



## MATERIAL SAFETY DATA SHEET

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MSDS #: TC1029-0101  
Product Code: 1524A / R64-0002

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

<b>Product Name:</b>	Canon EP-S Cartridge (for Laser Beam Printer)
<b>Product Code:</b>	1524A / R64-0002
<b>Manufacturer:</b>	Canon Inc., 30-2, Shimomaruko 3-Chome, Ohta-ku, Tokyo, Japan, Phone # 03-3758-2111
<b>Supplier:</b>	Canon USA, Inc., One Canon Park, Melville, NY 11747, USA
<b>Phone #:</b>	1-800-OK-CANON, 24 Hr. Emergency CHEMTREC # 1-800-424-9300

### SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

#### < Ingredient(s) >

Chemical Name / Generic name	CAS # / EC #	Weight %	EU Symbol/ R-Phrase	USA OSHA PEL	ACGIH TLV	EU ILV	DFG MAK
Styrene acrylate copolymer	Confidential	60-70	None/ None	Not established	Not established	Not established	Not established
Iron oxide	1317-61-9/ 215-277-5	30-40	None/ None	Not established	Not established	Not established	Not established
Chromate(1-), bis[3,5-bis(1,1-dimethylethyl)-2-(hydroxy- $\kappa$ O)-benzoato(2-)- $\kappa$ O]-, hydrogen, (T-4)-	72869-85-3/ 276-955-4	1-2 (as Cr: 0.1-0.2)	Xn/ R22	Not established	Not established	Not established	Not established

#### < 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>	1.4-1.6
<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, LD<sub>50</sub> > 5000mg/kg

**Eye:**

Rabbit, transient slight conjunctival irritation only.

**Skin:**

Rabbit, non-irritant

**Sensitization:**

Guinea pig, skin : Non-sensitizing

**Mutagenicity:**

Ames Test (Salmonella 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.



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### 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 CONSIDERATION

#### 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 or local laws.

### SECTION 14 TRANSPORT INFORMATION

**UN #:** 2807

**UN Shipping Name:** Magnetized material

**UN Classification:** 9

**UN Packing Group:** None

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

**Special Precautions:** 65 or more of these products shipped together, by air, are regulated as magnetized material.

### 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:

Safety data sheet available for professional user on request.

##### Specific Provisions in Relation to Protection of Man or the Environment:

**76/769/EEC:** Not regulated

**(EC)2037/2000:** Not regulated

**(EEC)2455/92:** 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:**

<u>Chemical Name</u>	<u>Weight %</u>
"Chromium(III) Compounds" (as Cr)	1-2 (0.1-0.2)

**California Proposition 65:**

<u>Chemical Name</u>	<u>Weight %</u>
None	

## &lt; Canada Information &gt;

**WHMIS Controlled Product:** Not applicable (Manufactured article)

## &lt; Australia Information &gt;

**Statement of Hazardous Nature:** Not classified as hazardous according to criteria of NOHSC.**SECTION 16 OTHER INFORMATION**

## R-phrase list:

R22 - Harmful if swallowed.

## Revised information from the previous version:

Entirely revised

## 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, (EEC)2455/92
- Canada Workplace Hazardous Materials Information System
- Australia National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances[NOHSC:1008]

## Abbreviations:

"EU" stands for European Union.

"OSHA PEL" stands for PEL(Permissible Exposure Limit) under Occupational Safety and Health Administration(USA).

"ACGIH TLV" stands for TLV(Threshold Limit Value) under American Conference of Governmental Industrial Hygienists.

"EU ILV" stands for Indicative Limit Values for Occupational Exposure under EU Directive 91/322/EEC and 2000/39/EC.

"DFG MAK" stands for MAK(Maximale Arbeitsplatzkonzentrationen) under Deutsche Forschungsgemeinschaft.

"TWA" stands for Time Weighted Average.

"IARC" stands for International Agency for Research on Cancer.

"NTP" stands for National Toxicology Program (USA).

"OSHA HCS" stands for Occupational Safety and Health Act, Hazard Communication Standard(USA).

"FHS" stands for Federal Hazardous Substances Act(USA).

"WHMIS" stands for Workplace Hazardous Materials Information System.

"NOHSC" stands for National Occupational Health and Safety Commission Act 1985.

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