

MATERIAL SAFETY DATA SHEET

CHARCOAL

PRODUCT CODE NUMBER(S): 2930-1, 2931-1

PRODUCT IDENTIFICATION

Chemical Name and Synonyms: Charcoal, granular, or powder activated for gas absorption

Chemical Family: Activated carbon

Chemical Formula: C

Product Use: Laboratory chemical, adsorbant

Manufacturer's Name and Address:

Caledon Laboratories Ltd.
40 Armstrong Avenue
Georgetown, Ontario L7G 4R9

Telephone No: (905) 877-0101

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Reactivity: Normally stable; finely divided material can cause dust explosion. Avoid ignition sources, incompatible materials, moisture, generation of dust.

Hazardous Decomposition Products: CO, CO₂

FIRE AND EXPLOSION DATA

Flammability: May be combustible if strongly heated or in contact with an ignition source; combustible in contact with strong oxidizers. Difficult to ignite and tends to smolder without producing smoke or flame. In confined areas smoldering charcoal can deplete oxygen and may produce carbon monoxide in amounts that reach explosive limits. Burns rapidly in contact with strong oxidizers. When wet, freshly calcined, or tightly packed, can ignite spontaneously and burn. As with most organic compounds, fine dust dispersed in air in the presence of an ignition source is a potential dust explosion hazard.

Extinguishing Media: Water spray, carbon dioxide, dry chemical, "alcohol" foam. Use water spray or fog to disperse vapours, and cool fire-exposed containers. Fight fire from upwind, from a safe distance. Firefighters must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes.

Flash Point (Method Used): 452°C

Autoignition Temperature: Not available

Upper Flammable Limit (% by volume): Not available

Lower Flammable Limit (% by volume): Not available

Hazardous Combustion Products: CO, CO₂

Sensitivity to Impact: None

Sensitivity to Static discharge: Fine dust dispersed in air in sufficient concentrations and, in the presence of an ignition source is a potential dust explosion hazard.

HAZARDOUS INGREDIENTS OF MATERIALS

Ingredients	%	TLV Units	CAS No.
Charcoal	>95	Not established	7440-44-0

PHYSICAL DATA

Physical State: Solid

Odour and Appearance: Black granules or powder, odourless

Odour Threshold (ppm): Not applicable

Vapour Pressure (mm Hg): 1 mm Hg @ 3586°C

Vapour Density (Air = 1): 0.4

Evaporation Rate: Not applicable

Boiling Point (degrees C): Sublimes

Melting Point (degrees C): 3550°C

pH: Not available

Specific Gravity: 1.5 to 1.8

Coefficient of Water/Oil distribution: Not available

SHIPPING DESCRIPTION

UN: Not regulated

T.D.G. Class: Not regulated

Pkg. Group: Not regulated

REACTIVITY DATA

Chemical Stability: Stable under normal conditions of use and storage.

Incompatibility with other substances: Burns rapidly in contact with strong oxidizers, such as liquid oxygen, ozone, chlorine, permanganates. Avoid contact with strong acids. Incompatible with alkali metals, iron oxide, lead oxide, liquid oxygen, manganese oxide, metallic salts, chlorinated paraffins, dibenzoyl peroxide, 1,4-diazabicyclo{2.2.2}octane, molybdenum(IV) oxide, nitrobenzaldehyde, potassium hydroxide, sodium hydrogen carbonate.

TOXICOLOGICAL PROPERTIES AND HEALTH DATA

Toxicological Data:

LD₅₀: (oral, rat) 6450 mg/kg

LC₅₀: Not available

Effects of Acute Exposure to Product:

Inhaled: May cause mild irritation, with coughing, sneezing, drying of mucous membranes. Severe overexposure can cause pulmonary edema with tightness in the chest, dyspnea, frothy sputum, cyanosis, weak, rapid pulse, hypotension, moist rales, even death. Symptoms may be delayed for as long as 72 hours.

