

PRECAUTIONARY STATEMENTS –

Prevention	Avoid generation of dust during handling. The dust or fines may be more susceptible to catalytic reaction than the large mesh product. Avoid breathing dust. Wash thoroughly after handling. Use in a well ventilated area. Avoid release to environment.
Response	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention for any breathing difficulty. IF IN EYES: Rinse cautiously with water for several minutes. Seek medical attention if irritation persists. CONTACT WITH SKIN: Remove contaminated clothing. Rinse cautiously with soap and water for several minutes. Seek medical attention if irritation persists. IF INGESTED: Drink a large volume of water; seek medical attention.
Storage	Store in a well-ventilated place. Keep container tightly closed.
Container Labeling	Carbon Activated Corp. has added GHS classification information to this SDS document. However, changes to container labeling have not been implemented. Changes to container labels will be made in accordance to the requirements which will be defined by OSHA's revision to the Hazard Communication Standard once final adoption of rule is approved and released. Labels will be provided that include a signal word, pictogram, hazard statement, and precautionary statement for each hazard class and category.

SECTION III

INGREDIENTS:

Chemical Name (CAS#)	%	PEL(OSHA)	TLV(ACGIH)	Other
Carbon* (7440-44-0)	100	N/A	N/A	N/A

*ACGIH (TWA) for respirable dust is 2.5 mg/m³

There are no established PEL, TWA or TLV values for this material. Caution should be taken for respirable dust. The product has no known carcinogenic properties.

Non-Hazardous components are recorded at 3% or >; Acute hazards are recorded when present at 1% or >; Chronic hazards are recorded when present at 0.01% or >.

This is not intended to be a comprehensive compositional disclosure.

SECTION IV

EMERGENCY FIRST AID MEASURES:

In case of ingestion do not induce vomiting. Dilute by giving water or milk.
Seek medical attention.

In case of inhalation remove to fresh air. Administer first aid as appropriate.
Seek medical attention.

In case of skin contact, wash thoroughly with soap and water.
If irritation persists seek medical attention.

In case of eye contact flush with lukewarm water for at least 15 minutes. Lift upper and lower eye lids occasionally.
Seek medical attention.

OTHER:

The effects of chronic and sub-chronic exposure have not been determined. Safe handling on a long-term basis should emphasize protection against respective or long-term exposure to carbon dust inhalation and avoidance of contact to any liquids that may leach off the impregnated carbon.

Affected individuals with pre-existing conditions pertaining to digestive, respiratory, skin or eye problems can be more susceptible to potential effects of carbon dust.

HEALTH HAZARD DATA:

Route (s) of Entry:

Ingestion:	Carbon is non-toxic through ingestion. Dust may cause mild irritation to the digestive tract resulting in nausea or diarrhea.
Inhalation:	The physical nature of carbon may irritate the respiratory system. Dust may cause mild irritation to the upper respiratory tract
Skin:	Carbon <i>is</i> non-toxic through skin absorption. Dust may cause mild irritation probably reddening.
Eye Irritation:	The physical nature of carbon may cause eye irritation. Dust may cause mild irritation probably reddening.

SECTION V

FIRE & EXPLOSION DATA:

Flash Point:	N/A
Extinguishing media:	Alcohol foam, CO ₂ , dry chemical, water.
Special Firefighting procedures:	Exercise caution when responding to any chemical fire. Respiratory protection is essential.
Decomposition Products:	CO may be formed in fire.
Thermal Decomposition:	Sulfur Oxides (SO _x)

FIRE FIGHTING MEASURES:

Flashpoint: Not Applicable.
Non-flammable: 16CFR1500.44.
Not Self Heating: UN Manual of Tests and Criteria, Test N.3.
Flammability Limits in Air: LFL and UFL Not Applicable.

GENERAL HAZARD: Carbon Monoxide and Carbon Dioxide gas may be generated during combustion. Caution is advised.

Contact of activated carbon with strong oxidizers such as ozone or liquid oxygen may cause rapid combustion.

Fire is possible at elevated temperatures or by contact with an ignition with most types of organic solids. Activated carbon is difficult to ignite and when it does, it has a tendency to burn or smolder very slowly without any smoke or flame.

Toxic gases will form upon combustion.

FIRE FIGHTING INSTRUCTIONS: If possible to do safely, move smoldering activated carbon to a non-hazardous area, preferably out of doors. Extinguish fire using water fog, fine water spray, carbon dioxide or foam. Avoid stirring up dust clouds.

FIREFIGHTING EQUIPMENT: Firefighting personnel should wear full protective equipment, including self-contained breathing apparatus (SCBA) for all inside fires and large outdoor fires.

