

Safety Data Sheet



Product name:


Chemsorb[®] 1000

Revised edition no: 158 - Rev H

Date: 09 September 2013

Supersedes: Revision edition no: 158 – Rev G

| 1 PRODUCT AND COMPANY IDENTIFICATION | |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Product Name | Chemsorb [®] 1000 |
| CAS Number | 7440-44-0 |
| Product Use | Adsorbents |
| U.N. Number | Not Applicable |
| U.N. Dangerous Goods Class | Non-Regulated Material |
| Supplier / Manufacturer's Name | Molecular Products Inc (a subsidiary of Molecular Products Group) 6837 Winchester Circle, Boulder, CO, 80301, USA |
| Emergency Contact | 1-888-665-7763 (Hours: 7:00AM – 5:00PM Mountain Time) |
| Date of Initial Preparation | 25 June, 2002 |
| Date of Previous Revision | 1 April, 2009 |

| 2 HAZARDS IDENTIFICATION | |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Emergency Overview | This product is an amorphous black solid with no odor. Warning! Wet activated carbon removes oxygen from the air and can lower the concentration levels within confined spaces. Exposure can be irritating to eyes, respiratory system and skin. Harmful by inhalation and ingestion. It is a non-flammable solid. Excessive airborne dust creates a dust explosion hazard. The Environmental effects of this product have not been investigated; however, this product is not expected to have any adverse effects. |
| US DOT Symbols | Non-Regulated |
| Canadian (WHMIS) Symbols | Not Controlled |
| European and (GHS) Hazard Symbols |  Signal Word: Warning! |
| EU Labelling and Classification | Classification of the substance or mixture according to Regulation (EC) No 1272/2008 Annex 1. EC# 231-153-3: This substance is not classified in the Annex 1 of Directive 67/548/EEC. |
| GHS Hazard Classification(s) | None |
| Hazard Statement(s) | None |
| Precautionary Statement(s) | P260: Do not breathe dust/fume/gas/mist/vapors/spray. P264: Wash hands thoroughly after handling. P271: Use only in well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. |
| EU Hazard Classification per Directive 1999/45/EC | None |
| Risk Phrases | None |
| Safety Phrases | S9: Keep container in well-ventilated area. S22: Do not breathe dust. S24/25: Avoid contact with skin and eyes. S36/37/38: Wear suitable protective clothing, gloves and eye/face protection. |
| Health Hazards or Risks from Exposure | Acute: Exposure to this product can be irritating to eyes, respiratory system and skin. Inhalation: Avoid use in confined spaces. Wet activated carbon can adsorb and remove oxygen from the air causing a severe inhalation hazard to workers. Inhalation of dusts may cause nose, throat and respiratory tract irritation. Eye: May cause mechanical irritation with pain and redness. Skin: May cause irritation. Ingestion: May cause irritation to gastrointestinal tract. Chronic: None known. |
| Target Organs | Acute: Eye, Respiratory System, Skin Chronic: None known |

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3 COMPOSITION AND INFORMATION ON INGREDIENTS

| Hazardous Ingredients | CAS # | EINECS # | ICSC # | WT % | Hazard Classification / Risk Phrases |
|-----------------------|-----------|-----------|--------|-------|---------------------------------------------------|
| Carbon, Activated | 7440-44-0 | 231-153-3 | 0702 | > 95% | HAZARD CLASSIFICATION: None RISK PHRASES: None |

Balance of other ingredients is non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

NOTE: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives, and the Japanese Industrial Standard JIS Z 7250:2000.

4 FIRST-AID MEASURES

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual. | |
| Eye Contact | If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention. |
| Skin Contact | Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use. |
| Inhalation | If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention. |
| Ingestion | If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional. |
| Medical Conditions Aggravated by Exposure | Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact. |
| Recommendations to Physicians | Treat symptoms and reduce over-exposure. |

5 FIRE-FIGHTING MEASURES

| | |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flash Point | Non-Flammable |
| Auto-Ignition Temperature | Not Applicable |
| Flammable Limits (in air by volume, %) | Lower (LEL): Not Applicable Upper (UEL): Not applicable |
| Fire Extinguishing Materials | As appropriate for surrounding fire. Carbon dioxide, foam, dry chemical, halon, or water spray. Do not release runoff from fire control methods to sewers or waterways. |
| Unusual Fire and Explosion Hazards | High dust concentration may form explosive mixtures with air, which can be ignited by spark, flame, or static discharge. |
| Explosion Sensitivity to Mechanical Impact | Not Sensitive |
| Explosion Sensitivity to Static Discharge | Sensitive (Air/Dust mixtures) |
| Special Fire-Fighting Procedures | Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. |

