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MATERIAL SAFETY DATA SHEET

MSDS #: TN1037-0304 Product Code: 1439A / F42-0431

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE

COMPANY/UNDERTAKING

Product Name: Canon Toner (Yellow) for CLC700

Product Code: 1439A / F42-0431 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	1-5	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:

Yellow 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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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 ☐ Required **Eye/Face Protection: ☒** Not Required **Skin Protection:** ☐ Required **☒** Not Required **SECTION 9** PHYSICAL AND CHEMICAL PROPERTIES Yellow fine powder Appearance: Odor: Slight plastic odor pH: Not applicable **Boiling Point/Range(°C):** Not applicable **Melting Point/Range(°C):** 85-120 (Softening point) **Decomposition Temperature**(${}^{\circ}C$): > 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 Not applicable **Vapor Pressure: Vapor Density:** Not applicable **Density / Specific Gravity:** 1.0 - 1.5Water 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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SECTION 10 STABILITY AND	REACTIVITY				
Stability:	■ Stable □ 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					
	response upon chronic inhalation exposure in rats to a toner enriched in				

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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SECTION 12 E	COLOGICAL INFORMATION					
Mobility:	Not available					
Persistence / Degrada	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 Effect	Not available					
SECTION 13 D	SPOSAL CONSIDERATIONS					
container, unless d	or toner container into fire; heated toner may cause severe burns. DO NOT shred a toner ast-explosion preventing measures are taken. Finely dispersed particles form explosive mixtures all be subject to federal, state and local laws.					
SECTION 14 T	RANSPORT INFORMATION					
UN #:	None					
UN Shipping Name:	None					
UN Classification:	None					
UN Packing Group:	None					
	☐ Yes Chemical name (wt%): ▼ No					
Special Precautions:	None					
SECTION 15 R	EGULATORY INFORMATION					
< EU Information >						
Information on the Symbol & Indica	Label: tion: Not required					
R-Phrase: Not required						
S-Phrase: Not required						
Dangerous Comp Not required	oonent(s):					
-	ns under 1999/45/EC Annex V: et available for professional user on request.					
-	n Relation to Protection of Man or the Environment: Not regulated					
(EC)2037/2000:						
-						
-	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 NameWeight %" Chromium(III) Compounds"1-4

(as Cr) (0.1-0.4)

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 9, 11 and 12

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, 40 CFR 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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