

Material Safety Data Sheet

Manganese(IV) oxide, 99+%, average particle size 2µm

ACC# 03803

Section 1 - Chemical Product and Company Identification

MSDS Name: Manganese(IV) oxide, 99+%, average particle size 2µm

Catalog Numbers: AC357790000, AC357790050, AC357790500

Synonyms: Manganese dioxide

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
1313-13-9	Manganese(IV) oxide	99+%	215-202-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Not available.

Target Organs: Central nervous system, lungs.

Potential Health Effects

Eye: Causes mild eye irritation.

Skin: May cause skin irritation.

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system effects.

Inhalation: Harmful if inhaled. Inhalation of dust may cause respiratory tract irritation. Aspiration may cause severe pneumonia.

Chronic: Not available.

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.

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

Ingestion: Get medical aid. Wash mouth out with water.

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.

Section 5 - Fire Fighting Measures

General Information: Strong oxidizer. Contact with other material may cause fire. Substance is noncombustible.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

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: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

Section 7 - Handling and Storage

Handling: Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing.

Storage: Do not store near combustible materials. Store in a cool, dry place. Store in a tightly closed container. Keep away from

reducing agents.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Manganese(IV) oxide	0.2 mg/m3 TWA (as Mn) (listed under Manganese, inorganic compounds).	1 mg/m3 TWA (as Mn) (listed under Manganese compounds, n.o.s.).500 mg/m3 IDLH (as Mn) (listed under Manganese compounds, n.o.s.).	5 mg/m3 Ceiling (as Mn) (listed under Manganese compounds, n.o.s.).

OSHA Vacated PELs: Manganese(IV) oxide: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Not available.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: 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.

Section 9 - Physical and Chemical Properties

Physical State: Powder

Appearance: dark gray to black

Odor: odorless

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:535 deg C (decomposes)

Decomposition Temperature:Not available.

Solubility: Insoluble.

Specific Gravity/Density:Not available.

Molecular Formula:MnO2

Molecular Weight:86.9368

Section 10 - Stability and Reactivity

Chemical Stability: Not available.

Conditions to Avoid: Incompatible materials, combustible materials.

Incompatibilities with Other Materials: Reducing agents, acids, organic materials, hydrochloric acid.

Hazardous Decomposition Products: Not available.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 1313-13-9: OP0350000

LD50/LC50:

CAS# 1313-13-9:

Oral, rat: LD50 = >3478 mg/kg;

Carcinogenicity:

CAS# 1313-13-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the

classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	OXIDIZING SOLID, N.O.S.	No information available.
Hazard Class:	5.1	
UN Number:	UN1479	
Packing Group:	II	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 1313-13-9 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 1313-13-9: delayed, fire.

Section 313

This material contains Manganese(IV) oxide (listed as Manganese compounds, n.o.s.), 99+%, (CAS# 1313-13-9) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 1313-13-9 (listed as Manganese compounds, n.o.s.) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 1313-13-9 can be found on the following state right to know lists: California, (listed as Manganese compounds, n.o.s.), New Jersey, Pennsylvania, (listed as Manganese compounds, n.o.s.), Minnesota, (listed as Manganese compounds, n.o.s.).

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 20/22 Harmful by inhalation and if swallowed.

Safety Phrases:

S 25 Avoid contact with eyes.

WGK (Water Danger/Protection)

CAS# 1313-13-9: 1

Canada - DSL/NDSL

CAS# 1313-13-9 is listed on Canada's DSL List.

Canada - WHMIS

WHMIS: Not available.

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.

Canadian Ingredient Disclosure List

CAS# 1313-13-9 (listed as Manganese compounds, n.o.s.) is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

Revision #1 Date: 10/05/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 Fisher 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 Fisher has been advised of the possibility of such damages.