
MATERIAL SAFETY DATA SHEET

DATE PREPARED: 23 January, 1997

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
1.1 Identification of the substance or Preparation

Product Name: Canon Starter (Black)

Used with: CLC 700, 800, 900 & 950

Description: Solid mixture, black starting toner powder

1.2 Company Undertaking Identification

Manufacturer: Canon Inc.
30-2, Shimomaruko 3-Chome, Ohta-Ku
Tokyo 146, Japan
Phone: 03-3758-2111

Distributor: Canon UK Limited
Woodhatch
Reigate
Surrey
Phone: (01737) 220000

SECTION 2: COMPOSITION/INFORMATION OF INGREDIENTS

Principal Components	Wt%	OSHA ²	ACGIH ³	DFG ⁴
Ferrite (1309-37-0, 1314-13-2, 1317-38-1)	90 - 95	-	-	-
Polyester Resin (39382-25-7)	3 - 10	-	-	-
Carbon Black (1333-86-4)	<1	3.5 MG/M ³	3.5 MG/M ³	-

All MSDS sheets have been updated to appear in the current 16 paragraph format (previously nine), information requested for the new format which isn't available from the previous format will have No Data Available against it. (As advised by Sedgwick Risk Consultants. Memo dated 28/02/97).

SECTION 3. HAZARDOUS IDENTIFICATION

EMERGENCY Fine black powder with slight plastic odour.

POTENTIAL HEALTH EFFECTS AND SYMPTOMS:

INGESTION: Ingestion is not an applicable route of entry for intended use.
 INHALATION: Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.
 EYE CONTACT: May cause eye irritation.
 SKIN CONTACT: Unlikely to cause skin irritation.

SECTION 4. FIRST AID MEASURES

INHALATION: Remove victim to fresh air.
 Get medical attention if symptoms persist.
 INGESTION: Dilute stomach contents with several glasses of water.
 Get medical attention if symptoms persist.
 EYE CONTACT: Flush with running water for at least 15 minutes.
 If irritation persist, get medical attention.
 SKIN CONTACT: Wash with soap and water.
 If irritation persist, get medical attention.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: CO₂, water, dry chemicals.
 UNSUITABLE EXTINGUISHING MEDIA: None.
 SPECIAL FIRE FIGHTING PROCEDURES: None.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Toner material, like most organic material in powder form, is capable of creating a dust explosion.

FIRE AND EXPLOSIVE PROPERTIES:

FLASH POINT (°C): No data available.
 FLAMMABLE (EXPLOSIVE) LIMITS: No data available.
 AUTO-IGNITION TEMPERATURE (°C): No data available.
 FLAMMABILITY: Non-flammable solid (according to test methods of USA16 CFR 1500.44 and 84/449/EEC (Annex V) A.10.).
 AUTOFLAMABILITY: Not applicable.
 EXPLOSIVE PROPERTIES: See “Unusual Fire and Explosion Hazards”.

OXIDISING PROPERTIES: No data available.
 HAZARDOUS COMBUSTION PRODUCTS: CO₂, CO.
 OTHER PROPERTIES: Not known.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use with adequate ventilation.
 Avoid breathing dust.
 ENVIRONMENTAL PRECAUTIONS: Do not wash away into sewer.
 METHOD FOR CLEANING UP: Sweep material onto paper and carefully transfer to a sealable waste container.
 If a vacuum is used, the motor must be rated as dust tight.
 A conductive hose bonded to the machine should be used to reduce static build up.

SECTION 7. HANDLING AND STORAGE

HANDLING: Avoid breathing dust.
 Use with adequate ventilation.
 Wash thoroughly after handling.
 STORAGE: Keep out of reach of children.
 Keep away from contact with oxidising materials.
 Keep container closed

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:
 USA OSHA (TWA /PEL): 15 mg/m³ (Total dust)
 5 mg/m³ (Respirable fraction)
 ACGIH (TWA/TLV): 10 mg/m³ (Total dust)
 3 mg/m³ (Respirable)
 DFG (MAK): 6 mg/m³ (Feinstaubkonzentration)
 (Also refer to SECTION 2.)

PERSONAL PROTECTION EQUIPMENT(S):
 RESPIRATORY PROTECTION: Not Required
 EYE/FACE PROTECTION: Not Required
 OTHER PROTECTIVE EQUIPMENT: Not Required

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colour fine powder.
 ODOUR: Slight plastic odour.
 pH: Not applicable.
 BOILING POINT/RANGE(°C): Not applicable.

