

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

**Product Name:** Canon NPG-4 Black Toner for NP Copier

**Product Code:** 1375A / F41-8001

**Manufacturer:** Canon Inc.  
30-2, Shimomaruko 3-Chome, Ohta-ku, Tokyo 146-8501, Japan

**Supplier:** Canon Singapore Pte Ltd  
1 HarbourFront Avenue, #04-01, Keppel Bay Tower, Singapore 098632  
cspl\_msds@canon.com.sg

**Use of the Product:** Toner for electrophotographic apparatus

### SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

< Ingredient(s) >

| Chemical Name /<br>Generic Name | CAS # /<br>EC #         | Weight<br>% | EU Symbol/<br>R-Phrase | USA<br>OSHA PEL                                      | ACGIH TLV                  | EU ILV          | DFG MAK  |
|---------------------------------|-------------------------|-------------|------------------------|--|----------------------------|-----------------|--|
| Iron oxide                      | 1317-61-9/<br>215-277-5 | 40-50       | None/ None             | Not established                                      | Not established            | Not established | Not established                                |
| Styrene acrylate<br>copolymer   | Confidential            | 35-45       | None/ None             | Not established                                      | Not established            | Not established | Not established                                |
| Styrene polymer                 | Confidential            | 5-15        | None/ None             | Not established                                      | Not established            | Not established | Not established                                |
| Amorphous Silica                | 7631-86-9/<br>231-545-4 | 1-2         | None/ None             | 20mppcf,<br>80(mg/m <sup>3</sup> )/%SiO <sub>2</sub> | 10 mg/m <sup>3</sup> (TWA) | Not established | 4 mg/m <sup>3</sup><br>(Inhalable<br>fraction) |

< Carcinogen >

| Chemical Name  | CAS # | Reference |
|--|-------|-----------|
| 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. |       |           |

### SECTION 3 HAZARDS IDENTIFICATION

**EU Classification:**

Not classified as dangerous.

**Emergency Overview:**

Black fine powder, slight plastic odor.

**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.

**Medical Conditions Generally known to be Aggravated by Exposure:**

Not determined

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**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

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**SECTION 5 FIRE FIGHTING MEASURES****Fire Fighting Measures:****Extinguishing Media:**

CO<sub>2</sub>, 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:**

CO<sub>2</sub>, CO

**Other Properties:**

Not available

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**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.

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**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<sup>3</sup> (Total dust), 5 mg/m<sup>3</sup> (Respirable fraction)  
 ACGIH TLV (TWA): 10 mg/m<sup>3</sup> (Inhalable fraction), 3 mg/m<sup>3</sup> (Respirable fraction)  
 DFG (MAK): 4 mg/m<sup>3</sup> (Inhalable fraction), 1.5 mg/m<sup>3</sup> (Respirable fraction)  
 (Also refer to SECTION 2)

#### 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

|   |   |
|---|---|
| <b>Appearance:</b>                              | Black fine powder   |
| <b>Odor:</b>                                    | Slight plastic odor   |
| <b>pH:</b>                                      | Not applicable  |
| <b>Boiling Point/Range(°C):</b>                 | Not applicable  |
| <b>Melting Point/Range(°C):</b>                 | 100-150 (Softening point)   |
| <b>Decomposition Temperature(°C):</b>           | > 200   |
| <b>Flash Point(°C):</b>                         | Not applicable  |
| <b>Flammable (Explosive) Limits:</b>            | Not applicable  |
| <b>Autoignition Temperature(°C):</b>            | Not available   |
| <b>Flammability:</b>                            | Not-flammable (Test method: Directive 92/69/EEC, A10 Flammability (Solids)) |
| <b>Explosive Properties:</b>                    | Can form explosive dust-air mixtures when finely dispersed in air.          |
| <b>Oxidizing Properties:</b>                    | Not available   |
| <b>Vapor Pressure:</b>                          | Not applicable  |
| <b>Vapor Density:</b>                           | Not applicable  |
| <b>Density / Specific Gravity:</b>              | 1.0-2.0   |
| <b>Water Solubility:</b>                        | Negligible  |
| <b>Fat Solubility:</b>                          | Partially soluble in toluene and xylene.                                    |
| <b>Partition Coefficient (n-Octanol/Water):</b> | Not applicable  |
| <b>Percent Volatile:</b>                        | Negligible  |
| <b>Evaporation Rate:</b>                        | Not applicable  |
| <b>Viscosity (mPa s):</b>                       | Not applicable  |

**SECTION 10 STABILITY AND REACTIVITY****Stability:**  Stable  
 Unstable**Conditions to Avoid:** None**Materials to Avoid:** Strong oxidizers**Hazardous Decomposition Products:** CO, CO<sub>2</sub>**Hazardous Polymerization:**  May Occur  
 Will Not Occur**Conditions to Avoid:** None**SECTION 11 TOXICOLOGICAL INFORMATION****Acute Toxicity:****Inhalation:**

Not available

**Ingestion:**

Rat, LD50 &gt; 5000 mg/kg

**Eye:**

Rabbit, transient slight conjunctival irritation only.

**Skin:**

Rabbit, non-irritant

**Sensitization:**

Estimate: Guinea pig, skin: Non-sensitizing (See Section 16)

**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/m<sup>3</sup> 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/m<sup>3</sup>, and a mild to moderate degree of fibrosis was observed in 92% of the animals at 16 mg/m<sup>3</sup>. 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:** Not available

**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  No Chemical name (wt%): \_\_\_\_\_

**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):** None

**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:**

**Signal Word:** Not required

**Hazard warning:** Not required

**Safety Advice:**

Not required

**Hazardous Component(s):**

None

**SARA Title III §313:**

**Chemical Name**

**Weight %**

None

**California Proposition 65:**

**Chemical Name**

**Weight %**

None

**< 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

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

Literature Reference:

- 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
- World Health Organization International Agency for Research on Cancer, IARC Monographs on the Evaluation on the Carcinogenic Risk of Chemicals to Humans
- DFG, List of MAK and BAT Values
- EU Directive 76/769/EEC, 67/548/EEC, 1999/45/EC
- EU Regulation (EC)2037/2000, (EC)304/2003
- Canada Workplace Hazardous Materials Information System
- Australia National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances[NOHSC:1008]

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.
- EU ILV: Indicative Limit Values for Occupational Exposure under EU Directive 91/322/EEC and 2000/39/EC.
- 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).
- OSHA HCS: Occupational Safety and Health Act, Hazard Communication Standard (USA).
- FHSA: Federal Hazardous Substances Act (USA).
- WHMIS: Workplace Hazardous Materials Information System.
- NOHSC: National Occupational Health and Safety Commission.

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