

Material Safety Data Sheet



Chemsorb® 16103

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name: CHEMSORB® 16103
Use/Size: Impregnated Adsorbents
Manufacturer/Supplier: Molecular Products Inc., a subsidiary of Molecular Products Group
Address: 6837 Winchester Circle, Suite A
Boulder, CO 80301
Phone Number: (303) 666-4400 (Monday – Friday 7:00 am to 5:00 pm MT)
Revision Date: April 1, 2009
MSDS Date: June 25, 2002

This MSDS has been compiled in accordance with -EC Directive 91/155/EC -OSHA's Hazcom Standard (29 CFR 1910.1200)

2. COMPOSITION/INFORMATION ON THE COMPONENTS

| Component Name | CAS#/Codes | Concentration | R Phrases | Classification |
|------------------|------------------------|---------------|----------------------|----------------|
| Copper | 1317-38-0 215-269-1 | < 12% | R-None | None |
| Molybdenum | 1313-27-5 215-204-7 | < 3% | R36/37, R48/20/22 | Xn |
| Activated Carbon | 7440-44-0 231-153-3 | 80% | R-None | None |

R36/37: Irritating to eyes and respiratory system.

R48/20/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

3. HAZARD IDENTIFICATION

EU Main Hazards

Irritating to eyes and respiratory system.

Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

Routes of Entry

- Eye contact - Skin contact - Inhalation.

Carcinogenic Status

Not considered carcinogenic by NTP, IARC, and OSHA.

Target Organs

- Eye - Skin - Respiratory Tract - Liver - Kidney - Central Nervous System.

Health Effects - Eyes

Contact may cause conjunctival irritation.

Health Effects - Skin

Material may cause irritation.

Health Effects - Ingestion

May cause irritation to gastrointestinal tract. A large dose may cause damage to liver, kidney and central nervous system.

Health Effects - Inhalation

Exposure to dusts at high concentrations may cause irritation of nose throat and respiratory tract, liver damage, kidney damage and central nervous system damage.

4. FIRST AID MEASURES

Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash skin thoroughly with soap and water. Continue washing for at least 15 minutes. Seek medical attention if symptoms occur or redness persists.

Ingestion

Have victim drink 1-3 glasses of water to dilute stomach contents. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing. Obtain medical attention immediately.

Inhalation

If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.

Advice to Physicians

Treat Symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media

Use water spray, foam, dry chemical or carbon dioxide.

Unusual Fire and Explosion Hazards

This product may give rise to hazardous fumes in a fire. Heavy carbon dust in air presents a dust explosion hazard. Contact with strong oxidizer (ozone, liquid oxygen, etc) may result in fire due to metal content.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

This product may be collected by carefully scooping into a pan, paper towel or other absorbent material. Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Transfer into suitable containers for recovery or disposal. Wear appropriate protective clothing.

7. HANDLING AND STORAGE

Keep container tightly closed when not in use. Avoid buildup of static charge in handling equipment. Do not get in eyes, on skin or on clothing. Avoid breathing dust. Storage area should be: - cool - dry - well ventilated - away from incompatible materials (see section 10 for materials to avoid).

Wet activated carbon removes oxygen from air causing a severe hazard (oxygen deficient atmosphere) to workers inside carbon vessels and enclosed or confined spaces. Establish Confined Space Entry Protocols before entering.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Standards

Exposure limits are listed below, if they exist.

Activated Carbon

ACGIH TLV: Graphite, all forms except graphite fibers: 2 mg/m³ (TWA). OSHA Permissible Exposure Limits (PELs): activated carbon (graphite, synthetic): total particulate = 15 mg/m³ (TWA), respirable fraction = 5 mg/m³ (TWA). UK TWA: 4 mg/m³.

Molybdenum

ACGIH TLV: 0.5 mg/m³. OSHA Permissible Exposure Limit: 5 mg/m³ UKTWA 5 mg/m³ and 10 mg/m³ (STEL).

