

# Safety Data Sheet



Product name:

**Chemsorb<sup>®</sup> 620**

Revised edition no: 156 - Rev H

Date: 13 August 2013

Supersedes: Revision edition no: 156 – Rev G

1 PRODUCT AND COMPANY IDENTIFICATION	
Product Name	Chemsorb <sup>®</sup> 620
CAS Number	Mixture
Product Use	Impregnated Adsorbent
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 may have adverse effects in the aquatic environment.
US DOT Symbols	Non-Regulated
Canadian (WHMIS) Symbols	
European and (GHS) Hazard Symbols	 Signal Word: <b>Warning!</b>
EU Labelling and Classification	Classification of the substance or mixture according to Regulation (EC) No1272/2008 Annex I EC# 231-153-3 This substance is not classified in the Annex I of Directive 67/548/EEC EC# 231-592-0 Annex I Index# 030-003-00-2
GHS Hazard Classification(s)	Acute Oral Toxicity: Category 4 Skin Irritant: Category 2 Acute Aquatic Toxicity: Category 1 Chronic Aquatic Toxicity: Category 1
Hazard Statement(s)	H302: Harmful if swallowed H315: Causes skin irritation H320: Causes eye irritation H400: Very toxic to aquatic life H401: Toxic to aquatic life
Precautionary Statement(s)	P260: Do not breath 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	[Xn] Harmful, [N] Dangerous to the Environment
Risk Phrases	R22: Harmful if swallowed R34: Causes Burns
Safety Phrases	S9: Keep container in a well-ventilated area S22: D not breathe dust S24/25: Avoid contact with skin and eyes S36/37/38: Wear suitable protective clothing, gloves and eye/face protection S45: In case of an accident or if you feel unwell, seek medical advice immediately S61: Avid release to the environment

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2 HAZARDS IDENTIFICATION	
Health Hazards or Risks from Exposure	<p><i>Acute:</i> Exposure to this product can be irritating to eyes, respiratory system and skin with possible chemical burns.</p> <p><i>Inhalation:</i> 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.</p> <p><i>Eye:</i> May cause mechanical irritation as well as possible chemical burns with pain and redness.</p> <p><i>Skin:</i> May cause irritation and possible chemical burns.</p> <p><i>Ingestion:</i> May cause irritation to gastrointestinal tract and may cause chemical burns.</p> <p><i>Chronic:</i> None known.</p>
Target Organs	<p><i>Acute:</i> Eye, Respiratory System, Skin</p> <p><i>Chronic:</i> None Known</p>

3 COMPOSITION AND INFORMATION ON INGREDIENTS						
Composition	Inorganic Chemicals					
Substance name	Content	CAS No	EC No	Index No	REACH	Classification***
Activated Carbon	> 70%	7440-44-0	231-153-3	0702	----	None
Zinc Chloride	< 25%	7646-85-7	231-592-0	1064		Hazard Classification: [Xn] Harmful
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 SDS 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 SDS 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 SDS 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.

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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.	

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.	

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## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits/Guidelines	Either local exhaust or general room ventilation is usually required		
Chemical Name	CAS #	ACGIH TWA	OSHA TWA
Carbon, Activated	7440-44-0	10 mg/m <sup>3</sup> Dust	15 mg/m <sup>3</sup> Total Dust 5 mg/m <sup>3</sup> Respiratory
Zinc Chloride	7646-85-7	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Currently, International exposure limits are established for the components of 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.		

## 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	0.59 to 0.64 g/ml
Evaporation Rate (nBuAc=1)	Not Applicable
Boiling Point (°C)	4000°
Freezing Point (°C)	Not Applicable
pH	Not Applicable
Specific Gravity 4° C (Water=1)	0.4 to 0.6
Viscosity	Not applicable
Solubility in Water (%)	Insoluble
VOC	0

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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 zinc, and oxides of chloride. The exact chemicals formed depends 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 LC-50, Inhalation – Rat	>64,400 mg/m <sup>3</sup>
CAS# 7440-44-0 LD50, Oral - Rat	>10,000 mg/kg
CAS# 7646-85-7 LD50, Oral – Rat	350 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.

12 ECOLOGICAL INFORMATION	
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.
*Note: Carbons made by steam activation process are not subject to the provision of UN Class 4.2	
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

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14 TRANSPORTATION INFORMATION	
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.

15 REGULATORY INFORMATION	
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:
SARA 313	This product contains Zinc Chloride CAS# 7646-85-7 and is subject to reporting requirements.
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 Class D Division 2B, as per the Controlled Product Regulations
European Economic Community Information	
EU Labelling and Classification	Classification of the mixture according to Regulation (EC) No 1272/2008. 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.

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15 REGULATORY INFORMATION	
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 Giftliste List of Toxic Substances	Listed
U.S. TSCA	Listed

16 OTHER INFORMATION	
NFPA Ratings	HMIS Ratings
Code for Flammability: 0	Code for Flammability: 0
Code for Health: 3	Code for Health: 3
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	13 August 2013