

ZMM® Canada Minerals Corp. Safety Data Sheet	Doc No:	T-Carbon
	Doc Type:	SDS
ZMM® T-Carbon	Revision Date:	March 4, 2019
	Revision No.	V1.3
	Issue Date:	March 4, 2019
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ZMM® T-Carbon

As you are reading through this document you will notice 16 sections shaded in blue. These represent the new international Global Harmonization System. Any section shaded in yellow is additional information that was included above and beyond the requirement for a normal SDS to clarify each section further. If there is no yellow area included under a section, it is because we feel that area is self-explanatory.

Identification

In this section you will find the product name which will be listed on the label as well as any contact information on the manufacturer.

PRODUCT NAME: ZMM® T-Carbon
CLASS: Industrial grade
SYNONYMS: Pyrolysis of Wood Chips
SDS NUMBER: N/A Version: 1.3
PRODUCT USE DESCRIPTION: Filtration/Soil Amendment
COMPANY: ZMM® Canada Minerals Corp.
MAIN TELEPHONE: 250 767-6788

COMPANY ADDRESS: 6459 Mack Road
Peachland, BC V0H 1X8

ZMM® EMERGENCY CONTACT: LuVerne E.W. Hogg – 250 767-6788
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Hazard(s) Identification

This section identifies the hazards of the chemical presented on the SDS and the appropriate warning information associated with those hazards. When looking at the different classifications of hazards this chemical meets you will see category numbers to tell you how severe the hazard is. These numbers **ARE NOT** the same as the old NFPA/HMIS system. The numbering starts at 1 (most hazardous) and ends at 5 (Least hazardous). The lower the number or letter, the more severe the hazard.

The hazard classification of the chemical (e.g., flammable liquid, category).

CLASSIFICATIONS:

- Flammable Wood – Category 5
- Aspiration Hazard – Category 4
- Carcinogenicity – Category 5
- Specific Target Organ Toxicity (Repeated Exposure) – Category 5
- Specific Target Organ Toxicity (Single Exposure) – Category 5
- Skin Irritation – Category 5
- Eye Irritation – Category 5
- Chronic Aquatic Toxicity – Category 5

PICTOGRAMS:



Composition/Information on Ingredients

This section identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed. The required information consists of:

MAIN INGREDIENT: Pyrolysis of Pine/Spruce Wood Chips

INGREDIENT	PERCENT (% Wt)	ACGIH <u>TLV-TWA</u>	ACGIH <u>STEL</u>	OSHA <u>PEL</u>
Wood Chip Based ZMM T-Carbon	>94%	10 mg/m ³	15 mg/m ³	5 mg/m ³
Water	<6%	not listed		

First-Aid Measures

This section describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical.

EFFECTS OF OVEREXPOSURE:

Exposure to T-Carbon should not present a health hazard. Excessive carbon dust from handling T-Carbon may produce allergenic responses in a few sensitive individuals. Overexposure of T-Carbon dust may cause skin/eye and upper respiratory tract irritation along with allergenic responses and asthma.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE:

If an allergy, such as dermatitis, asthma, or bronchitis develops, it may be necessary to remove a sensitive worker from further exposure to T-Carbon dust.

EMERGENCY AND FIRST AID PROCEDURES:

- **INHALATION:** Remove to fresh air. If persistent irritation, severe coughing/breathing difficulties, or rash occur, get medical advice before returning to work with T-Carbon.
- **EYE CONTACT:** Flush with water to remove dust particles from the eye. If irritation persists, get medical attention.
- **SKIN CONTACT:** If a rash, or persistent irritation or dermatitis occur, get medical advice before returning to work where T-Carbon is present.

Use of appropriate PPE can limit contact as needed – long pants, sleeves, gloves, eye shields, p100 respirator.

Fire-Fighting Measures

This section provides recommendations for fighting a fire caused by the chemical.

FLAMMABILITY CLASSIFICATION: N/A - Autoignition Temperature >400 degrees C

EXTINGUISHING MEDIA: Water Spray

UNUSUAL FIRE AND EXPLOSION HAZARDS: Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a potential dust explosion hazard. The minimum explosible concentration is 0.140 g/l.

FIRE FIGHTING EQUIPMENT: Full protective equipment and self-contained breathing apparatus (SCBA) with a full-face mask operated in positive pressure mode.

Accidental Release Measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Sweep up or vacuum up spills for recovery or disposal. A dust respirator may be required during clean up.

WASTE DISPOSAL:

Dispose in accordance with federal, state and/or local regulations.

Handling and Storage

This section provides guidance on the safe handling practices and conditions for safe storage of chemicals.

THE REQUIRED INFORMATION CONSISTS OF:

- Precautions for safe handling, including recommendations for handling incompatible chemicals, minimizing the release of the chemical into the environment, and providing advice on general hygiene practices (e.g. eating, drinking, and smoking in work areas is prohibited).
- Recommendations on the conditions for safe storage, including any incompatibilities. Provide advice on specific storage requirements (e.g., ventilation requirements).

Exposure Controls/Personal Protection

This section indicates the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure.

RESPIRATORY PROTECTION:

No protection required handling ZMM® T-Carbon unless there is excessive dust associated. Use approved dust respirator - P100 type ¼ face

EYE SHIELDS:

Eye shields

PROTECTIVE GLOVES:

Recommended to reduce skin contact

OTHER PROTECTIVE EQUIPMENT:

No special clothing required unless excessive dust is associated with handling. Use clean body-covering work clothing

VENTILATION:

Whenever possible local exhaust ventilation should be used to meet TLV requirements

HYGIENIC PRACTICES:

Follow good hygienic practices

Physical and Chemical Properties

This section identifies physical and chemical properties associated with the substance or mixture.

APPEARANCE AND ODOR:	Black particles of varying size, 0-3 mm, minimal odor
BULK DENSITY:	10-16 lb. per cubic foot
BOILING POINT (DEGREES FAHRENHEIT):	N/A
MELTING POINT (DEGREES FAHRENHEIT):	N/A
VAPOR PRESSURE (mm of MERCURY):	N/A
SPECIFIC GRAVITY (water=1):	<1
PERCENT VOLATILE (by weight):	N/A
pH:	9 - 12
SOLUBILITY IN WATER:	Insoluble

Stability and Reactivity

This section describes the reactivity hazards of the chemical and the chemical stability information.

This section is broken into three parts: reactivity, chemical stability, and other. The required information consists of:

REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur

CHEMICAL STABILITY

STABILITY: () Unstable (*) Stable

OTHER

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal-oxidative degradation of carbon produces irritating and toxic fumes and gases, including CO, aldehydes and organic acids.

CONDITIONS TO AVOID:

Provide ventilation sufficient to prevent exceeding recommended exposure limits. Keep containers closed and in a cool, well-ventilated area.

Toxicological Information

This section identifies toxicological and health effects information or indicates that such data are not available.

DATA NOT AVAILABLE

Ecological Information (non-mandatory)

This section provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment.

DATA NOT AVAILABLE

Disposal Considerations (non-mandatory)

This section provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices.

DATA NOT AVAILABLE

Transport Information (non-mandatory)

This section provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea.

DATA NOT AVAILABLE

Regulatory Information (non-mandatory)

This section identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS.

NONE

Section 16: Other Information

This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version.

SEE DOCUMENT HEADER FOR ALL REVISION HISTORY AND PERTINENT DOCUMENT INFORMATION.