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MATERIAL SAFETY DATA SHEET

MSDS #: TN1015-0202 Product Code: 1374A / F41-7901

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE

COMPANY/UNDERTAKING

Product Name: Canon NPG-3 Black Toner for NP Copier

Product Code: 1374A / F41-7901

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
Styrene acrylate copolymer	Confidential	45-55	None/ None	Not established	Not established	Not established	Not established
Iron oxide	1317-61-9/ 215-277-5	40-50	None/ None	Not established	Not established	Not established	Not established
Hydrogen bis[3,5-di-tert-butylsalicylato(2-)-O1,O2]chromate(1-)	72869-85-3/ 276-955-4	1-2 (as Cr: 0.1-0.2)	Xn/ R22	Not established	Not established	Not established	Not established

Reference

< Carcinogen >

Chemical Name CAS #

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

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 Exposure Guidelines:						
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 Equipment(s):						
Respiratory Protection:	☐ Required Not Required	ired				
Eye/Face Protection:	☐ Required Not Required					
Skin Protection:	☐ Required ☑ Not Required					
SECTION 9 PHYSIC	AL AND CH	EMICAL PROPERTIES				
Appearance:		Black fine powder				
Odor:		Slight plastic odor				
pH:		Not applicable				
Boiling Point/Range($^{\circ}$ C):		Not applicable				
Melting Point/Range(°C):		100 - 150 (Softening point)				
Decomposition Temperature (${}^{\circ}$ C):		>200				
Flash Point(°C):		Not applicable				
Flammable (Explosive) Lim	its:	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:		1.4-1.6				
Water Solubility:		Negligible				
Fat Solubility:		Partially soluble in toluene and xylene.				
$\label{partition} \textbf{Partition Coefficient (n-Octanol/Water):}$		Not applicable				
Percent Volatile:		Negligible				
Evaporation Rate:		Not applicable				
Viscosity (mPa s):		Not applicable				

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MSDS #: TN1015-0202 Product Code: 1374A / F41-7901

SECTION 10 STABILITY AND	REACTIVITY		
Stability:			
Conditions to Avoid:	None		
Materials to Avoid:	Strong oxidizers		
${\bf Hazar dous\ Decomposition\ Products:}$	CO, CO2		
Hazardous Polymerization:	☐ May Occur ☑ Will Not Occur		
Conditions to Avoid:	None		
SECTION 11 TOXICOLOGICA	AL INFORMATION		
Acute Toxicity: Inhalation: Not available Ingestion: Rat, LD50 > 5000mg/kg			
Eye:			
Rabbit, transient slight conjunctive	val 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.

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SECTION 12 E	COLOG	ICAL INFORMATION			
Mobility:		Not available			
Persistence / Degrad	lability:	Not available			
Bioaccumulation:		Not available			
Ecotoxicity:		Not available			
Other Adverse Effec	ets:	Not available			
SECTION 12 D	ICDOCA	I CONCIDED ATION			
		L CONSIDERATION			
container, unless d	r or toner lust-explo	container into fire; heated toner may cause severe burns. DO NOT shred a toner sion 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 ☑ No	Chemical name (wt%):			
Special Precautions:	None				
SECTION 15 R	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.			
Specific Provisions	in Relati	on 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 requ	ired			
Hazard warning Not required	;				



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MSDS #: TN1015-0202 Product Code: 1374A / F41-7901

Safety Advice:

Not required

Hazardous Component(s):

None

SARA Title III §313:

 Chemical Name
 Weight %

 "Chromium(III) Compounds"
 1-2

 (as Cr)
 (0.1-0.2)

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:

Partially revised

Section 2

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" 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).
- "FHSA" 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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