MELTING POINT/RANGE(°C):	100-150 °C (Softening point).
DECOMPOSITION TEMPERATURE (°C):	No Data available.
FLASH POINT (°C):	No Data available.
FLAMMABLE (EXPLOSIVE) LIMITS:	No Data available.
AUTOIGNITION TEMPERATURE(°C):	No Data available.
FLAMMABILITY:	Non-flammable solid (according to test methods of USA 16 CFR 1500.44 and 84/449/EEC(Annex V) A.10.)
AUTOFLAMMABILITY:	Not Applicable.
EXPLOSIVE PROPERTIES:	See “ Unusual Fire Explosion Hazards”.
OXIDISING PROPERTIES:	No Data Available.
VAPOUR PRESSURE;	Not Applicable.
VAPOUR 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:	Not Applicable
EVAPORATION RATE:	Not Applicable

SECTION 10. STABILITY AND REACTIVITY

STABILITY:	Stable
MATERIALS TO AVOID:	Strong oxidisers.
HAZARDOUS DECOMPOSITION PRODUCTS:	Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide.
HAZARDOUS POLYMERISATION:	Will Not Occur

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

INHALATION:	Data from similar toner materials) : LC50 >5mg/Kg (Rats).
INGESTION:	(Data from similar toner materials): Oral LD50: >5000 mg/kg (rats)
EYE CONTACT:	(Data from similar toner materials): Not classified as irritant according to OSHA Hazard Communication Standard (HCS) and EC Directive 67/548/EEC based on test data of rabbits.
SKIN CONTACT:	(Data from similar toner materials): Not classified as irritant, according to OSHA. Hazard Communication Standard (HCS) and EU Directive 67/548/EEC based on test data of rabbits.

SENSITISATION:	No sensitiser according to EC Directive 67/548/EEC Annex I and FHSA.
MUTAGENICITY:	(Data from similar toner materials) Negative (Ames Test: Salmonella typhimurium).
REPRODUCTIVE TOXICITY:	No reproductive toxic substances according to EC Directive 67/548/EEC Annex I, California Proposition 65 and DFG
CARCINOGENICITY:	No carcinogen or potential carcinogen, according to IARC Monographs ⁶⁾ , NTP ⁷⁾ ,
OTHERS:	Sub-acute Toxicity - Rat; 90 days inhalation Test .Test sample: magnetic and non magnetic toner. (Mean volume diameter is 6.0µm). NOEL (NO observed effect level): 16mg/m ³ .

SECTION 12. ECOLOGICAL INFORMATION

No information indicating any adverse ecological effects. Avoid spills and dispose of in accordance with applicable laws and regulations.

SECTION 13. DISPOSAL CONSIDERATION

The waste toner could be considered as plastic powder waste. For incineration, package it adequately. Disposal should be subject to federal, state or local laws.

SECTION 14. TRANSPORT INFORMATION

INTERNATIONAL TRANSPORT INFORMATION:

UN. NUMBER:	None.
UN. SHIPPING NAME:	None.
UN. CLASSIFICATION:	None.
UN. PACKING GROUP:	None.
SPECIAL PRECAUTIONS	None

SECTION 15. REGULATORY INFORMATION

LABEL INFORMATION ACCORDING TO THE DIRECTIVES 88/379/EEC AND 67/548/EEC

SYMBOL & INDICATION:	Not required.
R-PHRASE:	Not required.
S-PHRASE:	Not required.
DANGEROUS INGREDIENTS:	None

SPECIFIC PROVISIONS IN RELATION TO PROTECTION OF MAN OR THE ENVIRONMENT:

REGULATION (EEC) 2455/92:	Not regulated.
DIRECTIVE 76/769/EEC:	Not regulated.
(EC)3093/94:	Not regulated.
OTHERS:	None.

SARA TITLE §III 313 (USA):	
CHEMICAL NAME	None
Weight %	

SECTION 16. OTHER INFORMATION

LITERATURE REFERENCE:

- US Department of Labour 29CFR Part 1910.
- US Environmental Protection Agency, 40CFR Part 372.
- US Consumer Product Safety Commission, 16CFR Part 1500
- ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.
- US Department of Health and Human Services National Toxicology Program, Annual Report on Carcinogens.
- World Health Organisation 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 and their amendments.
- EU Regulations (EC) 3093/94, (EEC) 2455/92 and their amendments.

OTHER INFORMATION.

None

ABBREVIATIONS:

- "AEU" 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.
- "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).

This information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any other process. It is based on the level of our knowledge as of the date of preparation.