MATERIAL SAFETY DATA SHEET

Manufacturer: Unidym, Inc.
1430 O’Brien Drive - Suite G
Menlo Park, CA 94025
Phone: 650-462-1935
Fax: 650-462-1939
E-mail: info@unidym.com

Product: Unidym™ Carbon Nanotubes

Section 1 Product Identification

Chemical Name: Carbon Fullerene

Formula: Carbon

Chemical Family: Synthetic Graphite

Synonyms: Carbon Nanotubes

CAS Number: 7782-42-5 (Graphite)

Section 2 Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>%</th>
<th>OSHA/PEL</th>
<th>ACGIH/TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic graphite</td>
<td>Up to 100%</td>
<td>15 mg/m³ (total dust)</td>
<td>2 mg/m³ TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>Metallic impurity</td>
<td>Balance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 3 Hazards Identification

Potential Health Effects

Eye Contact: May cause eye irritation

Skin Contact: No known hazards, but may be mildly irritating

Inhalation: May cause irritation to respiratory tract

Ingestion: No known hazards, but may irritate gastrointestinal tract

Acute and Chronic Health Effects: High concentration of dusts may be irritating to eyes, skin, mucus membranes and respiratory tract.
Section 4 First Aid Measures

Eye Exposure: Immediately flush eyes with copious amounts of water for 15 minutes. If exposure persists, get medical attention.

Skin Contact: Flush skin with water.

Inhalation: Remove to fresh air. If breathing difficulties persist, get medical attention.

Ingestion: Not expected to require first aid. If large amounts swallowed, give water and get medical advice.

Section 5 Fire Fighting Measures

Flash Point: Not applicable.
Explosion Limits: Unknown
Extinguisher Medium: Water, Carbon Dioxide, Dry Chemical, or Foam
Special Procedures: None
Decomposition Products: Carbon Monoxide, Carbon Dioxide
Unusual Hazards: Thermal decomposition or combustion may produce dense smoke.

Section 6 Accidental Release Measures

Safeguards: Review FIRE FIGHTING MEASURES and HANDLING sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Procedures: Sweep or vacuum according to normal housekeeping practices.

Section 7 Handling and Storage

Handling: Use PERSONAL PROTECTIVE EQUIPMENT and exposure controls given in Section 8.


Storage: Keep in closed container for storage.
Section 8 Exposure Controls and Personal Protection

Eye Protection: Use approved safety glasses or goggles.

Respiratory Protection: Use of a dust mask is recommended.

Skin Protection: Impervious gloves and protective clothing to prevent skin contact.

Ventilation: A local or general exhaust system is recommended.

Section 9 Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form and Color</td>
<td>Clumpy or fluffy black powder or small black spheres</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>840 to greater than 10,000,000</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not determined. Expected to be greater than 2000 deg. F</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Greater than 1</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
</tbody>
</table>

Section 10 Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable under normal conditions of use</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>No</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Thermal decomposition or combustion may produce dense smoke, carbon monoxide and carbon dioxide</td>
</tr>
<tr>
<td>Materials to avoid</td>
<td>Strong oxidizing and reducing agents</td>
</tr>
<tr>
<td>Incompatibilities</td>
<td>None known</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>None known</td>
</tr>
</tbody>
</table>

Section 11 Toxicological Information

Effects: The toxicological properties of this specific product have not been determined.

Toxicological information on carbon nanotubes may be found at the website of the International Council on Nanotechnology at http://icon.rice.edu/
Section 12 Environmental Information

Ecological Information:  
Ecological information for this specific product has not been determined.  
Ecological information on carbon nanotubes may be found at the website of the International Council on Nanotechnology at http://icon.rice.edu/

Section 13 Disposal Considerations

Disposal:  Dispose of this material in accordance with local, state, and federal regulations.

Section 14 Transportation Information

Not regulated.

Section 15 Regulatory Information

This material is listed on the US Toxic Substances Control Act (TSCA) Inventory and the following chemical inventories: Canadian Domestic Substances List (DSL), European Inventory of Existing Commercial Chemical Substances (EINECS), Korean Existing Chemicals List (ECL), Australian Inventory of Chemical Substances (AICS), the Philippines Inventory of Chemicals and Chemical Substances (PICCS), and the Swiss Giftliste 1 Inventory of Notified New Substances. In addition, this substance is not regulated in Japan and excluded from the Japanese Chemical Substances Control Law according to the Japanese Ministry of Economy, Trade and Industry, formerly the Ministry of International Trade and Industry (MITI).

Section 16 Other Information

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>BASIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>Synthetic graphite powder</td>
</tr>
</tbody>
</table>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>BASIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>Synthetic graphite powder</td>
</tr>
</tbody>
</table>
Label Precautions:
Do not get in eyes, on skin or on clothing.
Do not breathe dust.
Wash thoroughly after handling.
Keep container closed.
Use with adequate ventilation.

Label First Aid:
If inhaled, remove to fresh air. If breathing difficulties persist, get medical attention. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. If irritation develops or persists, get medical attention.

Disclaimer: Unidym, Inc. provides the information contained herein in good faith and makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Unidym, Inc. makes no representations or warranties, either express or implied, regarding the suitability of the material for any purpose or the accuracy of the information contained within this document. Accordingly, Unidym, Inc. will not be responsible for damages resulting from use of or reliance upon this information.

Preparation Date: September 17, 2004
Revised: March 2, 2006 and September 7, 2007
Last revision: November 30, 2007