

Safety Data Sheet



Product name:


Chemsorb® MultiGard® 3620

Revised edition no: 648 – Rev E

Date: 27 August 2019

Supersedes: Revision edition no: 648 Rev D

1 PRODUCT AND COMPANY IDENTIFICATION	
Product Name	Chemsorb® MultiGard® 3620
Product Use	Air Purification Sorbent
U.N. Number	Not Applicable
U.N. Dangerous Goods Class	Not Applicable
Supplier / Manufacturer's Name	Molecular Products Inc (a subsidiary of Molecular Products Group) 633 CTC Blvd Suite 200, Louisville, CO 80027, USA
Emergency Contact	+1 202 464 2554 US and Canada
Date of Initial Preparation	27 January 2017
Date of Previous Revision	16 April 2019

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
Hazard Symbols	 Signal Word: Warning!
GHS Hazard Classification(s)	Acute Oral Toxicity: Category 4 Inhalation Category 4.
Hazard Statement(s)	H315: Causes skin irritation H320: Causes eye irritation
Precautionary Statement(s)	P264: Wash hands thoroughly after handling P280: Wear protective gloves P302+P352: If on skin wash with plenty of water P332+P313: If skin irritation occurs; Get medical advice/attention P362+P364: Take off contaminated clothing and wash it before reuse P391: Collect spillage P501: Dispose of contents/ containers in accordance with local/regional/national/international regulations
Other Hazard Information	This product contains substances that have a workplace exposure limit (WEL). Activated carbon does not pose a high health hazard and this product should not pose a high health hazard unless decomposed. Please note that zinc chloride is the hazardous component of this product and is adsorbed onto the activated carbon. Zinc chloride is a corrosive material but when adsorbed, the final product is not corrosive.

3 COMPOSITION AND INFORMATION ON INGREDIENTS			
Composition	Activated carbon, virgin plus additives		
Common Name/Synonyms	Impregnated activated carbon		
Substance name	Content	CAS No	Classification
Activated Carbon	80%	7440-44-0	Hazard Classification: Combustible Dusts

Safety Data Sheet



Product name:

Chemsorb® MultiGard® 3620

Revised edition no: 648 – Rev E

Date: 27 August 2019

Supersedes: Revision edition no: 648 Rev D

3 COMPOSITION AND INFORMATION ON INGREDIENTS				
Zinc Chloride	6%	7646-85-7	Hazard Classification: [Xn] Harmful H302, H314, H318, H410	
Copper II Oxide†	2%	1317-38-0	Hazard Classification: H400, H412	
Zinc Oxide†	2%	1314-13-2	Hazard Classification: [N] Dangerous to the Environment H400, H410	
† Reaction products formed during manufacture. Balance of other ingredients are 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 MSDS contains all the information required by the CPR.				

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/or SDS to health professional with contaminated individual.	
Eye Contact	If product enters the eyes, open eyes while under gently 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 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.
Health Hazards or Risks from Exposure	<i>Acute:</i> Exposure to this product can be irritating to skin, may cause mechanical irritation to eyes and respiratory system. <i>Inhalation:</i> Avoid use in confined spaces. Wet activated carbon can absorb and remove oxygen from the air causing a severe inhalation hazard to workers. Inhalation dust may cause nose, throat and respiratory tract irritation. <i>Eye:</i> May cause mechanical irritation as well as possible chemical burns with pain and redness <i>Skin:</i> May cause irritation <i>Ingestion:</i> May cause irritation to gastrointestinal tract <i>Chronic:</i> None known
Target Organs	<i>Acute:</i> Eye, Respiratory System, Skin <i>Chronic:</i> None known
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, %)	<i>Lower (LEL):</i> Not Applicable <i>Upper (UEL):</i> 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)

Safety Data Sheet



Product name:

