



Material Safety Data Sheet

U.S. Department of Labor
 Occupational Safety and Health Administration
 This form is consistent with ANSI standard for preparation of MSDS's in accordance with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

Product Type: ST-I-X	
Product Code 7854	Profile No: 42
Effective: March 31, 2008	Supersedes:

SECTION I - PRODUCT AND COMPANY INFORMATION

Company Identification (USA)	Calgon Carbon Corporation P.O. Box 717 Pittsburgh, PA 15230-0717	
Telephone Number(s)	Information	412-787-6700
	Emergency	412-787-6700
Company Identification (Europe)	Chemviron Carbon Zoning Industriel de Feluy B-7181 Feluy, Belgium	
Telephone Number(s)	Information	32 64 51 18 11
	Emergency	32 64 51 18 11
Date Prepared:	Signature of Preparer: (optional)	
November 3, 2008		

SECTION II – COMPOSITION /INFORMATION ON INGREDIENTS

Nonhazardous components are listed at 3% or greater; acute hazards are listed when present at 1% or greater and chronic hazards are listed when present at 0.01% or greater. This is not intended to be a complete compositional disclosure.

Ingredient / Component	CAS No	% by Wt
Activated Carbon	7440-44-0	≥90
Potassium Hydroxide (KOH)	1310-58-3	≤ 10

Active ingredient for impregnation is aqueous potassium hydroxide. Upon drying the form of the remnant impregnant is as salts of potassium.

SECTION III – HAZARD(S) IDENTIFICATION

Emergency Overview: Black particulate solid, pellet or powder. Contact may cause eye irritation. Dust may be slightly irritating to eyes and respiratory tract. Avoid generation of dust and fines during handling.

The impregnant is corrosive. May cause irritation and burns to area of contact. Harmful if swallowed or inhaled.

CAUTION: Wet activated carbon removes oxygen from air causing a severe hazard to workers in enclosed or confined spaces. Before entering such an area, sampling and work procedures for low oxygen levels should be taken to ensure ample oxygen availability, observing all local, state and federal regulations

NOTE: Health effects comments refer to the pure component knowing that the concentration on the carbon is significantly less than 100%.

OSHA Regulatory Status:		Some of the ingredients of this product are classified as Hazardous by OSHA	
HMIS Ratings: (NFPA)	Health	3	4 = Extreme/Severe 3 = High/Serious 2 = Moderate 1 = Slight 0 = Minimum W = Water Reactive OX = Oxidizer
	Flammability	1	
	Reactivity	2	
	Special		
Protective Equipment :		Safety glasses with side shields or goggles, gloves, long sleeve shirt or lab coat, long pants recommended. . Material may be corrosive	
Health Effects:		See Section IV	
Environmental Effects:		See Section XII	

SECTION IV – FIRST-AID MEASURES

Route of exposure	
Eyes	Dust may cause mild irritation, possibly reddening. Corrosive, causes irritation, prolonged exposure could cause burns and vision impairment or blindness.
Skin	Dust may cause mild irritation, possibly reddening. Corrosive, skin contact can results in burns
Inhalation	Dust may cause mild irritation to the upper respiratory tract; may result in chemical burns to nose and throat.
Ingestion	Dust may cause mild irritation to digestive track resulting in nausea or diarrhea. Corrosive, swallowing could cause burns of the mouth, throat and stomach.
Signs/Symptoms of Exposure	Dust may cause Irritation and redness of eyes, irritation of skin and respiratory system. The effects of long-term, low-level exposures to this product have not been determined.
Emergency and First Aid Procedures	For eye contact, immediately flush with copious amounts of water for at least 15 minutes, lifting both the upper and lower lids occasionally; seek medical attention. For skin contact, wash with soap and water; seek medical attention. For inhalation, remove to fresh air and rest as needed; seek medical attention for any breathing difficulty. For ingestion, drink plenty of water; seek medical attention.
Medical Conditions Generally Aggravated by Exposure	People with pre-existing skin conditions or eye problems or impaired respiratory function may be more susceptible to the effects of the impregnant.

