MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
C Tube-100, C Tube-101, C Tube-120

CHEMICAL NAME
Multiwall Carbon Nanotubes

FORMULA
Carbon

CHEMICAL FAMILY
Synthetic Graphite

SYNONYMS
Multi-Walled Carbon Nanotube

MANUFACTURER
CNT Co., Ltd.

C-2116 The #1st World officetel, 4-1 Songdo-dong Yeonsu-gu
Incheon, Korea, 406-840

EMERGENCY TEL. NO.
TEL. 82 32 835 5285/6, FAX. 82 32 835 5287

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>%</th>
<th>O/D</th>
<th>LENGTH</th>
<th>CAS NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Nanotube Synthetic graphite</td>
<td>95</td>
<td>10~40nm</td>
<td>1~25μm</td>
<td>7782-42-5</td>
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</tbody>
</table>

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Irritant
Irritating to eyes and respiratory system

HMIS RATING

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABILITY</td>
<td>0</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>0</td>
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NFPA RATING

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</table>

For additional information on toxicity, Please refer to Section 11.
4. FIRST AID MEASURES

ORAL EXPOSURE
If swallowed, wash out a mouth with copious amount of water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE
Immediately wash affected area with soap and copious amounts of water.

EYE EXPOSURE
Immediately flush eyes with copious amounts of water for at least 15 minutes.

5. FIRE FIGHTING MEASURES

FLASH
Not available

EXPLOSION LIMITS
Unknown

EXTINGUISHING MEDIA
Water, Carbon Dioxide, Dry chemical or Foam

DECOMPOSITION PRODUCTS
Carbon Monoxide, Carbon Dioxide

UNUSUAL HAZARDS
Thermal decomposition or combustion may produce dense smoke.

6. ACCIDENTAL RELEASE MEASURES

PROCEDURE OF PERSONAL PRECAUTION
Wear respirator, chemical safety goggles, rubber boots to avoid skin contact.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal, Avoid raising dust. Ventilate area and wash spilt site after material pickup is completed.

7. HANDLING AND STORAGE

HANDLING

USER EXPOSURE
Do not breathe dust. Avoid contact with eyes, skin and clothing.
Avoid prolonged or repeated exposure.

STORAGE

SUITABLE
Keep tightly closed and store in a cool & dry place.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**EYE PROTECTION**
Use approved safety glasses or goggles

**RESPIRATOR**
Wear high-efficiency dust mask

**SKIN PROTECTION**
Impervious gloves and protective clothing to prevent skin contact

**VENTILATION**
A local or general exhaust system is recommended

9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE**
Clumpy, black or dark gray powder

**MOLECULAR WEIGHT**
N/A

**BOILING POINT**
N/A

**MELTING POINT**
3,652~3,697°C

**VAPOR PRESSURE**
N/A

**FREEZING POINT**
N/A

**SPECIFIC GRAVITY**
2.1g/cm³ at 25°C

**BULK DENSITY**
0.03~0.06g/cm³

**VOLATILE, %**
N/A

**WATER CONTENT**
N/A

**SOLVENT CONTENT**
N/A

**SOLUBILITY IN WATER**
Insoluble

**PH**
6-7

**ODOR**
Odorless

N/A = not available

10. STABILITY AND REACTIVITY

**STABILITY**
Stable

**HAZARDOUS POLYMERIZATION**
None

**HAZARDOUS DECOMPOSITION PRODUCTS**
Carbon monoxide, Carbon Dioxide

**MATERIALS TO AVOID**
Strong oxidizing agents

11. TOXICOLOGICAL INFORMATION

**ROUTE OF EXPOSURE**

**SKIN CONTACT**
May cause skin irritation

**EYE CONTACT**
Cause eye irritation

Revision date: Nov. 01, 2010
INHALATION Material is irritating to mucous membranes and upper respiratory tract
INGESTION May be harmful if swallowed

SIGN AND SYMPTOMS OF EXPOSURE
Chemical, Physical and toxicological properties have not been thoroughly investigated

12. ECOLOGICAL INFORMATION
ECOLOGICAL INFORMATION
No known ecological harms

13. DISPOSAL CONSIDERATIONS
DISPOSAL
Dispose of this material in accordance with local, state, and federal regulation

14. TRANSPORTATION INFORMATION
DOT
PROPER SHIPPING NAME None
NON-HAZARDOUS FOR TRANSPORT
This substance is considered to be non – hazardous for transport.
IATA
NON-HAZARDOUS FOR AIR TRANSPORT
This substance is Non – hazardous for air transport

15. REGULATORY INFORMATION
EU ADDITIONAL CLASSIFICATION
SYMBOL OF DANGER Xi
INDICATION OF DANGER Irritant, R : 36/37
RISK STATEMENTS Irritating to eyes and respiratory system, S: 26 36
SAFETY STATEMENTS In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.
US  CLASSIFICATION AND LABEL TEXT

INDICATION OF DANGER

Irritant.

RISK STATEMENTS  Irritating to eyes and respiratory system.

SAFETY STATEMENTS  In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

SARA LISTED  No

CANADA

WHMIS CLASSIFICATION  This product has been classified in accordance with the hazard criteria of the CPR, and MSDS contains all the information required by the CPR.

DSL  No

NDSL  No

16. OTHER INFORMATION

WARRANTY  The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. CNT Co., Ltd. Shall not be held liable for any damage resulting from handling or from contact with the above product.