Chemsorb® MultiGard® 3620

Revised edition no: 648 – Rev E

Date: 27 August 2019

Supersedes: Revision edition no: 648 Rev D

5 FIRE-FIGHTING MEASURES		
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
Spill Response PPE		Coveralls, dust mask, safety glasses or goggles, nitrile gloves.
Clean up Procedure		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.
Incompatible Materials		Avoid contact with strong oxidizing agents, strong acids.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION				
Exposure Limits/Guidelines	Either local exhaust or general room ventilation is usually required			
<i>Chemical Name</i>	<i>CAS #</i>	<i>ACGIH TWA</i>	<i>OSHA TWA</i>	
Carbon, Activated	7440-44-0	10 mg/m ³ Dust	15 mg/m ³ Total Dust 5 mg/m ³ Respirable	
Zinc Chloride	7646-85-7	1 mg/m ³ (TWA) 2 mg/m ³ (STEL)	1 mg/m ³	
Zinc Oxide	1314-13-2	2 mg/m ³ (TWA) 10 mg/m ³ (STEL)	5 mg/m ³ Fume 15 mg/m ³ Total Dust 5 mg/m ³ Respirable	
Copper II Oxide	1317-38-0	1 mg/m ³ TWA (dust and mist, as Cu)	1 mg/m ³ TWA (dust and mist, as Cu)	
Canada				
Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)				

Safety Data Sheet



Product name:

Chemsorb® MultiGard® 3620

Revised edition no: 648 – Rev E

Date: 27 August 2019

Supersedes: Revision edition no: 648 Rev D

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	CAS #	Value
Zinc Chloride	7646-85-7	1 mg/m ³ (TWA) Fume 2 mg/m ³ (STEL) Fume
Zinc Oxide	1314-13-2	2 mg/m ³ (TWA) Respirable 10 mg/m ³ (STEL) Respirable
Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)		
Chemical Name	CAS #	Value
Zinc Chloride	7646-85-7	1 mg/m ³ (TWA) Fume 2 mg/m ³ (STEL) Fume
Zinc Oxide	1314-13-2	2 mg/m ³ (TWA) Respirable 10 mg/m ³ (STEL) Respirable
Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)		
Chemical Name	CAS #	Value
Zinc Chloride	7646-85-7	1 mg/m ³ (TWA) Fume 2 mg/m ³ (STEL) Fume
Zinc Oxide	1314-13-2	2 mg/m ³ (TWA) Respirable 10 mg/m ³ (STEL) Respirable
Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)		
Chemical Name	CAS #	Value
Zinc Chloride	7646-85-7	1 mg/m ³ (TWA) Fume
Zinc Oxide	1314-13-2	5 mg/m ³ (TWA) Fume 10 mg/m ³ (STEL) Fume 10 mg/m ³ (TWA) Dust
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 EN 149, 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
----------------	-----------------

Safety Data Sheet



Product name:

Chemsorb® MultiGard® 3620

Revised edition no: 648 – Rev E

Date: 27 August 2019

Supersedes: Revision edition no: 648 Rev D

9 PHYSICAL AND CHEMICAL PROPERTIES	
Appearance and Odor	Black solid with no odor
Odor Threshold (PPM)	None
Vapor Pressure (mm/Hg)	Not applicable
Vapor Density (AIR=1)	Not applicable
Density (g/mL)	0.25 – 1.0 g/ml
Evaporation Rate (nBuAc=1)	Not applicable
Boiling Point (°C)	Not applicable
Freezing Point (°C)	Not applicable
Flash Point (°C)	Not applicable
pH	Not applicable
Specific Gravity 4° C (Water=1)	0.25 – 1.0
Solubility in Water (%)	Insoluble
VOC	0
Upper Explosive Limit	Not Applicable
Lower Explosive Limit	Not Applicable
Flammability	Not Applicable
Partition Coefficient	Not Applicable
Auto-Ignition Temperature	Not Applicable
Decomposition Temperature	Not Determined
Viscosity	Not Applicable

10 STABILITY AND REACTIVITY	
Stability	Product is stable.
Reactivity	Product is non-reactive.
Decomposition Products	Thermal decomposition (burning) may produce irritating and toxic fumes of carbon (carbon dioxide, carbon monoxide), and oxides of copper, molybdenum and zinc. 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
CAS# 7646-85-7 LD50, Oral - Rat	350 mg/kg
CAS# 1314-13-2 LD-50, Oral –Mouse	>7,950 mg/kg

