# MATERIAL SAFETY DATA SHEET

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

**Product Name:** Canon Ink Cartridge BCI-21 Black  
**Product Code:** 0954A / F47-0731  
**Manufacturer:** Canon Inc., 30-2, Shimomaruko 3-Chome, Ohta-ku, Tokyo, Japan, Phone # 03-3758-2111  
**Supplier:** Canon USA, Inc., One Canon Park, Melville, NY 11747, USA  
**Phone #:** 1-800-OK-CANON  
24 Hr. Emergency CHEMTREC # 1-800-424-9300  

## SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name / Generic name</th>
<th>CAS # / EC #</th>
<th>Weight %</th>
<th>EU Symbol / R-Phrase</th>
<th>USA OSHA PEL</th>
<th>ACGIH TLV</th>
<th>EU ILV</th>
<th>DFG MAK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>56-81-5 / 200-289-5</td>
<td>5 - 10</td>
<td>None / None</td>
<td>(as mist) TWA = 15 mg/m³</td>
<td>(as mist) TWA = 10 mg/m³</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1 / 203-473-3</td>
<td>2 - 6</td>
<td>Xn / R22</td>
<td>Not established</td>
<td></td>
<td>TWA = 20 ppm, Ceiling = 100 mg/m³</td>
<td>10 ppm, 26 mg/m³</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>67-63-0 / 200-661-7</td>
<td>2 - 6</td>
<td>F / R11, Xi / R36, R67</td>
<td>TWA = 400 ppm, 980 mg/m³</td>
<td>TWA = 400 ppm, 983 mg/m³, STEL = 500 ppm, 1230 mg/m³</td>
<td>Not established</td>
<td>200 ppm, 500 mg/m³</td>
</tr>
<tr>
<td>Ammonia derivative</td>
<td>Confidential</td>
<td>5 - 10</td>
<td>None / None</td>
<td>Not established</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5 / 231-79-12</td>
<td>60 - 80</td>
<td>None / None</td>
<td>Not established</td>
<td></td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

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**Revised:** December 18, 2002
<Carcinogen>
No component of this ink 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:
Ink cartridge containing black liquid ink with slight odor.

Potential Health Effects and Symptoms:

Inhalation:
No adverse effects are expected under intended use.
Glycerin mist may cause physical irritation and difficulty breathing.
Over exposure to ethylene glycol and/or isopropyl alcohol may cause headache, nausea, dizziness, vomiting, drowsiness, cough and sore throat.

Ingestion:
Ingestion of glycerin, ethylene glycol and/or isopropyl alcohol may cause headache, nausea, dizziness, vomiting, drowsiness, abdominal pain, dullness and sore throat.

Eye:
May cause minimal irritation based on the animal test data of this ink.
(See SECTION 11)

Skin:
May be no irritation and no sensitization based on the animal test data of this ink.
(See SECTION 11)

Chronic Effects:
Not identified

Medical Conditions Generally known to be Aggravated by Exposure:
Not identified

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. Give one or two glasses of water.
If irritation or discomfort occurs, obtain medical advice immediately.

Eye:
Immediately flush with water for 5 minutes or until the chemical is removed.
If irritation persists, obtain medical advice immediately.

Skin:
Wash with water and soap or mild detergent.
If irritation persists, obtain medical advice.

Note to Physicians:
None

Date of Issue: February 16, 1996  Revised: December 18, 2002
SECTION 5  FIRE FIGHTING MEASURES

Fire Fighting Measures:

Extinguishing Media:

CO₂, water, foam or dry chemicals

Unsuitable Extinguishing Media:

None

Special Fire Fighting Procedures:

None

Unusual Fire and Explosion Hazards:

None

Fire and Explosive Properties (See also Section 9):

Hazardous Combustion Products:

CO, CO₂, and NOx

Other Properties:

None

SECTION 6  ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid contact with skin, eyes and clothing.

Environmental Precautions:

Do not release to sewer, surface water or ground water.

Method for Cleaning Up:

Wipe off with wet cloth or paper.

SECTION 7  HANDLING AND STORAGE

Handling:

Use with adequate ventilation.
Avoid contact with skin, eyes and clothing.
When contact, wash out immediately.

Storage:

Keep in a cool and dry place. Keep away from heat and flame.
Protect from sunlight.
Keep out of the reach of children.

Specific Uses:

Ink for Ink Jet Printer.
For more information, please refer to the instruction of this product.

