

MATERIAL SAFETY DATA SHEET

SECTION 1.

Company Name:
Address:
Phone / Fax:

COMPANY IDENTIFICATION AND CHEMICAL PRODUCT

Lawrence Factor, Inc.
4740 NW 157 Street, Miami Lakes, FL 33014
305-430-0550 / 305-430-0864

Chemical Name:
Identity Name:
Product Use:

Hopcolite
Monoxycon™
Catalyst – Used for the destruction of Carbon Monoxide.

SECTION 2.

MATERIAL:

Manganese Oxide

Copper Oxide

COMPOSITION / INFORMATION ON INGREDIENTS

CAS No.*

1313-13-9

EINECS No.*****

215-202-6

%

40-70

HAZARD DATA

PEL**C**** 5 mg Mn per cubic meter of air
TLV-TWA***0.2 mg Mn per cubic meter of air
PEL**1mg Cu per cubic meter of air
TLV-TWA*** 1mg Cu per cubic meter of air

- * Chemical Abstract Service Number
** OSHA Permissible Exposure Limit, manganese compounds (as Mn), copper dusts and mists (as Cu), 29 CFR 1910.1000 Table Z-1.
*** American Conference of Governmental Hygienists, 2005. TLV-TWA = the time weighted average concentration for a normal 8-hour workday and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.
**** Ceiling Exposure Limit or maximum exposure concentration not to be exceeded under any circumstances.
***** European Inventory of Existing Chemical Substances

Hazard Symbols:



Xn Harmful

Risk Phrases:

20/22.... Harmful by inhalation and if swallowed.

Safety Phrases:

2 Keep out of the reach of children
25 Avoid contact with eyes

SECTION 3.

HAZARDS IDENTIFICATION

Potential Health Effects:

Eye Contact:

May cause eye irritation

Skin Contact:

May cause skin irritation or dehydrating of skin.

Inhalation: May cause nose, throat and lung irritation.

Ingestion: Irritating to mouth, throat and stomach.

Potential Chronic Health Effects:

Prolonged inhalation of manganese compounds above the TLV-TW A may cause lung irritation or central nervous system disorders. The symptoms simulate Parkinson's disease.

Carcinogenicity:

NTPNot Listed

IARC MonographsNot Listed

OSHA RegulatedNot Listed

Medical Conditions Generally Aggravated By Exposure:

Dust or fine powder may further irritate mucous membranes or open wounds.

SECTION 4.

FIRST AID MEASURES

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Seek medical attention if irritation persists.

Skin Contact: Flush contaminated areas with large amounts of water. Remove contaminated clothing. Wash clothing before reuse.

Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. Seek medical attention.

Ingestion: Never give anything by mouth to an unconscious or convulsing person. If conscious, give large quantities of water. Do not induce vomiting. Seek medical attention.

SECTION 5.

FIRE FIGHTING MEASURES

The material itself is noncombustible but may accelerate the burning of combustible material.

Flashpoint:.....None

Flammable or Explosive Limits:

LowerNonflammable

Upper.... Nonflammable

Extinguishing Media: Use extinguishing medium appropriate for surrounding materials.

Special Firefighting Procedures: None

Unusual Fire & Explosion Hazards: Should not be heated or rubbed in contact with organic matter or other oxidizing substances. Keep away from heat and flammable materials; potentially an oxidizer under certain conditions.

SECTION 6.

ACCIDENTAL RELEASE MEASURES

Steps To Be Taken If Material Is Released or Spilled:

Clean up spills immediately by scooping Monoxycon[™] into a metal drum. Deactivate by soaking with water. Cover loosely. Flush contaminated floors with abundant quantities of water into sewer, if permitted by federal, state or local regulations.

SECTION 7.

SAFE HANDLING AND STORAGE

Store in a cool dry area in closed container. Segregate from easily oxidizing materials, peroxides, chlorates, and acids. Protect containers against physical damage.

SECTION 8.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation
Requirements:

Provide sufficient mechanical and/or local exhaust to maintain exposure levels below TLV-TW A limit for manganese.

Respiratory
Protection:

In cases where high dust exposure may exist, the use of NIOSH-MSHA dust and mist respirator or an air-supplied respirator is advised. Engineering or administrative controls should be implemented to control dust.

Eye Protection:

Primary eye protection (safety glasses or goggles).

Other Protective
Equipment:

Rubber or plastic gloves should be worn and normal work clothing is sufficient.

SECTION 9.

PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point, 760 mm Hg Not Applicable
Solubility in Water % by Solution Insoluble
Bulk Density Approximately 0.8-0.9 g/cc
Melting Point..... Starts to decompose with evolution of oxygen at
704°C (1300°F)
Appearance Black granulated, solid.
Odor Odorless
Vapor Pressure (mm Hg) Not Applicable
Percent Volatile by Volume..... Not Volatile

SECTION 10.

STABILITY AND REACTIVITY DATA

Stability:

Stable under normal conditions. Moisture may reduce catalytic activity.

Conditions to Avoid:

Contact with incompatible materials or heat (704°C/1300°F).

Incompatible Materials:

Contact with peroxides and chlorates may cause violent reaction under certain conditions, such as elevated temperature or friction. May ignite organic material, especially organic solvents. May initiate polymerization of monomers. May form unstable acetylides in contact with acetylene.

Hazardous Decomposition Products: None

Conditions Contributing To Hazardous Polymerization: Not known to polymerize.

SECTION 11.

TOXICOLOGICAL INFORMATION

Most diagnosed cases of manganese toxicity in humans have been reported following long-term exposures to airborne concentrations of manganese above the TLV-TW A. The usual form of chronic manganese toxicity involves the central nervous system.