HAZARDOUS COMBUSTION PRODUCTS: Combustion products may include smoke and oxides of carbon (for example, carbon monoxide). Materials allowed to smolder or long periods in enclosed spaces, may produce amounts of carbon monoxide which reach the lower explosive limit (carbon monoxide LEL = 12.5% in air). Under certain conditions, any airborne dust may be an explosion hazard. Used activated carbon may produce additional combustion products.

SECTION VI

SPILL AND/OR ACCIDENTAL RELEASE HANDLING MEASURES:

Reportable Quantities: No EPA requirements.

Personal Precautions: Wear protective equipment, keep unnecessary personnel away, and ventilate area of spill.

Environmental Precautions: The carbon is not soluble in water; however, dust particles can cause a particulate emission if discharged to waterways.
Block all entrances to sewers and drains to avoid introducing the material into the waterways.

Steps To Be Taken For Containment & Clean-up: Block all entrances to sewers and drains.
Vacuum, shovel or sweep up spilled material, neutralize and place in closed container for disposal.

Do not release to sewer or waterway

Remove product to appropriate storage area until it can be properly disposed of in accordance with local, state and federal regulations.
Avoid formation of dust.

Waste Disposal Method: Unused product may have a lot pH.
Used product may contain hazardous chemicals or hazardous properties that may have to be examined to determine proper disposal method.
Dispose in accordance with local, state, and federal regulations.

Disposal Considerations: Activated carbon, in its original state, is not a hazardous material or hazardous waste.
Follow applicable governmental regulations for waste disposal.
Used activated carbon may become classified as a hazardous waste depending upon the application.
Follow applicable regulations for disposal.
Recycling (reactivation) may be a viable alternative to disposal.
Contact Carbon Activated Corp. for information.

SECTION VII

STORAGE AND HANDLING INFORMATION:

Storage Temperature: Ambient

Storage Pressure: Atmospheric

Handling: Follow good handling and housekeeping practices to minimize spills, generation of airborne dusts, and accumulation of dusts on exposed surfaces.
Use with adequate exhaust ventilation to draw dust away from workers' breathing zones.
Keep away from ignition sources.
Use in well ventilated areas.
Protect containers from physical damage.
Avoid prolonged contact with eyes and skin.
Prevent or minimize exposures to dusts by using appropriate personal protection equipment
Avoid Wash exposed skin areas thoroughly with soap and water after handling.

Storage: Dry airtight storage recommended.
Store in cool, dry, ventilated area and in closed containers.
Maintain good housekeeping.
Store away from strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc.
Keep away from heat or flames or ignition sources.

SECTION VIII

SPECIAL PROTECTION INFORMATION:

Respiratory Protection: Use NIOSH/MSHA approved respiratory protection equipment appropriate to the material and/or its concentration where airborne exposure is likely. If exposures cannot be kept to a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for a given application.
Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer.

Ventilation/Local Exhaust: Essential in confined areas

Eye Protection: Safety glasses or goggles with side shields are recommended for any type of handling.
Where eye contact or dusty conditions may be likely, dust tight goggles are recommended. Have eye flushing equipment available.

Skin Protection: Avoid contact with the skin. Wear appropriate dust resistant clothing. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling. Protective gloves are recommended.

Airborne Exposure Guidelines:	<u>Recommended Exposure Limits</u>	<u>Activated Carbon</u>
	8-hr TWA	
	Total Dust	10 mg/m ³ *
	Respirable Fraction	3 mg/m ³ *

EXPOSURE CONTROL:

<i>NOTE:</i>	<i>PEL, TLV and Toxicological data when available are provided for the pure component knowing that the carbon product contains a lesser percentage.</i>		
Component	OSHA PEL	ACGIH TLV	Other Limits
*Activated Carbon	Data not available	Data not available	
Exposure Guidelines	Wet activated carbon removes oxygen from air posing a hazard to workers in enclosed or confined space. Before entering such an area, sample the air within to assure sufficient oxygen supply. Use work procedures for low oxygen levels, observing all local, state and federal regulations. Comment: Remove from the area any worker who shows allergic reactions from exposure to sulfur.		
Engineering Controls	Exhaust ventilation should be designed to prevent accumulation and recirculation in the workplace and safely remove carbon black from the air. Note: Wet activated carbon removes oxygen from air causing a severe hazard to workers in enclosed or confined space. If risk of overexposure exists, wear an approved respirator. Provide adequate ventilation in warehouse or closed storage area.		
Personal Protective Equipment	Use of NIOSH approved particulate filter is recommended if dust is generated in handling. The usual precautionary measures for handling chemicals should be followed, i.e. gloves, safety glasses w/side shields or goggles, long sleeve shirt or lab coat, dust respirator if dusty and/or other protective clothing/equipment as determined appropriate.		
General Hygiene	The usual precautionary measures for handling chemicals should be followed: i.e. Keep away from food and beverage; remove contaminated clothing immediately; wash hands before breaks or eating; avoid contact with eyes and skin.		
*OSHA and ACGIH have not established specific exposure limits for this material. The recommended exposure limits for these activated carbon products are based on the Threshold Limit Values adopted by ACGIH for Particulates (insoluble) Not Otherwise Classified. The OSHA PEL for Nuisance Dust is 15 mg/m ³ (5 mg/m ³ respirable fraction).			