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| 6 ACCIDENTAL RELEASE MEASURES | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Spill and Leak Response | Personnel should be trained for spill response operations. |
| Spills | Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Sweep, shovel or vacuum (HEPA vacuum) spilled material and place in an appropriate container for re-use or disposal. Avoid dust generation if possible. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, <i>Disposal Considerations</i>). |

| 7 HANDLING AND STORAGE | |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Work Practices and Hygiene Practices | <p>As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing dusts generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately. Do not enter places where bulk material is used or stored until adequately ventilated to prevent asphyxiation.</p> <p>As with all finely divided materials, precautions should be taken to avoid inhalation and eye contact. Ground all transfer, blending and dust collecting equipment to prevent static discharge in accordance with NFPA 70, "National Electric Code;" NFPA 499, "Recommended Practice for the Classification of Combustible Dusts and of Hazardous (classified) Locations for Electrical Installations in Chemical Process Areas;" NFPA 654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids" and OSHA Combustible Dust standards. Remove all ignition sources from material handling, transfer and processing areas where dust may be present.</p> |
| Storage and Handling Practices | Containers of this product must be properly labeled. Store containers in a cool, dry location away from heat, flame and incompatible materials. Keep container tightly closed when not in use. Avoid buildup of static charge in handling equipment. |

| 8 EXPOSURE CONTROLS / PERSONAL PROTECTION | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------|
| Exposure Limits/Guidelines | | | |
| Chemical Name | CAS # | ACGIH TWA | OSHA TWA |
| Carbon, Activated | 7440-44-0 | 10 mg/m ³ Dust | 15 mg/m ³ Total Dust 5 mg/m ³ Respiratory |
| Currently, International exposure limits are established for this product. Please check with competent authority in each country for the most recent limits in place. | | | |
| Ventilation and Engineering Controls | | | |
| Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used. | | | |
| Personal Protective Equipment | | | |
| The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details. | | | |
| Respiratory Protection | Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent to U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states. | | |
| Eye protection | Safety glasses or chemical goggles are recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Standards of Canada. | | |
| Hand Protection | Use protective gloves to minimize skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada. | | |
| Body Protection | Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. | | |

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| 9 PHYSICAL AND CHEMICAL PROPERTIES | |
|------------------------------------|--------------------------|
| Physical State | Amorphous Solid |
| Appearance and Odor | Black solid with no odor |
| Odor Threshold (PPM) | None |
| Vapor Pressure (mmHg) | Not Applicable |
| Vapor Density (AIR=1) | Not Applicable |
| Density | 0.4 to 0.6 g/ml |
| Evaporation Rate (nBuAc=1) | Not Applicable |
| Boiling Point (°C) | 4,000° |
| Freezing Point (°C) | Not Applicable |
| pH | Not Applicable |
| Specific Gravity 4° C (Water=1) | 0.4 to 0.6 |
| Solubility in Water (%) | Insoluble |
| VOC | 0 |

| 10 STABILITY AND REACTIVITY | |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stability | Product is stable. |
| Decomposition Products | Thermal decomposition (burning) may produce irritating and toxic fumes of carbon (carbon dioxide, carbon monoxide), oxides of nitrogen. The exact chemicals formed depend on many factors including temperature and heating rate. |
| Materials with which Substance is Incompatible | Avoid contact with strong oxidizing agents, strong acids. |
| Hazardous Polymerization | Will not occur. |
| Conditions to Avoid | Contact with incompatible materials and dust generation. |

| 11 TOXICOLOGICAL INFORMATION | |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity: There is no available data for the product, only for the ingredients. | |
| CAS# 7440-44-0 LC50, Inhalation - Rat | >64,400 mg/m ³ |
| CAS# 7440-44-0 LD50, Oral - Rat | >10,000 mg/kg |
| Suspected Cancer Agent | None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be, a cancer-causing agent by these agencies. |
| Irritancy | Contact with this product can be irritating to exposed skin, eyes, and respiratory system. |
| Sensitization | This product is not considered a sensitizer. |
| Reproductive Toxicity | No information concerning the effects of this product and its components on the human reproductive system. |

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| 12 ECOLOGICAL INFORMATION | |
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| All work practices must be aimed at eliminating environmental contamination. | |
| Environmental Stability | The ecological characteristics of this product have not been fully investigated. The product should not be discharged unmonitored into the environment. |
| Effect of Material on Plants or Animals | No evidence is currently available on this product's effects on plants or animals. |
| Effect of Chemical on Aquatic Life | No Data Available for this product at this time. |

