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**MATERIAL SAFETY DATA SHEET**


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DATE PREPARED: 13<sup>th</sup> January 1999**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****1.1 Identification of the Substance or Preparation**

Product Name: BC-81 Cartridge  
 Description: Cartridge for BJC8500

**1.2 Company Undertaking Identification**

Manufacturer: Canon Inc.  
 30-2, Shimomaruko  
 30 Chome, Ohta-Ku, Tokyo, 146-8501  
 Japan  
 Phone: 03-3758-2111

Distributor: Canon (UK) Limited  
 Canon House, Manor Road, Wallington, Surrey, SM6 0AJ  
 Telephone: (0181) 773 6000

**SECTION 2: COMPOSITION/INFORMATION OF INGREDIENTS**

Principal Components	Wt%	CAS #	EU Symbol	EU R-Phrase	DFG MAK
Glycerin	5-10	56-81-5	None	None	Not established
Isopropyl alcohol (contained only in black ink)	<5	67-63-0	No health risk	No health risk	200ppm, 500mg/m <sup>3</sup>
Water	60-90	-	-	-	-
Ammonia derivatives (contained only in black ink)	3-8	-	-	-	-
Glycols	<8	-	-	-	-

*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 OVERVIEW:** A set of three colours ink cartridge (cyan, magenta, yellow). The ink is liquid mixture with slight odour. Over exposure to vapour or mist may cause irritation. Black ink is combustible liquid.

**POTENTIAL HEALTH EFFECTS AND SYMPTOMS:**

**INGESTION:** Over ingestion of isopropyl alcohol, and glycerin may cause nausea, drowsiness, dizziness, vomiting, abdominal pain, headache, diarrhoea, sore throat.

**INHALATION:** No effects are expected under intended use. Over exposure of isopropyl alcohol may cause nausea, drowsiness, dizziness, vomiting, abdominal pain, headache, diarrhoea, sore throat. Glycerin mist may cause physical irritation, difficulty breathing.

**EYE CONTACT:** May cause minimal irritant based on the animal test data. (See Section 11).

**SKIN CONTACT:** May cause minimal irritant based on the animal test data. (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:** Give one or two glasses of water. If irritation persists, obtain medical attention immediately.

**EYE CONTACT:** Immediately flush with water for 5 minutes. If irritation persists, obtain medical advice immediately.

**SKIN CONTACT:** Wash with water and soap or mild detergent. If irritation persist, get medical attention.

**Note to Physicians:** None.

**SECTION 5. FIRE FIGHTING MEASURES**

FIRE FIGHTING MEASURES:	
EXTINGUISHING MEDIA:	CO <sub>2</sub> , water, foam and dry chemicals
UNSUITABLE EXTINGUISHING MEDIA:	None.
SPECIAL FIRE FIGHTING PROCEDURE:	None.
UNUSUAL FIRE AND EXPLOSIVE HAZARDS:	None.
FIRE AND EXPLOSIVE PROPERTIES:	
FLASH POINT(°C):	Cyan 57.9oC / Magenta 58.0oC / Yellow 56.0oC (Tag closed Cup: Do not sustain combustion)
FLAMMABLE (EXPLOSIVE) LIMITS:	No data available.
AUTO-IGNITION TEMPERATURE (°C):	No data available.
FLAMMABILITY:	Classified as 'combustible liquid' under OSHA-HCS(USA) and 'non-flammable' under 88/379/EEC (EU).
AUTO-FLAMMABILITY:	None.
EXPLOSIVE PROPERTIES:	None.
OXIDISING PROPERTIES:	None.
HAZARDOUS COMBUSTION PRODUCTS:	CO <sub>2</sub> , CO and NO <sub>x</sub>
OTHER PROPERTIES:	None.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS:	Avoid contact with skin, eyes and clothing.
ENVIRONMENTAL PRECAUTIONS:	It is recommended not to 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:	Avoid contact with skin, eyes and clothing. When contact, wash out immediately.
STORAGE:	Keep out of the reach of children. Store in cool and dry place.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

EXPOSURE GUIDELINES:	USA OSHA PEL: <b>Glycerin:</b> (as mist) Total dust: TWA =15mg/m <sup>3</sup> Respirable fraction: TWA = 5mg/m <sup>3</sup> ACGIH TLV: TWA=10mg/m <sup>3</sup>
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**Isopropyl alcohol**

USA OSHA PEL:  
 TWA=400ppm, 980mg/m<sup>3</sup>  
 ACGIH TLV:  
 TWA=400ppm, 983mg/m<sup>3</sup>  
 STEL=500ppm, 1230mg/m<sup>3</sup>  
 (Also refer to Section 2).