SECTION IX**PHYSICAL DATA:**

Appearance:	Granular, powder of extruded pellet
Odor:	None
Color:	Black
pH Value:	7-10
Specific Gravity, (H ₂ O = 1):	3.5
Solubility in water:	Insoluble
Vapor Pressure:	0
Vapor Density:	Solid
Relative Density:	0.4 – 0.7
Flammability:	> 220 ^o C
Auto Ignition Temperature:	> 220 ^o C
Melting Point:	N/A
Boiling Point:	N/A
Freezing Point:	N/A
Flash Point:	N/A
Evaporation:	N/A
Molecular Weight:	N/A

SECTION X

STABILITY & REACTIVITY DATA:

Chemical Stability :	Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/>
Conditions to Avoid :	None
Possibility of Hazardous Reaction :	Will Not Occur <input checked="" type="checkbox"/> May Occur <input type="checkbox"/>
Conditions to Avoid :	None
Incompatibility / Materials to Avoid :	Strong oxidizers such as oxygen, ozone, chlorine, permanganates, etc...alkali metals, liquid acids.
Hazardous Decomposition Products :	Carbon monoxide and carbon dioxide gas can be generated if combustion of this material takes place. Sulfur oxides emission is possible during combustion.
Caution:	High concentrations of organics in air will cause temperature rise due to heat of adsorption. At very high concentration levels this may result in a thermal excursion, referred to as a bed fire. High concentrations of Ketones and Aldehydes may cause a rise in bed temperature due to adsorption and oxidation.

SECTION XI

TOXICOLOGICAL INFORMATION:

NOTE: Toxicological data is provided for the pure component knowledge that the carbon product contains a lesser %

ACUTE EFFECTS

Toxicity Studies	Oral LD50	Not determined on the finished product.
	Dermal LD50	Not determined on the finished product.
Inhalation	See section IV	-
Ingestion	See section IV	-
Eye Irritation	See section IV	-
Skin Irritation	See section IV	-
Target Organs or Systems		Eyes, skin, and upper respiratory system
Signs and Symptoms of Exposure	See section III & IV	Irritation and redness of eyes, irritation of skin and respiratory system may result from exposure to carbon dust

CHRONIC EFFECTS

Carcinogenicity	Not determined on the finished product
Mutagenicity	Not determined on the finished product
Reproductive Effects	Not determined on the finished product
Developmental Factors	Not determined on the finished product

SECTION XII

ECOLOGICAL INFORMATION:

NOTE: Ecological data is provided for the pure component knowledge that the carbon product contains a lesser %.

Ecotoxicity	Not determined on the finished product.
Mobility in Environmental Media	Not determined on the finished product.
Bioaccumulation/Accumulation	Not determined on the finished product.
Persistence/Degradability	Not determined on the finished product.
Any Other Adverse Effects	Not determined on the finished product.

SECTION XIII

DISPOSAL CRITERIA:

See Section VI.

Storage and disposal should be in accordance with applicable local, state and federal laws and regulations.

Activated Carbon is an adsorbent media; hazard classification is generally determined by the adsorbate that the carbon has picked up.

Consult with the US EPA Guidelines as per 40 CFR Part 261.3 for the classifications of hazardous waste before disposal.

SECTION XIV

TRANSPORTATION INFORMATION:

USDOT (United States Department of Transportation) Regulations

Proper Shipping Name:	Steam Activated Carbon, Non-Regulated OR Carbon, Activated, Non-Regulated
Shipping Class:	Class 70
Hazard Class:	Not Applicable See *Note Below
UN/NA Number:	Not Applicable
Packing Group:	Not Applicable
Freight Classification:	STCC Code - #2899643 / NMFC #40560
DOT Marking:	Not Applicable
DOT Placard:	Not Applicable
Precautions To Be Taken In	No specific precautions
Transportation:	See Section

EMERGENCY ACCIDENT PRECAUTIONS AND PROCEDURES:

Contact: Carbon Activated Corporation
Phone: 310 885 4555

Land	Global Transport Regulations	Proper Shipping Description:	Steam Activated Carbon, Non-Regulated OR Carbon, Activated, Non-Regulated
		Hazard Class:	Not Applicable See *Note Below
		UN/NA Number:	Not Applicable
		Packing Group:	Not Applicable
		Marine Pollutant:	Not Applicable

Water	IMO / IMDG	Proper Shipping Description:	Steam Activated Carbon, Non-Regulated OR Carbon, Activated, Non-Regulated
		Hazard Class:	Not Applicable See *Note Below
		UN/NA Number:	Not Applicable
		Packing Group:	Not Applicable
		Marine Pollutant:	Not Applicable

Air	ICAO / IATA	Proper Shipping Description:	Steam Activated Carbon, Non-Regulated OR Carbon, Activated, Non-Regulated
		Hazard Class:	Not Applicable See *Note Below
		UN/NA Number:	Not Applicable
		Packing Group:	Not Applicable
		Marine Pollutant:	Not Applicable
		+ Information reported for product/size: 0.5 Kg	

***Note:** Under the UN classification for activated carbon, all activated carbons have been identified as a class 4.2 product. However, This product has been tested according to the United Nations Transport of Dangerous Goods test protocol for a “self-heating substance” (United Nations Transportation of Dangerous Goods, Manual of Tests and Criteria, Part III, Section 33.3.1.6 - Test N.4 - Test Method for Self Heating Substances) and it has been specifically determined that this product does not meet the definition of a self-heating substance (class 4.2) or any other hazard class, and therefore should not be listed as a hazardous material. This information is applicable only for the Activated Carbon Product identified in this document.

SECTION XV

FEDERAL REGULATIONS:

US FEDERAL REGULATIONS

- | | |
|---|--|
| OSHA (29 CFR1910:1200): | Not Regulated
See Table Z-1 of 29CFR1910.1000,
Limits For Air Contaminates. |
| CERCLA/SUPERFUND (40CFR117, 302): | Contains no CERCLA hazardous substances.
Notification of spills of this material is not required
Specific reporting requirements at the local, regional, or state level pertaining to releases of this material may exist. |
| RCRA (40CFR261.33, 261.20-24): | This product, in its original state, does not meet the criteria of hazardous waste. |
| Toxic Substances Control Act (40CFR710): | Activated carbon does not contain any relevant components. |
| Clean Water Act
(40CFR122.21 and 40CFR122.42): | Activated carbon does not contain any substances regulated as pollutants. |
| Clean Air Act
(CAA, Section112, 40CFR82): | Activated carbon does not contain any components listed as Hazardous Air Pollutants, Flammable Substances, Toxic Substances, or Class 1 or 2 Ozone Depletors. |
| California Prop. 65 | Product and impregnate component are not listed. |
| Section 302 - Extremely Hazardous Substances
(40CFR355): | This product is not listed as an extremely hazardous substance. |
| SECTION 313-
List of Toxic Chemicals: | This product is not listed. |

SARA 311/312 Hazard Categories

Acute Health Hazard	NO
Chronic Health Hazard	NO
Fire hazard	NO
Sudden release of pressure hazard	NO
Reactive Hazard	NO

Activated carbon, (CAS: 7440-44-0) is found on the following regulatory lists:

US EPA High Production Volume Program Chemical List
US FDA CFSAN Color Additive Status List 4
US FDA CFSAN Color Additive Status List 6
US DOE Temporary Emergency Exposure Limits (TEELs)
US - Hawaii Air Contaminant Limits
US - Idaho - Toxic and Hazardous Substances - Mineral Dust
US - Minnesota Hazardous Substance List
US - Minnesota Permissible Exposure Limits (PELs)
US - Rhode Island Hazardous Substance List
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants
US - Washington Permissible exposure limits of air contaminants
Canada - British Columbia Occupational Exposure Limits
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances
Canada Domestic Substances List (DSL)
International Air Transport Association (IATA) Dangerous Goods Regulations
OECD Representative List of High Production Volume (HPV) Chemicals

CANADIAN CLASSIFICATION

WHMIS (CPR, SOR/88-66):

Product and impregnate component are listed

DSL #.

Product and impregnate component are listed

EEC Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations

Risk and Safety Phrases

R36: Irritating to the eyes
R37: Irritating to the respiratory system
R38: Irritating to the skin

SECTION XVI

OTHER INFORMATION:

The information contained herein is based on data considered to be accurate and applies to this specific material as supplied.

This SDS will not be valid for this material if it is used in combination with any other material/s.

It is the user's responsibility to determine the suitability and completeness of this information for their particular use and to ensure that its activities comply with federal, state, provincial and local laws.