Note: This product is readily biodegradable and is not expected to bio-accumulate.

| 13 DISPOSAL CONSIDERATIONS | |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Preparing Wastes for Disposal | Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan. |

| 14 TRANSPORTATION INFORMATION | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| U.S. DOT, IATA, IMO, and ADR | THIS PRODUCT* IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION. |
| Proper Shipping Name | Non-Regulated Material |
| Hazard Class Number and Description | Not Applicable |
| U.N. Identification Number | Not Applicable |
| Packing Group | Not Applicable |
| DOT Label(s) Required | Not Applicable |
| North American Emergency Response Guidebook Number (2004) | Not Applicable |
| Marine Pollutant | None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B) |
| This product is NOT considered spontaneously combustible under the "Self-Heating Test for Carbon" protocol listed in the United Nations' Manual of Tests and Criteria [33.3.1]. | |
| U.S. Department of Transportation (DOT) Shipping Regulations | This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101. |
| Transport Canada, Transportation of Dangerous Goods Regulation | This product is not classified as Dangerous Goods, per regulations of Transport Canada. |
| International Air Transport Association (IATA) | This product is not classified as Dangerous Goods, by rules of IATA: Not restricted per Special Provision A3. |
| International Maritime Organization (IMO) Designation: | This product is not classified as Dangerous Goods by the International Maritime Organization. |
| European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) | This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods. |

* NOTE: Carbons made by steam activation process are not subject to the provision of UN Class 4.2.

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| 15 REGULATORY INFORMATION | |
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| United States Regulations | |
| SARA Reporting Requirements | This product is not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows: None |
| Toxic Control Substance Act (TCSA) | All components in this product are listed on the U.S. Toxic Control Substance Act (TCSA) inventory of chemicals. |
| SARA 311/312 | Acute Health: Yes Chronic Health: No Fire: No Reactivity: No |
| U.S. SARA Threshold Planning Quantity | There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs. (4,540 Kg) may apply, per 40 CFR 370.20. |
| U.S. CERCLA Reportable Quantity (RQ) | CERCLA Reportable Quantity (RQ): None. |
| Clean Water Act (CWA) | None of the chemicals in this product are listed as Hazardous Substances under the CWA. |
| State Regulations | None |
| California Safe Drinking Water and Toxic Enforcement Act (Proposition 65) | None of the ingredients are on the California Proposition 65 lists. |
| Canadian Regulations | |
| Canadian DSL/NDSL Inventory Status | All of the components of this product are on the DSL Inventory. |
| Canadian Environmental Protection Act (CEPA) Priorities Substances Lists | No component of this product is on the CEPA First Priorities Substance Lists. |
| Canadian WHMIS Classification and Symbols | This product is categorized as Not Controlled, as per the Controlled Product Regulations. |
| European Economic Community Information | |
| EU Labelling and Classification | Classification of the mixture according to Regulation (EC) No1272/2008. See Section 2 for details. |
| Australian Information for Product | |
| Australian Inventory of Chemical Substances (AICS) Status | All components of this product are listed on the AICS. |
| Standard for the Uniform Scheduling of Drugs and Poisons | Not Applicable. |
| Japanese Information for Product | |
| Japanese Minister of International Trade and Industry (MITI) Status | The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI. |
| International Chemical Inventories - Listing of the components on individual country Chemical Inventories is as follows. | |
| Asia-Pac | Listed |
| Australian Inventory of Chemical Substances (AICS) | Listed |
| Korea Existing Chemicals List (ECL) | Listed |
| Japanese Existing National Inventory of Chemical Substances (ENCS) | Listed |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | Listed |
| Swiss Giftlist List of Toxic Substances | Listed |
| U.S. TSCA | Listed |

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| 16 OTHER INFORMATION | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| NFPA Ratings | HMIS Ratings |
| Code for Flammability: 0 | Code for Flammability: 0 |
| Code for Health: 1 | Code for Health: 1 |
| Code for Reactivity: 0 | Code for Reactivity: 0 |
| Code for Special Hazards: None | Code for Personal Protection - See Section 8 |
| PREPARED BY | John Green, Molecular Products, Inc. Assisted by: Paul Eigbrett, MSDS Authoring Services |
| Disclaimer: The information in this safety data sheet is based on the best knowledge available at the time and current legislation. 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. | |
| Date of issue | 09 September 2013 |