

MATERIAL SAFETY DATA SHEET

MSDS NO. 0505 B

CHEMTREC EMERGENCY TELEPHONE NO. (800) 424-9300

EFFECTIVE DATE: 03/18/08

TOHO TENAX AMERICA, INC.

121 Cardiff Valley Road, Rockwood, TN 37854 USA

NICKEL COATED, CONTINUOUS AND CHOPPED CARBON FIBER

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Synonyms: Nickel-coated carbon fiber

Chemical Family: Carbon; metallic Nickel

Molecular Formula/Molecular Weight: Mixture

Distributor: Toho Tenax America, Inc.
121 Cardiff Valley Road
Rockwood, TN 37854 USA
Phone: (865) 354-4120

**FOR EMERGENCY INVOLVING SPILL, OVEREXPOSURE, FIRE OR ACCIDENT
CALL CHEMTREC: 1-800-424-9300.**

2. COMPOSITION & INFORMATION ON INGREDIENTS

OSHA - REGULATED COMPONENTS

<u>COMPONENT</u>	<u>CAS NUMBER</u>	<u>%</u>	<u>TWA/PEL</u>	<u>REFERENCES</u>
Carbon	7440-44-0	30-70	10 mg/M ³ total 5 mg/M ³ respir.	OSHA & ACGIH
Nickel	7440-02-0	20-60	1 mg/M ³	OSHA & ACGIH

3. **HAZARD IDENTIFICATION**

HAZARD STATEMENTS

WARNING! Airborne fibers can short circuit electrical equipment. Nickel metal is a skin and respiratory sensitizer and irritant.

POTENTIAL HEALTH EFFECTS - OVEREXPOSURE

Prolonged or repeated contact with fibers or dust may cause skin or eye irritation due to a) mechanical abrasion of small fibers, b) skin sensitization or dermatitis. Inhalation of dust may cause irritation of respiratory passages and/or ulceration of the nasal mucosa; nickel dust is a suspect carcinogen.

Conditions aggravated by exposure: Exposure to nickel dust may aggravate individuals sensitive to dermatitis or asthma.

4. **FIRST AID MEASURES**

- EYE CONTACT:** Immediately irrigate eyes with plenty of water for 15 minutes. If irritation persists, get medical attention promptly.
- SKIN CONTACT:** Remove contaminated clothing. Wash affected areas with soap and water. If irritation persists, get medical attention.
- INHALATION:** If irritation of nasal or respiratory passage occurs, remove patient to fresh air and get medical attention promptly.

5. **FIRE FIGHTING MEASURES**

Nickel-coated carbon Fiber is non-flammable but may generate toxic fumes at fire temperatures. (See Section 10)

FIRE FIGHTING INSTRUCTIONS:

Fire fighters must wear protective gear with self-contained positive pressure breathing apparatus. To extinguish fires, use water, carbon dioxide, sand or dry chemical.

6. **ACCIDENTAL RELEASE MEASURES**

Vacuum or sweep up spill with care to minimize dust generation. Flush area with water. Wear adequate protective clothing to avoid contact with granules and dust. Store waste in a closed container.

7. **HANDLING & STORAGE**

Keep containers closed. **IMPORTANT** - Airborne fibers are electrically conductive. Fibers should not be allowed to come in contact with electrical equipment.

8. **EXPOSURE CONTROL - PERSONAL PROTECTION**

Local ventilation at points of dust generation is the preferred control. General ventilation may disperse dust throughout the workplace and increase worker exposure. Good housekeeping to minimize dust accumulation is essential. When dust is present, workers' use of impervious gloves, dust mask and face shield or goggles is recommended. To avoid dust contact, overalls which may be removed and washed daily may be worn to avoid dust accumulation in worker's clothing. Before eating, drinking or smoking, hands and face should be washed with soap and water.

If the concentration of dust in workplace air exceed the OSHA Permissible Exposure Limit (PEL), a NIOSH-approved full face respirator with dust filtering cartridge must be worn. (See Section 2.)

9. **PHYSICAL & CHEMICAL PROPERTIES**

Appearance & Odor: Gray metallic odorless granules.

Vapor Pressure: Negligible

pH: Not applicable

Melting Point: 1450°C (Nickel)

Boiling Point: Not Available

Specific Gravity: 1.8-3.0

% Volatile (by wt.): <10

Solubility in Water: Insoluble

10. **STABILITY & REACTIVITY**

Stability: Stable

Polymerization: Will not occur

Conditions to Avoid: None Known

Incompatible Materials: Strong Acids

Hazardous Decomposition Products: Under fire conditions, toxic nickel oxides may be formed

11. **TOXICOLOGICAL INFORMATION**

Nickel metal and its salts are potent skin sensitizers and respiratory passage irritants. Dermatitis may result from repeated or prolonged exposure, especially in smokers, women, and persons with allergy problems. Prolonged and repeated inhalation of nickel containing dusts and fumes may result in ulceration of the nasal mucosa. **IARC (2B), NTP and NIOSH** have categorized powdered nickel metal as a possible human carcinogen and occupational carcinogen (by inhalation).

12. **ECOLOGY INFORMATION**

No aquatic LC 50, BOD or COD data available.

13. **DISPOSAL CONSIDERATIONS**

Nickel, a component of our products, is listed by OSHA. Nickel containing wastes may be categorized as hazardous under RCRA. Storage of wastes in sealed containers and disposal in a secured landfill are recommended. Regulations in each state should be investigated to ensure compliance.

14. **TRANSPORT INFORMATION**

No applicable DOT rules pertaining to packaging, labeling or reporting were found.

15. **REGULATORY INFORMATION**

TSCA: This product is imported in compliance with all provisions of the Toxic Substances Control Act.

OSHA: Carbon fiber and nickel metal components of this product are regulated under the "Hazard Communication Standard." (See Section 3 of this MSDS.)

RCRA: The nickel metal component of this product is covered under the RCRA definition of "hazardous waste" (40CFR 260). Nickel metal is regulated under some state waste disposal rules.

SARA TITLE III (CERCLA) - Nickel metal is identified as a hazardous substance on SARA Title III consolidated list. Our products are subject to reporting under Sections 311 and 313 if amounts over the 10,000 pound limit are stored at any time. State Right-to-Know laws may have additional requirements. It is recommended that each processor of our products submit a copy of this MSDS to their local fire department.

16. **OTHER INFORMATION**

Toxicity Hazard Rating - nickel metal dust.

Acute & Chronic Local: Rated "3" for repeated or prolonged contact with skin, eyes, and mucous membranes.

Acute & Chronic Systemic: Rated "3" for repeated inhalation and ingestion.

3 = high, may cause permanent injury

Reference: Sax, "Dangerous Properties of Industrial Materials", 6th Edition.

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DISCLAIMER

To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy or completeness of such information. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible long-term adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones which exist. Final determination of the suitability of any information or product for the use contemplated by any user, the manner of that use and whether there is any infringement of any patents is the sole responsibility of the user. We recommend that anyone intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves as to such suitability and that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturers' or suppliers' current instruction for handling each material they use.