Reports of adverse effects in humans from ingestion of manganese are rare.

SECTION 12.

ECOLOGICAL INFORMATION

Inorganic manganese compounds have negligible vapor pressures but exist in air as suspended particulate matter, which settle under the influence of gravity.

The transport of manganese in water is influenced by the solubility of the form present. Insoluble forms, such as manganese dioxide, are transported as sediments.

The bioaccumulation of manganese in the food chain does not appear to be significant.

SECTION 13.

DISPOSAL CONSIDERATIONS

Monoxycon[™] (Hopcolite) is not considered a hazardous waste under 40 CFR 261. Dispose of deactivated Monoxycon[™] in a landfill approved to accept chemical waste, after verifying that it is not contaminated with hazardous substances through usage.

SECTION 14.

TRANSPORT INFORMATION

DOT (Department of Transportation)

USA (land, D.O.T.)

European Labeling in accordance Road/Rail Transport (ADR/RID)

European Labeling in accordance with EC directive (Water, I.M.O.)

European Labeling in accordance with EC directive (Air, I.C.A.O.)

Proper Shipping Name: Manganese Dioxide Compound

ID Number: Not Regulated

SECTION 15.

OTHER REGULATORY INFORMATION

Federal/State Regulations:

TSCA: All components in this product are listed on the TSCA inventory.

Health & Safety Reporting List: None of the chemicals in this product are on the Health & Safety Rep. List.

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

Section 12b: None of the chemicals in this product are listed under TSCA Section 12b.

TSCA Significant New Use Rule: None of the chemicals in this product have a SNUR under TSCA.

CERCLA Hazardous Substances & Corresponding RQ's: None of the chemicals in this product have an RQ.

SARA Section 302 Extremely Hazardous Substances: None of the chemicals in this product have a TPO.

SARA Codes: CAS # 1313-13-9 and 1317-38-0; acute.

SARA Section 313: CARULITE R 300 Granular Catalyst contains manganese compounds (CAS Reg. No. N/A) and copper compounds (CAS Reg. No. N/A) as part of the mixture and is subject to the reporting requirements of Section 313.

Clean Air Act: This material does not contain any hazardous air pollutants. This material does not contain any Class 1 or 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 chemicals in this product are considered highly hazardous by OSHA.

State: CAS # 1313-13-9 is on the state lists from NJ.

FIFRA: CAS # 1317-38-0 is found.

California Prop 65: California No Significant Risk Level: None of the chemicals in this product are listed.

Other Classifications:

HMIS® (USA)

Health Hazard1
Flammability Hazard0
Physical Hazard0
Personal Protection.....E

NFPA® (USA)

Health 1
Flammability 0
Reactivity..... 0

Personal Protection: Safety glasses, gloves, and *NIOSH approved dust respirator/mask.

HMIS® and NFPA® ratings involve data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

**National Institute for Occupational Safety and Health*

European/International Regulations:

European Labeling in Accordance with EC Directives:

Hazard Symbols:

XnHarmful

Risk Phrases:

20/22Harmful by inhalation and if swallowed.

Safety Phrases:

2Keep out of reach of children.
25Avoid contact with eyes.

WGK (Water Danger/Protection): CAS# 1317-38-0: VwVwS (1) and KBwS-Beschluss (3)

Canada – DSL/NDL: CAS# 1313-13-9 and 1317-38-0 are listed on Canada's DSL List.

Canada – WHMIS: None of the components in this product could be classified as hazardous in accordance with the hazardous criteria of the Controlled Products Regulations.

Canadian Ingredient Disclosure List: Manganese and copper compounds are listed on the Canadian Ingredient Disclosure List.

Japan Chemical Inventory List – METI: CAS# 1313-13-9 and 1317-38-0 are listed on Japan's METI List.

Australia Chemical Inventory List – AICS: CAS# 1313-13-9 and 1317-38-0 are listed on Australia's AICS List.

China Chemical Inventory List – IECSC: CAS# 1313-13-9 and 1317-38-0 are listed on China's IECSC List.

SECTION 16.

References:

OTHER INFORMATION

Not Available.

Other Consideration:

Not Available.

WARNING: This is a hazardous chemical product. By following the directions and warnings on this material safety data sheet, product label and any publication referred to thereon, the danger can be greatly reduced, but never entirely eliminated. Lawrence Factor, Inc. makes no warranties, expressed or implied with respect to this product and expressly disclaims the warranty of merchantability and any warranty of fitness for a particular purpose. Users assume all risk in handling, using or storing this product, even if they do so in accordance with the information and instructions given.

Product emergencies:

If you have a product-related emergency, resulting in an accident such as a spill or release of product or human exposure and need assistance from Lawrence Factor, please contact the following number:

LAWRENCE FACTOR, INC. 1-800-338-5493

General:

The data and recommendations presented in this data sheet concerning the use of our product and the materials contained therein are believed to be accurate and are based on information which is considered reliable as of the date hereof. However, the customer should determine the suitability of such materials for his purpose before adopting them on a commercial scale. Since the use of our products by others is beyond our control, no guarantee, express or implied, is made and no responsibility assumed for the use of this material or the results to be obtained there from. Information on this form is furnished for the purpose of compliance with Government Health and Safety Regulations and shall not be used for any other purposes. Moreover, the recommendations contained in this data sheet are not to be construed as a license to operate under, or a recommendation to infringe, any existing patents, nor should they be confused with state, municipal or insurance requirements, or with national safety codes.

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