# MATERIAL SAFETY DATA SHEET

## SECTION 1

### IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name:** Canon Starter (Yellow) for CLC300  
**Product Code:** 1469A001AA / F41-6832  
**Manufacturer:** Canon Inc., 30-2, Shimomaruko 3-Chome, Ohta-ku, Tokyo, Japan, Ph# 03-3758-2111  
**Supplier:** Canon USA, Inc., One Canon Park, Melville, NY 11747, USA  
**Phone #:** 1-800-OK-CANON  
**MSDS #:** TN0065-0304  

### Hazardous Ingredient(s)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Weight %</th>
<th>EU Symbol</th>
<th>EU R-Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferrite including copper and zinc</td>
<td>66402-68-4</td>
<td>90 - 96</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(AsCu:10-12)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>USA OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferrite including copper and zinc</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EU ILV</th>
<th>DFG MAK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferrite including copper and zinc</td>
<td>Not established</td>
<td>1.0mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(As Cu and its compound : Inhalable fraction)</td>
</tr>
</tbody>
</table>

**Date of Issue:** October 5, 1990  
**Revised:** December 13, 2000
SECTION 2  COMPOSITION/INFORMATION ON INGREDIENTS - Continued

<table>
<thead>
<tr>
<th>Carcinogen Chemical Name</th>
<th>CAS #</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>No component of this toner is listed as human carcinogen or potential carcinogen in IARC Monographs, NTP, OSHA regulations or Annex I to Directive 67/548/EEC.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other Ingredient(s)

<table>
<thead>
<tr>
<th>Chemical/Generic Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyester resin</td>
<td>3 - 7</td>
</tr>
<tr>
<td>Pigment</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

SECTION 3  HAZARDS IDENTIFICATION

Emergency Overview: Yellowish 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 to excessive amounts of dust.

Medical Conditions Generally known to be Aggravated by Exposure: Not determined.

Date of Issue: October 5, 1990  Revised: December 13, 2000
SECTION 4  FIRST AID MEASURES

First Aid Measures:
  Inhalation: If symptoms are experienced, move victim to fresh air and obtain medical advice.

  Ingestion: Rince 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

Date of Issue: October 5, 1990  Revised: December 13, 2000
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): 4mg/m³ (Inhalable fraction)
1.5mg/m³ (Respirable fraction) (Also refer to SECTION 2)

Engineering Controls: Use adequate ventilation.

Personal Protection Equipment(s):

Respiratory Protection: [ ] Required  [x] Not Required

Eye/Face Protection: [ ] Required  [x] Not Required

Skin Protection: [ ] Required  [x] Not Required

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellowish 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

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

Date of Issue: October 5, 1990 Revised: December 13, 2000
### SECTION 10  STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Stability:</th>
<th>☒ Stable  ☐ Unstable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions to Avoid:</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Materials to Avoid:</th>
<th>Strong oxidizers</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hazardous Decomposition Products:</th>
<th>CO, CO₂</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hazardous Polymerization:</th>
<th>☐ May Occur  ☒ Will Not Occur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions to Avoid:</td>
<td>None</td>
</tr>
</tbody>
</table>

### SECTION 11  TOXICOLOGICAL INFORMATION

#### Acute Toxicity:

<table>
<thead>
<tr>
<th>Inhalation:</th>
<th>Not available</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ingestion:</th>
<th>Estimate : Rat, LD50 &gt; 5000 mg/kg</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Eye:</th>
<th>Estimate : Rabbit, transient slight conjunctival irritation only.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Skin:</th>
<th>Estimate : Rabbit, non irritant.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sensitization:</th>
<th>Not available</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Mutagenicity:</th>
<th>Estimate : Ames Test (Salmonella typhimurium) : Negative</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Reproductive Toxicity:</th>
<th>Not available</th>
</tr>
</thead>
</table>

Date of Issue: October 5, 1990  Revised: December 13, 2000
Carcinogenicity: Not available

Others:

Chronic effects: Mühle 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

Date of Issue: October 5, 1990  Revised: December 13, 2000
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:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferrite including copper and zinc</td>
<td>96 wt% (Maximum)</td>
</tr>
<tr>
<td>Copper and compounds(As Copper metal)</td>
<td>(12 wt%(Maximum))</td>
</tr>
<tr>
<td>Zinc and compounds(As Zinc metal)</td>
<td>(12 wt% (Maximum))</td>
</tr>
</tbody>
</table>

California Proposition 65:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
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
- DFG, List of MAK and BAT Values

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.
"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.
"FHSAA" stands for Federal Hazardous Substances Act.

The information, data and recommendations set forth herein (the "Information") are presented in good faith and are believed to be correct as of the date hereof. The company/manufacturer makes no representations as to the completeness or accuracy of the Information and disclaims responsibility for any reliance thereon. The Information is provided upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. Any use of the Information must be determined by the user to be in accordance with applicable Federal, state and local laws and regulations. In no event will the company/manufacturer be responsible for damages of any nature whatsoever resulting from the use or reliance upon the Information.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE WITH RESPECT TO THE INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

Date of Issue: October 5, 1990
Revised Date: December 13, 2000