Safety Data Sheet



Product name:

Chemsorb® MultiGard® 3620

Revised edition no: 648 – Rev E

Date: 27 August 2019

Supersedes: Revision edition no: 648 Rev D

11 TOXICOLOGICAL INFORMATION	
CAS# 1314-13-2 LC-50, Inhalation – Mouse	>2,500 mg/m ³
CAS# 1317-38-0 LD50, Oral-Rat	>2,500mg /kg
CAS# 1317-38-0 LD50, Dermal-Rat	>2,000mg/kg

Hazards	
Routes of entry	Inhalation and ingestion.
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 cause mechanical irritation 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.
Health Hazards or Risks from Exposure	<p><i>Acute:</i> Exposure to this product can be irritating to eyes, respiratory system and skin</p> <p><i>Inhalation:</i> Avoid use in confined spaces. Wet activated carbon can absorb and remove oxygen from the air causing a severe inhalation hazard to workers. Inhalation dust may cause nose, throat and respiratory tract irritation.</p> <p><i>Eye:</i> May cause irritation.</p> <p><i>Skin:</i> May cause irritation</p> <p><i>Ingestion:</i> May cause irritation to gastrointestinal tract and may cause chemical burns</p> <p><i>Chronic:</i> None known</p>
Mutagenicity	Not a mutagen.
Target Organs	<p><i>Acute:</i> Eye, Respiratory System, Skin</p> <p><i>Chronic:</i> None known</p>
Aspiration Hazard	No aspiration hazard.

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	Testing per OECD 201 shows no reportable effect on aquatic life.
<i>Note: This product is readily biodegradable and is not expected to bio-accumulate.</i>	

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

Safety Data Sheet



Product name:

Chemsorb® MultiGard® 3620

Revised edition no: 648 – Rev E

Date: 27 August 2019

Supersedes: Revision edition no: 648 Rev D

14 TRANSPORTATION INFORMATION	
U.N. Identification Number	Not Applicable
Packing Group	Not Applicable
Label(s) Required (DOT, IATA, IMDG)	Not Applicable
Label(s) Required (ADR)	Not Applicable
North American Emergency Response Guidebook Number (2016)	Not Applicable
Environmental Hazards	None of the ingredients are classified by the DOT, IATA, IMDG as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B). This product is classified as a Marine Pollutant under DOT, IATA, IMDG, ADR.
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.

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: Zinc Chloride is regulated under SARA 313.
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
SARA 313	This product contains Zinc Chloride 7646-85-7 which is subject to reporting requirements
U.S. SARA Threshold Planning Quantity	There are no specific Threshold Planning Quantities for this product. The default Federal SDS 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): Zinc chloride CAS# 7646-85-7 : 1000 lb final RQ
Clean Water Act (CWA)	CAS# 7646-85-7 is listed under the Clean Water Act
State Regulations	CAS# 1313-27-5 can be found on the following state right to know lists: Massachusetts, New Jersey and Pennsylvania CAS# 7646-85-7 can be found on the following state right to know lists: Massachusetts, New Jersey and Pennsylvania CAS# 1317-38-0 can be found on the following state right to know lists: New Jersey and Pennsylvania CAS# 1314-13-2 can be found on the following state right to know lists: Massachusetts, New Jersey and Pennsylvania

Safety Data Sheet



Product name:

Chemsorb® MultiGard® 3620

Revised edition no: 648 – Rev E

Date: 27 August 2019

Supersedes: Revision edition no: 648 Rev D

15 REGULATORY INFORMATION	
California Safe Drinking Water and Toxic Enforcement Act (Prop 65)	None of the ingredients are on the California Proposition 65 lists.
Canadian Regulations	
Regulatory Status	This product has been classified in accordance with the hazard criteria of the Canadian Hazardous Products Regulations and the Safety Data Sheet contains all the information required by the Hazardous Products Regulations (WHMIS 2015).
National Pollutant Release Inventory (NPRI)	None of the components in this product is listed.
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 in accordance with Canadian Hazardous Products Regulations

16 OTHER INFORMATION	
Prepared By	Molecular Products Inc.
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	27 August 2019