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MATERIAL SAFETY DATA SHEET

MSDS #: TN1029-0202 Product Code: 1427A / F42-0411

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE

COMPANY/UNDERTAKING

Product Name: Canon Toner (Cyan) for CLC700

Product Code: 1427A / F42-0411

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 / 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	1-5	None/ None	Not established	Not established	Not established	Not established
Hydrogen bis[3,5-di-tert-butylsalicyl ato(2-)-O1,O2]chromate(1 -)	72869-85-3/ 276-955-4	1-4 (as Cr: 0.1-0.4)	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:

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.

Eye:

May cause transient slight irritation.

Skin:

May cause slight irritation.

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

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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Exposure Guidelines:	RE CONTR	OLS / PERSONAL PROTECTION			
USA OSHA PEL (TWA): 15 mg/m³ (Total dust), 5 mg/m³ (Respirable fraction) ACGIH TLV (TWA): 10 mg/m³ (Inhalable fraction), 3 mg/m³ (Respirable fraction) DFG (MAK): 4 mg/m³ (Inhalable fraction), 1.5 mg/m³ (Respirable fraction) (Also refer to SECTION 2)					
Engineering Controls: Use adequate ventilation.					
Personal Protection Equipme	ent(s):				
Respiratory Protection:	☐ Required ☑ Not Requi	ired			
	☐ Required ☑ Not Required				
	☐ Required Not Required				
SECTION 9 PHYSICA	L AND CH	EMICAL PROPERTIES			
Appearance:		Cyan 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 applicable			
Autoignition Temperature(°C):		Not available			
Flammability:		Not-flammable (Test method: Directive 92/69/EEC, A10 Flammability (Solids))			
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:		1.0-1.5			
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			

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MATERIAL SAFETY DATA SHEET

MSDS #: TN1029-0202 Product Code: 1427A / F42-0411

SECTION 10 STABILITY AND REACTIVITY				
Stability:	Stable Unstable Unstable			
Conditions to Avoid:	None			
Materials to Avoid:	Strong oxidizers CO, CO2			
Hazardous Decomposition Products:				
Hazardous Polymerization:	☐ May Occur ☑ Will Not Occur			
Conditions to Avoid:	None			
SECTION 11 TOXICOLOGICA	AL INFORMATION			
Acute Toxicity: Inhalation: Not available				
Ingestion: Estimate: Rat, LD50 > 2000 mg/kg (See Section 16)				
Eye: Estimate: Rabbit, transient slight conjunctival irritation only. (See Section 16)				
Skin: Estimate: Rabbit, mild irritant (See Section 16)				
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 $1~\text{mg/m}^3$ which is most relevant to potential human exposure. A minimal to mild degree of fibrosis was noted in 22% of the animals at $4~\text{mg/m}^3$, and a mild to moderate degree of fibrosis was observed in 92% of the animals at $16~\text{mg/m}^3$. 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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MSDS #: TN1029-0202 Product Code: 1427A / F42-0411

SECTION 12 E	COLOG	ICAL INFORMATION				
Mobility:		Not available				
Persistence / Degradability:		Not available				
Bioaccumulation: Ecotoxicity:		Not available Not available				
SECTION 13 D	TCDOCA	I CONCIDED A TIONS				
		L CONSIDERATIONS				
container, unless d	r or toner lust-explo	container into fire; heated toner may cause severe burns. DO NOT shred a toner osion preventing measures are taken. Finely dispersed particles form explosive mixtures abject to federal, state and local laws.				
SECTION 14 T	RANSP	ORT 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	REGULA	TORY INFORMATION				
< EU Information >						
Information on the Symbol & Indica		ot required				
R-Phrase: Not required						
S-Phrase: Not required						
Dangerous Com None	ponent(s):				
•		r 1999/45/EC Annex V: ble for professional user on request.				
-	in Relati	ion to Protection of Man or the Environment:				
76/769/EEC:	Not regu	lated				
(EC)2037/2000:	Not regu	lated				
(EC)304/2003:	Not regu	lated				
Others:	None					
< USA Information >	>					
Information on the	Label:					
Signal Word: Not required						
Hazard warning: Not required						



MATERIAL SAFETY DATA SHEET

MSDS #: TN1029-0202

Product Code: 1427A / F42-0411

Safety Advice:

Not required

Hazardous Component(s):

None

SARA Title III §313:

Chemical Name	Weight %	
"Chromium(III) Compounds"	1-4	
(as Cr)	(0.1-0.4)	
"Copper Compounds"	1-5	
(as Cu)	(0.1-1)	

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

R - phrase list:

R22 - Harmful if swallowed.

Revised information from the previous version: Section 2, 3 and 11

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
- World Health Organization International Agency 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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