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#### MATERIAL SAFETY DATA SHEET

MSDS #: TN1515-0101 Product Code: 0457B / F43-9612

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE

**COMPANY/UNDERTAKING** 

**Product Name:** Canon C-EXV 21 Cyan Drum Unit

Product Code: 0457B / F43-9612
Company Name: Canon Europa N.V.

Address: Bovenkerkerweg 59-61, 1185 XB, Amstelveen, The Netherlands

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

## 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
Polyester resin	Confidential	85-95	None/ None	Not established	Not established	Not established	Not established
Pigment	Confidential	1-4	None/ None	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:**

Cyan 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:**

Low acute toxicity. Ingestion is a minor route of entry for intended use of this product.

#### Eve:

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

Date of Issue: January 29, 2007

Revised:



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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

## 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.

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SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION			
<b>Exposure Guidelines:</b>			
ACGIH TLV (TWA): 10 mg/r	m³ (Total dust), 5 mg/m³ (Respirable fraction) n³ (Inhalable fraction), 3 mg/m³ (Respirable fraction) ³ (Inhalable fraction), 1.5 mg/m³ (Respirable fraction)		
Engineering Controls:  Use adequate ventilation.			
<b>Personal Protection Equipment(s):</b>			
<b>Respiratory Protection:</b> ☐ Requ	uired Required		
	☐ Required  ☑ Not Required		
Skin Protection: Required Not	uired Required		
SECTION 9 PHYSICAL ANI	O CHEMICAL PROPERTIES		
Appearance:	Cyan fine powder		
Odor:	Slight plastic odor		
pH:	Not applicable		
<b>Boiling Point/Range(°C):</b>	Not applicable		
<b>Melting Point/Range(°C):</b>	85-120 (Softening point)		
<b>Decomposition Temperature</b> ( ${}^{\circ}C$ ):	> 200		
Flash Point(°C):	Not applicable		
Flammable (Explosive) Limits:	Not applicable		
Autoignition Temperature ( ${}^{\circ}C$ ):	Not available		
Flammability:	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.		
Oxidizing Properties:	Not available		
Vapor Pressure:	Not applicable		
Vapor Density:	Not applicable		
Density / Specific Gravity:	1.0-1.2		
Water Solubility:	Negligible		
Fat Solubility:	Partially soluble in toluene and xylene.		
Partition Coefficient (n-Octanol/Wa	ter): Not applicable		
Percent Volatile:	Negligible		
<b>Evaporation Rate:</b>	Not applicable		
Viscosity (mPa s):	Not applicable		

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SECTION 10 STABILITY AND	REACTIVITY		
Stability:	Stable     Unstable		
Conditions to Avoid:	None		
Materials to Avoid:	Strong oxidizers		
<b>Hazardous Decomposition Products:</b>	CO, CO2		
Hazardous Polymerization:	☐ May Occur  ☑ Will Not Occur		
Conditions to Avoid:	None		
SECTION 11 TOXICOLOGICA	AL INFORMATION		
Acute Toxicity: Inhalation: Not available			
<b>Ingestion:</b> Estimate: Rat, LD50 > 2000 mg/	/kg (See SECTION 16)		
Eye: Estimate: Rabbit, transient slight	conjunctival irritation only. (See SECTION 16)		
Skin:			
Estimate: Rabbit, non-irritant (So	ee SECTION 16)		
<b>Sensitization:</b> Estimate: Guinea pig, skin: Non-	-sensitizing (See SECTION 16)		
Mutagenicity:			
Ames Test (S. typhimurium, E. c	coli): Negative		
Reproductive Toxicity: Not available			
Carcinogenicity: Not available			
Others:			
	response upon chronic inhalation exposure in rats to a toner enriched in red to commercial toner. No pulmonary change was found at 1 mg/m³ which is		

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.

Canon

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SECTION 12	ECOLOGICAL INFORMATION

Mobility: Not available Persistence / Degradability: Not available

**Bioaccumulation:** Not available

**Ecotoxicity:** Estimate: Fish (Rainbow trout), 96h LL50 > 1000 mg/l (WAF)

Estimate: Crustaceans (Daphnia magna), 48h EL50 > 1000 mg/l (WAF)

Estimate: Algae (Scenedesmus subspicatus), 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		
<b>UN Shipping Name</b>	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 Symbol & Indic	e Label: ation: Not required		
<b>R-Phrase:</b> Not required			
S-Phrase: Not required			
Dangerous Com Not required	ponent(s):		
Special Precauti Not required	ons under 1999/45/EC Annex V:		
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		

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< 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:** 

Chemical Name Weight %

None

**California Proposition 65:** 

Chemical Name Weight %

None

< Canada Information >

WHMIS Controlled Product: Not applicable (Manufactured article)

< Australia Information >

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

#### SECTION 16 OTHER INFORMATION

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
- 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]

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#### **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, 2000/39/EC and 2006/15/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). 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).

WHMIS: Workplace Hazardous Materials Information System. NOHSC: National Occupational Health and Safety Commission.

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