In contact with skin: No irritation is likely after brief contact but may be irritating after prolonged contact, causing redness, itching, drying of skin.

In contact with eyes: May cause mild mechanical irritation, with tearing, redness.

Ingested: Non-toxic. Used as an adsorbant in ingestion of poisonous substances. Ingestion of large amounts can cause irritation, nausea, vomiting and laxative effect.

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Effects of Chronic Exposure to Product:

Prolonged or repeated inhalation may cause decreased pulmonary function, gastrointestinal disturbances, albuminuria, gradual loss of weight, increasing weakness.

Carcinogenicity: No information available.

Teratogenicity: No information available

Reproductive Effects: No information available

Mutagenicity: No information available

Synergistic Products: None known

PREVENTIVE MEASURES

Engineering Controls: Local exhaust recommended

Respiratory Protection: Dust mask. In dusty conditions, half-face dust/mist respirator. For high or unknown concentrations or fire or spill conditions - positive pressure full face-piece supplied-air respirator. or positive pressure full face-piece self-contained breathing apparatus.

Eye Protection: Chemical safety goggles

Skin Protection: Plastic apron, rubber gloves, sleeves and boots as required to limit contact.

Other Personal Protective Equipment: Safety shower and eye-wash fountain in work area.

Leak and Spill Procedure: Ventilate area. Eliminate all sources of ignition. Clean up personnel should be thoroughly trained in the handling of hazardous materials, and should wear protective equipment and clothing sufficient to prevent inhalation and contact with skin, eyes and clothing. Collect, using non-sparking tools. Wet if necessary to prevent dust formation. Collect for recovery or disposal. Material may absorb hazardous chemicals, and take on hazardous properties. Treat with caution. Flush area of spill thoroughly with running water.

Waste Disposal: Follow all federal, provincial and local regulations for disposal.

Handling Procedures and Equipment: COMBUSTIBLE DUST. Personnel working with this product should be trained in its hazards and its safe use, and should wear appropriate protective equipment and clothing. Avoid generating dust. If there is dust, keep away from heat, sparks, and all sources of ignition; avoid the accumulation of static charge, post "No Smoking" signs, use anti-sparking tools and ground and bond equipment and containers. Use the smallest amount possible for the purpose, in a designated area with adequate ventilation. Use good housekeeping to prevent accumulations of dust. Avoid contact with skin and eyes. Avoid inhalation. Wash thoroughly after handling.

Storage Requirements: Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight and away from all sources of ignition and incompatible materials. Keep tightly closed when not in use. Protect from damage. Inspect regularly for signs of leaking or damage. Keep storage area clear of combustible materials. Ground and bond equipment and containers to prevent a static charge buildup. Storage area should be made of non-combustible materials. Empty containers may contain hazardous residues (dust).

FIRST AID MEASURES**Specific Measures:**

Eyes: Immediately flush eyes with gently running water, holding eyelids open while flushing, for five to ten (5-10)

minutes, or until no trace of chemical remains. If irritation persists, get medical attention.

Skin: Remove contaminated clothing. Wash affected areas with large amounts of running water, for five to ten (5-10) minutes, or until no trace of chemical remains. If irritation persists, get medical attention.

Inhalation: Remove to fresh air. Give oxygen and get medical attention for any breathing difficulty.

Ingestion: If victim is alert and not convulsing, rinse mouth thoroughly with water and give 2 to 4 glasses of water to drink to dilute. If large amounts were ingested, or if the victim feels unwell, get medical attention.

REFERENCES USED

CCINFO disc

Sax: Dangerous Properties of Industrial Materials, 5th ed., 1979

Suppliers' Material Safety Data Sheets

ADDITIONAL INFORMATION

Date Issued: May 16, 1991

Revision: March 2011

MSDS: 2930-1, 2931-1

Proposed WHMIS Designation: B6; D2B

Prepared by: Caledon Laboratories Ltd. (905) 877-0101
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