SECTION 8  EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Not established for this ink. (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

Date of Issue: February 16, 1996
Revised: December 18, 2002
### SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Black liquid</td>
</tr>
<tr>
<td>Odor:</td>
<td>Slight odor</td>
</tr>
<tr>
<td>pH:</td>
<td>9.5 - 10.5</td>
</tr>
<tr>
<td>Boiling Point/Range(°C):</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point/Range(°C):</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature(°C):</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point(°C):</td>
<td>49.0 (Tag, closed cup. Do not sustain combustion.)</td>
</tr>
<tr>
<td>Flammable (Explosive) Limits:</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition Temperature(°C):</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Classified as &quot;Combustible liquid&quot; under OSHA-HCS. Not classified as &quot;flammable&quot; or &quot;combustible&quot; under FHSA. Not classified as &quot;flammable&quot; under 1999/45/EC.</td>
</tr>
<tr>
<td>Explosive Properties:</td>
<td>None</td>
</tr>
<tr>
<td>Oxidizing Properties:</td>
<td>None</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Density / Specific Gravity:</td>
<td>1.04</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>Miscible</td>
</tr>
<tr>
<td>Fat Solubility:</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient (n-Octanol/Water):</td>
<td>Not available</td>
</tr>
<tr>
<td>Percent Volatile (%):</td>
<td>60 - 80</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity (mPa s):</td>
<td>1.5 - 2.1</td>
</tr>
</tbody>
</table>

### SECTION 10  STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability:</td>
<td>☒ Stable</td>
</tr>
<tr>
<td>Conditions to Avoid:</td>
<td>None</td>
</tr>
<tr>
<td>Materials to Avoid:</td>
<td>Acids, bases, oxidizing materials and reducing agents</td>
</tr>
<tr>
<td>Hazardous Decomposition Products:</td>
<td>CO, CO₂, NOx and Ammonia</td>
</tr>
<tr>
<td>Hazardous Polymerization:</td>
<td>☒ May Occur</td>
</tr>
<tr>
<td>Conditions to Avoid:</td>
<td>None</td>
</tr>
</tbody>
</table>
SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

Inhalation:
Not available

Ingestion:
Not available

Eye:
Minimal irritant, Maximum Group Mean Score = 2.7, Class 3 (rabbit)
OECD Guidelines No.405 (1987)
92/69/EEC Method B5

Skin:
Non irritant, Primary Irritation Index = 0.0 (rabbit)
OECD Guidelines No.404 (1992)
92/69/EEC Method B4

Sensitization:
Non sensitizer, Sensitization rate = 0 % (0/10) (guinea pig)
96/54/EC Method B6

Mutagenicity:
Ames test : Negative (test strains: *S. typhimurium*)

Reproductive Toxicity:
Not available

Carcinogenicity:
Not available

Others:
Not available

Date of Issue: February 16, 1996
Revised: December 18, 2002
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 may be subject to federal, state and local laws.

SECTION 14  TRANSPORT INFORMATION

UN #: None
UN Shipping Name: None
UN Classification: None
UN Packing Group: None
Marine Pollutant: ☐ Yes  Chemical name (wt%): ☒ No

SECTION 15  REGULATORY INFORMATION

Information on the Label:
Symbol & Indication: Not required
R-Phrase:
Not required
S-Phrase:
Not required
Dangerous Component(s):
None

Special Precautions under 1999/45/EC Annex V:
Not required

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

Date of Issue: February 16, 1996  Revised: December 18, 2002
< USA Information >

Information on the Label under FHSA:

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>&quot;Ethylene glycol&quot; (107-21-1)</td>
<td>2 - 6</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>

< Canada Information >

WHMIS Controlled Product: Not applicable (Manufactured article)

< Australia Information >

Statement of Hazardous Nature: Not classified as hazardous according to criteria of NOHSC.

SECTION 16 OTHER INFORMATION

<R phrase list>
R11 : Highly flammable.
R22 : Harmful if swallowed.
R36 : Irritating to eyes.
R67 : Vapours may cause drowsiness and dizziness.

<Revised information from the previous version>
Entirely revised.

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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
- Canada Workplace Hazardous Materials Information System

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.
- DFG MAK: MAK(Maximale Arbeitsplatzkonzentrationen) under Deutsche Forschungsgemeinschaft.
- TWA: Time Weighted Average.
- NTP: National Toxicology Program (USA).
- FHSA: Federal Hazardous Substances Act (USA).

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