

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

Product Name: Canon CLC1000 Starter Black

Product Code: 1454A

Manufacturer: Canon Inc., 30-2, Shimomaruko 3-Chome, Ohta-ku, Tokyo 146-8501, Japan

Supplier: Canon USA, Inc., One Canon Park, Melville, NY 11747, USA

Phone #: 1-800-OK-CANON 24 Hr. Emergency CHEMTREC # 1-800-424-9300

MSDS #: TN0440-0106

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)

Chemical Name	CAS #	Weight %	EU Symbol	EU R-Phrase
Carbon Black	1333-86-4	< 1	None	None
Ferrite including copper and zinc	66402-68-4	90 - 95 (AsCu:10-12)	None	None

Chemical Name	USA OSHA PEL	ACGIH TLV
Carbon Black	3.5 mg/m ³ (TWA)	3.5 mg/m ³ (TWA)
Ferrite including copper and zinc	Not established	Not established

Chemical Name	EU ILV	DFG MAK
Carbon Black	Not established	Not established
Ferrite including copper and zinc	Not established	1.0 mg/m ³ As Cu and its compounds (Inhalable fraction)

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS - Continued

Carcinogen

Chemical Name	CAS #	Reference
Carbon Black (<1%)	1333-86-4	IARC : Group 2B. NTP; OSHA; Annex 1 to 67/548/EEC : Not listed.

Other Ingredient(s)

Chemical/Generic Name	Weight %
Polyester resin	3 - 10

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview: Gray 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. 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.

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:

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))

SECTION 5 FIRE FIGHTING MEASURES - Continued

Fire and Explosive Properties - Continued:

Autoflammability: Not applicable

Explosive Properties: Can form explosive dust-air mixtures when finely dispersed in air.

Oxidizing Properties: Not available

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 away from oxidizing materials.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: USA OSHA(TWA/PEL):15mg/m³ (Total dust)
5mg/m³ (Respirable fraction)
ACGIH(TWA/TLV): 10mg/m³ (Inhalable particulate)
3mg/m³ (Respirable particulate)
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

Eye/Face Protection: Required Not Required

Skin Protection: Required Not Required

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Gray 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))

Autoflammability: Not applicable

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: 4.0 - 5.0

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

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable Unstable
 Conditions to Avoid: None

Materials to Avoid: Strong oxidizers

Hazardous Decomposition Products: CO, CO₂

Hazardous Polymerization: May Occur Will Not Occur
 Conditions to Avoid: None

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

Inhalation: Not available

Ingestion: Estimate : Rat, LD50 > 5000 mg/kg

Eye: Estimate : Rabbit, transient slight conjunctival irritation only.

Skin: Estimate : Rabbit, non irritant.

Sensitization: Not available.

Mutagenicity: Estimate : Ames Test (Salmonella typhimurium) : Negative

Reproductive Toxicity: Not available.

SECTION 11 TOXICOLOGICAL INFORMATION - Continued

Carcinogenicity: The IARC evaluated carbon black as a Group 2B carcinogen, for which there is inadequate human evidence, but sufficient animal evidence. The latter is based upon the development of lung tumors in rats receiving chronic inhalation exposure to powdered carbon black at levels that induce particle overload of the lung. However, there is a two-year inhalation study of a toner containing carbon black which demonstrated no association between toner exposure and tumor development in rats.

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.

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: Disposal should be subject to federal, state or local laws.

SECTION 14 TRANSPORT INFORMATION

UN #: None

UN Shipping Name: None

UN Classification: None

UN Packing Group: None

Special Precautions: None

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

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:

Chemical Name**Weight %**

Ferrite including copper and zinc

95 wt% (Maximum)

Copper and compounds(As Copper metal)

(12 wt% (Maximum))

Zinc and compounds(As Zinc metal)

(14 wt% (Maximum))

California Proposition 65:

Chemical Name**Weight %**

None

SECTION 16 OTHER INFORMATION

Other Information:

None

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, 88/379/EEC
- EU Regulation (EC)2037/2000, (EEC)2455/92

Abbreviations:

- "EU" stands for European Union.
- "OSHA PEL" stands for PEL(Permissible Exposure Limit) under Occupational Safety and Health Administration.
- "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.
- "FHSA" stands for Federal Hazardous Substances Act.

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