.
S 16 Keep away from sources of ignition - No smoking.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 18820-29-6: Not available

Canada

CAS# 18820-29-6 is listed on Canada's DSL List
Canadian WHMIS Classifications: D2B
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations
and the MSDS contains all of the information required by those regulations.
CAS# 18820-29-6 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 18820-29-6 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 3/16/1998
Revision #5 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available
to us. However, we make no warranty of merchantibility or any other warranty, express or implied,
with respect to such information, and we assume no liability resulting from its use. Users should make
their own investigations to determine the suitability of the information for their particular purposes. In no
event shall the company be liable for any claims, losses, or damages of any third party or for lost profits
or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the
company has been advised of the possibility of such damages.

--------------------------------------------------------------------------------