MATERIAL SAFETY DATA SHEET

SECTION 1  IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: Canon C330 Black Toner
Product Code: 1377A / F41-9801
Manufacturer: Canon Inc., 30-2, Shimomaruko 3-Chome, Ohta-ku, Tokyo, Japan, Ph#03-3758-2111.
Supplier: Canon USA Inc., One Canon Park, Melville, NY 11747, USA
Phone #: 1-800-OK-CANON 24Hr.Emergency CHEMTREC # 1-800-424-9300

No component of this toner is a PBT or vPvB substance under Regulation (EC)1907/2006.

No component of this toner is listed as a human carcinogen or a potential carcinogen in IARC Monographs, NTP, OSHA regulations or Annex I to Directive 67/548/EEC.

Potential Health Effects and Symptoms:

Inhalation:
Exposure to excessive amounts of dust may cause physical irritation to respiratory tract.

Ingestion:
Practically non-toxic based on animal testing. Ingestion is a minor route of entry for intended use of this product.

Eye:
May cause transient slight irritation.

Skin:
May be non-irritant.

Chronic Effects:
Prolonged inhalation of excessive amounts of dust may cause lung damage. Use of this product as intended does not result in inhalation of excessive amounts of dust.

SECTION 2  HAZARDS IDENTIFICATION

EU Classification: Not classified as dangerous

Emergency Overview: Black fine powder, slight plastic odor.

Medical Conditions Generally known to be Aggravated by Exposure:
Not determined

SECTION 3  COMPOSITION/INFORMATION ON INGREDIENTS

< Ingredient(s) >

<table>
<thead>
<tr>
<th>Chemical Name / Generic Name</th>
<th>CAS # / EC #</th>
<th>Weight %</th>
<th>EU Symbol / R-Phrase</th>
<th>USA OSHA PEL</th>
<th>ACGIH TLV</th>
<th>EU ILV</th>
<th>DFG MAK</th>
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<tr>
<td>Iron oxide</td>
<td>1317-61-9/ 215-277-5</td>
<td>40-50</td>
<td>None/ None</td>
<td>Not established</td>
<td>Not established</td>
<td>Not established</td>
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<tr>
<td>Styrene acrylate copolymer</td>
<td>Confidential</td>
<td>35-45</td>
<td>None/ None</td>
<td>Not established</td>
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<td>Styrene polymer</td>
<td>Confidential</td>
<td>5-15</td>
<td>None/ None</td>
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<tr>
<td>Amorphous silica</td>
<td>7631-86-9/ 231-545-4</td>
<td>1-2</td>
<td>None/ None</td>
<td>20 mppcf, 80(mg/m³)/%Si₂O₃</td>
<td>Not established</td>
<td>Not established</td>
<td>4 mg/m³ (Inhalable fraction)</td>
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< Carcinogen >
No component of this toner is listed as a human carcinogen or a potential carcinogen in IARC Monographs, NTP, OSHA regulations or Annex I to Directive 67/548/EEC.

< PBT substance and vPvB substance >
No component of this toner is a PBT or vPvB substance under Regulation (EC)1907/2006.
SECTION 4   FIRST AID MEASURES

First Aid Measures:

Inhalation:
If symptoms are experienced, move victim to fresh air and obtain medical advice.

Ingestion:
Rinse mouth. Drink 1 or 2 glasses of water. If irritation or discomfort occurs, obtain medical advice immediately.

Eye:
Do not allow victim to rub eye(s). Flush with lukewarm, gently flowing water for 5 minutes or until particle is removed. If irritation persists, obtain medical attention.

Skin:
Wash with soap and water. If irritation persists, obtain medical advice.

Note to Physicians:
None

SECTION 5   FIRE FIGHTING MEASURES

Fire Fighting Measures:

Extinguishing Media:
CO₂, water, dry chemicals

Unsuitable Extinguishing Media:
None

Special Fire Fighting Procedures:
None

Unusual Fire and Explosion Hazards:
Can form explosive dust-air mixtures when finely dispersed in air.

Fire and Explosive Properties (See also SECTION 9):
Hazardous Combustion Products:
CO₂, CO

Other Properties:
Not available

SECTION 6   ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Avoid breathing dust.

Environmental Precautions:
Do not wash away into sewer.

Method for Cleaning Up:
Sweep slowly spilled powder on to paper, and carefully transfer into a waste container. Clean remainder with wet paper, wet cloth or a vacuum cleaner.
If a vacuum cleaner is used, it must rate as a dust explosion-proof type. Fine powder can form explosive dust-air mixtures.

SECTION 7   HANDLING AND STORAGE

Handling:
Avoid breathing dust.
Use with adequate ventilation.

Storage:
Keep out of the reach of children.
Keep away from oxidizing materials.

Specific Uses:
Toner for electrophotographic apparatus.
For more information, please refer to the instruction of this product.
SECTION 8  EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

USA OSHA PEL (TWA): 15 mg/m$^3$ (Total dust), 5 mg/m$^3$ (Respirable fraction)
ACGIH TLV (TWA): 10 mg/m$^3$ (Inhalable fraction), 3 mg/m$^3$ (Respirable fraction)
DFG (MAK): 4 mg/m$^3$ (Inhalable fraction), 1.5 mg/m$^3$ (Respirable fraction)
(Also refer to SECTION 3)

Engineering Controls:
Use adequate ventilation.