SECTION V – FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Use an extinguishing media suitable for the surrounding fire.
Unsuitable Extinguishing Media	None known
Specific Hazards	As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. Activated carbon is difficult to ignite and tends to burn slowly (smolder) without producing smoke or flame. Carbon monoxide and carbon dioxide gas may be generated during combustion of this material. Thermal oxidation can produce toxic fumes of potassium oxide Contact with strong oxidizers such as ozone or liquid oxygen may cause rapid combustion.
Protective Equipment and Procedures	Wear NIOSH approved self-contained breathing apparatus suitable for the surrounding fire.
Unusual Fire and Explosion Hazard	The product when in large vessels) under static conditions is susceptible to exothermic reaction on contact with oxidizable material. Flooding the vessel with water will extinguish any hot zones. Steam could be generated in the process of extinguishing the hot zones.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear protective equipment, keep unnecessary personnel away, and ventilate area of spill.
Environmental Precautions	Impregnant components are water soluble. The carbon portion is not; however, the dust and fine material can cause a particulate emission if discharged to waterways; therefore, dike all entrances to sewers and drains to avoid introducing the material into the waterways.
Containment & Clean-up	Dike all entrances to sewers and drains. Vacuum or shovel spilled material and place in closed container for disposal. Remove product to appropriate storage area until it can be properly disposed of in accordance with local, state and federal regulations. Avoid dust formation. See section XIII
Other information	NA

SECTION VII – HANDLING AND STORAGE

Handling	Avoid prolonged contact with eyes and skin. Keep away from ignition sources. Use in well ventilated areas. Protect containers from physical damage. Wash hands after handling
Storage	Store in cool, dry, ventilated area and in closed containers. Keep away from oxidizers, heat or flames. Store away from ignition sources.

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

NOTE: PEL, TLV and Toxicological data where available are provided for the pure component knowing that the carbon product contains a lesser percentage

Component	OSHA PEL	ACGIH TLV	Other limits
Activated Carbon	5 mg/M ³ (Resp)	5 mg/M ³ (Resp)	
Alkaline Potassium Salts	2mg/M ³ (Ceiling)	2mg/M ³ (Ceiling)	
Exposure Guidelines	Wet activated carbon removes oxygen from air posing a hazard to workers in enclosed or confined spaces. Before entering such an area, sample the air to assure sufficient oxygen supply. Use work procedures for low oxygen levels, observing all local, state and federal regulations.		
Engineering Controls	No special ventilation requirements. Good general ventilation should be adequate for open areas. Mechanical ventilation is recommended for enclosed or confined spaces.		
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, Other protective clothing/equipment as 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.		

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	NA	Melting Point	NA
Vapor Pressure (mm Hg.)	0	Evaporation Rate	NA
Vapor Density (AIR = 1)	solid	Flash Point	NA
Specific Gravity	0.4 to 0.7	UEL	NA
		LEL	NA
Flammability Limits	Ignition Temperature > 140° C		
Odor	None		
Solubility in Water	Impregnant components are soluble.		
Appearance	Black granular, pellet or powder material		

SECTION X – STABILITY AND REACTIVITY

STABILITY	UNSTABLE		CONDITIONS TO AVOID: None
	STABLE	XX	
HAZARDOUS REACTION	MAY OCCUR		CONDITIONS TO AVOID: None
	WILL NOT OCCUR	XX	
Caution: High concentrations of organics in air will cause temperature rise due to heat of absorption. 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 bed temperature rise due to adsorption and oxidation.			
Incompatible Materials	Alkali Metals and Strong Oxidizers such as ozone, oxygen, permanganate, chlorine		
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide gas may be generated during combustion of this material. Thermal oxidation can produce toxic fumes of potassium oxide		

SECTION XI – TOXICOLOGICAL INFORMATION

NOTE: Toxicological data is provided for the pure component knowing that the carbon product contains a lesser percentage.

Acute Effects		
Toxicity Studies	Oral LD ₅₀	Not determined on the finished product.
	Dermal LD ₅₀	Not determined on the finished product.
Inhalation:	See section IV	
Ingestion:	See section IV	
Eye Irritation:	See section IV	
Skin Irritation:	See section IV	
Sensitization:	Not determined on the finished product.	
Target Organ (s) or System		Eyes, Skin, Upper Respiratory System
Signs and symptoms of Exposure		Irritation of eyes and respiratory system may result from exposure to carbon dust. See Sections III and IV
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 knowing that the carbon product contains a lesser percentage.