Copper

ACGIH TLV: 0.1 mg/m³.

Engineering Control Measures

Good general room ventilation is expected to be adequate to control airborne levels. If conditions are dusty, use local exhaust ventilation.

Respiratory Protection

NIOSH Approved dust respirator if conditions are dusty.

Hand Protection

Rubber gloves.

Eye Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------|-----------------|
| Physical State | Amorphous Solid |
| Color | Black |
| Odor | Odorless |
| pH | Alkaline |
| Specific Gravity | 0.4-0.6 |
| Boiling Range / Point (°C) | 4000 |
| Flash Point (PMCC) (°C) | 330 |
| Explosion Limits (%) | Not flammable |
| Vapor Pressure | Not Applicable |
| Density | 0.49-0.56 g/ml |
| Solubility in Water | Insoluble |
| Vapor Density (Air = 1) | Not Applicable |
| Melting Point (deg C) | Not Applicable |

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid

- Heat - High temperatures.

Materials to Avoid

- Water reactive chemicals - strong oxidizers - strong acids.

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

- Acrid smoke and irritating fumes - oxides of carbon - oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

(Molybdenum) LD50 Rat oral 125 mg/kg.

Chronic Toxicity/Carcinogenicity

(Molybdenum) Equivocal evidence of carcinogenic activity of molybdenum trioxide in male F344/N rats.

Genotoxicity

This product is not expected to cause any mutagenic effects.

Reproductive/Developmental Toxicity

This product is not expected to cause reproductive or developmental health effects.

12. ECOLOGICAL INFORMATION

Mobility

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bio-accumulation

No relevant studies identified.

Ecotoxicity

(Molybdenum) LC50 Pimephales promelas (fathead minnow) 370 mg Mo/l/96 hr /Conditions of bioassay not specified

13. DISPOSAL

Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

| | |
|--|---|
| DOT CFR 172.101 Data | Not Regulated |
| UN Proper Shipping Name | Carbons made by steam activation process are not subject to the provision of UN Class 4.2 |
| UN Class | N/A |
| UN Number | N/A |
| UN Packaging Group | N/A |
| Classification for AIR Transportation (IATA) | Not Restricted per Special Provision A3 |

15. REGULATORY INFORMATION

EU Label Information

Classification and labelling was performed according to EU directives 67/548/EEC and 99/45/EC including amendments.

EU Hazard Symbol and Indication of Danger

Xn: Harmful

R phrases

R36/37: Irritating to eyes and respiratory system.

R48/20/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

S phrases

S22: Do not breathe dust.

S25: Avoid contact with eyes.

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing

All ingredients were verified for inclusion on the EPA Toxic Substance Control Act Chemical Substance Inventory.

EINECS Listing

All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are exempt from listing.

DSL/NDSL (Canadian) Listing

All ingredients were verified for inclusion on either the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL).

WHMIS Classification

D.2.B

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

California Proposition 65

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

SARA Title III Sect. 302 (EHS)

This product does not contain any chemicals subject to SARA Title III Section 302.

SARA Title III Sect. 304

This product does not contain any chemicals subject to SARA Title III Section 304.

SARA Title III Sect. 311/312 Categorization

This product meets the following SARA Title III Section 311/312 categorizations: Acute Hazard, Chronic Hazard.

SARA Title III Sect. 313

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations - copper (1317-38-0) - molybdenum (1313-27-5).

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Flammability - 0

NFPA Code for Health - 1

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - 0

HMIS Ratings

HMIS Code for Flammability - 0

HMIS Code for Health - 1

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

Abbreviations

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

R: Risk

S: Safety

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

BOD: Biological Oxygen Demand

KoC: Soil Organic Carbon Partition Coefficient

The information in this safety data sheet is based on the best knowledge and legislation available at the time. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular application. As the specific conditions of use are outside the control of the supplier, the user is responsible for ensuring that the product is used in a safe way and in compliance with the relevant requirements of legislation.

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