Personal Protection Equipment(s):

Respiratory Protection: ☒ Required
☒ Not Required

Eye/Face Protection: ☒ Required
☒ Not Required

Skin Protection: ☒ Required
☒ Not Required

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black fine powder
Odor: Slight plastic odor
pH: Not applicable
Boiling Point/Range(°C): Not applicable
Melting Point/Range(°C): 100-150 (Softening point)
Decomposition Temperature(°C): > 200
Flash Point(°C): Not applicable
Flammable (Explosive) Limits: Not available
Autoignition Temperature(°C): Not available

Explosive Properties: Can form explosive dust-air mixtures when finely dispersed in air.
Oxidizing Properties: Not available
Vapor Pressure: Not applicable
Vapor Density: Not applicable
Density / Specific Gravity: 1.4-1.6
Water Solubility: Negligible
Fat Solubility: Partially soluble in toluene and xylene.
Partition Coefficient (n-Octanol/Water): Not applicable
Percent Volatile: Negligible
Evaporation Rate: Not applicable
Viscosity (mPa s): Not applicable
## SECTION 10  STABILITY AND REACTIVITY

**Stability:**
- ☒ Stable
- ☐ Unstable

**Conditions to Avoid:**
None

**Materials to Avoid:**
Strong oxidizers

**Hazardous Decomposition Products:**
CO, CO2

**Hazardous Polymerization:**
- ☐ May Occur
- ☒ Will Not Occur

**Conditions to Avoid:**
None

## SECTION 11  TOXICOLOGICAL INFORMATION

### Acute Toxicity:

**Inhalation:**
Not available

**Ingestion:**
- Rat, LD50 > 5000 mg/kg

**Eye:**
- Rabbit, transient slight conjunctival irritation only.

**Skin:**
- Rabbit, non-irritant

### Sensitization:
- Guinea pig, skin: Non-sensitizing

### Mutagenicity:
- Ames Test (S. typhimurium): Negative

### Reproductive Toxicity:
Not available

### Carcinogenicity:
Not available

### Others:

**Chronic effects:**
Muhle et al. reported pulmonary response upon chronic inhalation exposure in rats to a toner enriched in respirable-sized particles compared to commercial toner. No pulmonary change was found at 1 mg/m³ which is most relevant to potential human exposure. A minimal to mild degree of fibrosis was noted in 22% of the animals at 4 mg/m³, and a mild to moderate degree of fibrosis was observed in 92% of the animals at 16 mg/m³. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lung for a prolonged interval.
**SECTION 12 ECOLOGICAL INFORMATION**

**Mobility:** Not available

**Persistence / Degradability:** Not available

**Bioaccumulation:** Not available

**Ecotoxicity:**
- Estimate: Fish, 96h LL50 > 1000 mg/l (WAF)
- Estimate: Crustaceans, 48h EL50 > 1000 mg/l (WAF)
- Estimate: Algae, EbL50(72h), ErL50(0-72h) > 1000 mg/l (WAF)
  (See SECTION 16)

**Other Adverse Effects:** Not available

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Method of Disposal:**
DO NOT put toner or toner container into fire; heated toner may cause severe burns. DO NOT shred a toner container, unless dust-explosion preventing measures are taken. Finely dispersed particles form explosive mixtures in air. Disposal should be subject to federal, state and local laws.

**SECTION 14 TRANSPORT INFORMATION**

**UN #:** None

**UN Shipping Name:** None

**UN Classification:** None

**UN Packing Group:** None

**Marine Pollutant:**
- Yes
- Chemical name (wt%): 
- No

**Special Precautions:** None

**SECTION 15 REGULATORY INFORMATION**

**< EU Information >**

**Information on the Label:**
- **Symbol & Indication:** Not required

**R-Phrase:** Not required

**S-Phrase:** Not required

**Dangerous Component(s):** Not required

**Special Precautions under 1999/45/EC Annex V:** Not required

**Specific Provisions in Relation to Protection of Man or the Environment:**
- **76/769/EEC:** Not regulated
- **(EC)2037/2000:** Not regulated
- **(EC)304/2003:** Not regulated

**Others:** None
< USA Information >
Information on the Label under OSHA:

Signal Word:  Not required
Hazard warning:  Not required
Safety Advice:  Not required
Hazardous Component(s):  Not required

SARA Title III §313:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
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California Proposition 65:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

< Canada Information >

WHMIS Controlled Product:  Not a controlled product

< Australia Information >

Statement of Hazardous Nature:  Not classified as hazardous according to criteria of NOHSC.

SECTION 16  OTHER INFORMATION

Revised information from the previous version: SECTION 2, 3, 8, 12, 13 and 15

Estimate: Estimate based on test data on similar toner/developer/drum and/or the raw materials of this product.

Literature References:
- U.S. Department of Labor, 29CFR Part 1910
- U.S. Environmental Protection Agency, 40CFR Part 372
- U.S. Consumer Product Safety Commission, 16CFR Part 1500
- ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
- U.S. Department of Health and Human Services National Toxicology Program, Annual Report on Carcinogens
- DFG, List of MAK and BAT Values
- Canada Workplace Hazardous Materials Information System
Abbreviations:

EU: European Union.
OSHA PEL: PEL (Permissible Exposure Limit) under Occupational Safety and Health Administration (USA).
ACGIH TLV: TLV (Threshold Limit Value) under American Conference of Governmental Industrial Hygienists.
DFG MAK: MAK (Maximale Arbeitsplatz-Konzentration) under Deutsche Forschungsgemeinschaft.

TWA: Time Weighted Average.
STEL: Short Term Exposure Limit.
IARC: International Agency for Research on Cancer.
NTP: National Toxicology Program (USA).
WAF: Water Accommodated Fraction.
LL: Lethal Loading rate.
EL: Effective Loading rate.
OSHA HCS: Occupational Safety and Health Act, Hazard Communication Standard (USA).
FHSA: Federal Hazardous Substances Act (USA).
PBT: Persistent, Bioaccumulative and Toxic.
vPvB: very Persistent and very Bioaccumulative.

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