Ecotoxicity:	Not determined on the finished product. Potassium Hydroxide: TL _m 24 H Fresh water mosquito is 80 PPM
Persistence/degradability:	Not determined on the finished product.
Bioaccumulation/Accumulation:	Not determined on the finished product.
Mobility in Environmental Media:	Not determined on the finished product.
Other Adverse Effects:	Impregnant is water soluble, if wetted potassium hydroxide could leach to contact surface

SECTION XIII – DISPOSAL CONSIDERATIONS

Vacuum or shovel material into a closed container. Storage and disposal should be in accordance with applicable local, state and federal laws and regulations. Local regulations may be more stringent than state or federal requirements. Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal

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SECTION XIV – TRANSPORT INFORMATION

This information as presented below only applies to the material as shipped. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.			
Land	DOT Regulations	Proper Shipping Description:	ST-I-X (Steam Activated Carbon)
	Canadian WHMIS	Hazard Class:	4.2
		UN/NA:	UN 1362
Water	IMO / IMDG	Proper Shipping Description:	ST-I-X (Steam Activated Carbon)
		Hazard Class:	4.2
		UN/NA:	UN 1362
Air	IACO / IATA	Proper Shipping Description:	ST-I-X (Steam Activated Carbon)
		Hazard Class:	4.2
		UN/NA:	UN 1362
		Information reported for product/size: 0.5 Kg	
This product has been tested according to the <u>United Nations Transport of Dangerous Goods</u> test protocol for a “self-heating substance”. It has been specifically determined that this product does not meet the definition of a self heating substance or any other hazard class, and therefore is not a hazardous material. Please note that this information is applicable only for the Activated Carbon Product identified in this document.			

SECTION XV – REGULATORY INFORMATION

SARA Title III 302 :	Potassium Hydroxide is not subject to SARA Title III Section 302 regulation.		
SARA Title III 313 :	Potassium Hydroxide is subject to SARA Title III Section 313 regulation.		
TSCA	Components are listed		
California Proposition 65	Components are not listed		
Canadian classification	WHMIS	Components are listed	
	DSL #	Components are listed	
EEC Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations.			
Risk and Safety Phrases	R22 Harmful if swallowed, R36: Irritating to the eyes, R37: Irritating to the respiratory system, R38: Irritating to the skin,		

SECTION XVI – OTHER INFORMATION

Intended Use:	The material is generally used for treatment of gases and liquids
The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to determine the suitability and completeness of this information for their particular use.	
While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Calgon Carbon Corporation makes no warranty with respect to same and disclaims all liability for reliance there on.	

References:

NA not applicable

Legend:

ACGIH	- American Conference of Governmental Industrial Hygienists
ANSI	- American National Standards Institute
C	- Ceiling (limit value)
CAS #	- Chemical Abstracts Service Registry Number
CERCLA	- Comprehensive Environmental Response, Compensation, and Liability Act
CEPA	- Canadian Environmental Protection Act
CFR	- Code of Federal Regulations
DOT	- Department of Transportation
DSL	- Domestic Substances List
EINECS	- European Inventory of Existing Commercial Chemical Substances
ERAP	- Emergency Response Assistance Plan
IATA	- International Air Transportation Association
IARC	- International Agency for Research on Cancer
ICAO	- International Civil Aviation Organization
IDLH	- Immediately Dangerous to Life and Health
IMO	- International Maritime Organization
IMDG	- International Maritime Dangerous Goods
LC ₅₀	- The concentration of material in air expected to kill 50% of a group of test animals
LD ₅₀	- Lethal Dose expected to kill 50% of a group of test animals
NFPA	- National Fire Protection Association
NIOSH	- National Institute for Occupational Safety and Health
NTP	- National Toxicology Program
OSHA	- Occupational Safety and Health Association
PEL	- Permissible Exposure Limit
RCRA	- Resource conservation and Recovery Act
RQ	- Reportable Quantity
SARA	- Superfund Amendments and Reauthorization Act
STEL	- Short Term Exposure Limit
TDG	- Transportation of Dangerous Goods Act/Regulation
TLV	- Threshold Limit Value
TSCA	- Toxic Substances Control Act
TWA	- Time Weighted Average
WHMIS	- Workplace Hazardous Material Information System

* * * END OF MATERIAL SAFETY DATA SHEET * * *