ENGINEERING CONTROLS:	Use usual ventilation to keep airborne concentrations below the permissible exposure limits. (See Section 2).
PERSONAL PROTECTION EQUIPMENT(S):	
RESPIRATORY PROTECTION:	Not Required.
EYE/FACE PROTECTION:	Not Required.
SKIN PROTECTION:	Not Required.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE:	Cyan, Magenta and Yellow liquid.
ODOUR:	Slight odour.
PH:	9.2-10.7
BOILING POINT/RANGE (°C):	No data available.
MELTING POINT/RANGE (°C):	No data available.
DECOMPOSITION TEMPERATURE (°C):	No data available.
FLASH POINT (°C):	Cyan 57.9°C / Magenta 58.0°C / Yellow 56.0°C (Tag closed cup: Do not sustain combustion).
FLAMMABLE (EXPLOSIVE) LIMITS:	No data available.
AUTOIGNITION TEMPERATURE (°C):	No data available.
FLAMMABILITY:	Classified as 'combustible liquid' under OSHA-HCS (USA) and 'non-flammable' under 88/379/EEC (EU).
AUTOFLAMMABILITY:	None.
EXPLOSIVE PROPERTIES:	None.
OXIDISING PROPERTIES:	None.
VAPOUR PRESSURE:	No data available.
VAPOUR DENSITY (Air=1):	No data available.
DENSITY/SPECIFIC GRAVITY:	Cyan 1.07 / Magenta 1.07 / Yellow 1.07
WATER SOLUBILITY:	Miscible.
FAT SOLUBILITY:	No data available.
PARTITION COEFFICIENT (N-OCTANOL/WATER):	No data available.
PERCENT VOLATILE:	65-90%
EVAPORATION RATE:	No data available.

**SECTION 10. STABILITY AND REACTIVITY**

STABILITY:	Stable.
CONDITIONS TO AVOID:	None.
MATERIALS TO AVOID:	None.
HAZARDOUS DECOMPOSITION PRODUCTS:	CO, CO <sub>2</sub> , NO <sub>x</sub> and Ammonia.
HAZARDOUS POLYMERISATION:	Will not occur.
CONDITIONS TO AVOID:	None.

**SECTION 11. TOXICOLOGICAL INFORMATION****ACUTE TOXICITY:**

INHALATION:	No data available
INGESTION:	No data available.
EYE CONTACT:	Cyan: Minimal irritant; Maximum Group Mean Score = 5.3 Class 3. Magenta: Minimal irritant; Maximum Group Mean Score = 2.7 Class 3. Yellow: Practically non-irritant; Maximum Group Mean Score = 0.7 Class 2. (rabbit). OECD Guidelines No. 405 Commission Directive 92/69/EEC. Method B6.
SKIN CONTACT:	Cyan: Mild irritant; Primary Irritation Index (PII) = 1.7. Magenta: Mild irritant; Primary Irritation Index (PII) = 1.0. Yellow: Mild irritant; Primary Irritation Index (PII) = 1.5. (rabbit). OECD Guidelines No. 404 Commission Directive 92/69/EEC. Method B4.
SENSITISATION:	Non sensitiser, Sensitisation rate=0% (0/10) (guinea pig). OECD Guidelines No. 406, Commission Directive 92/69/EEC. Method B6.
MUTAGENICITY:	Ames test: Negative (test strains: S. typhimurium & E. Coli)
REPRODUCTIVE TOXICITY:	No data available.
CARCINOGENICITY:	No human carcinogen or potential carcinogen, according to IARC Monographs, NTP and OSHA (USA) regulation, and EC Directive (Annex I to Directive 67/548/EEC).
OTHERS:	None.

**SECTION 12. ECOLOGICAL INFORMATION**

No data available.

**SECTION 13. DISPOSAL CONSIDERATIONS**

METHOD OF DISPOSAL: Disposal may 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 PRECAUTION: None.

**SECTION 15. REGULATORY INFORMATION****EU INFORMATION**

INFORMATION ON THE LABEL:

SYMBOL AND INDICATION: Not required.  
 RISK PHRASE: Not required.  
 S-PHRASE: Not required.  
 DANGEROUS INGREDIENTS: None.

**Specific provisions in relation to protection of man or the environment.**

76/769/EEC: Not regulated.  
 (EC)3093/94: 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 %  
 Copper compound <5  
 As Copper metal <0.35  
 (Contained only in cyan ink)

California Proposition 65:

Chemical Name Weight %  
 None

Revision Date: -

MSDS3129

## **SECTION 16. OTHER INFORMATION**

### **Literature Reference:**

- U.S. Department of Labour, 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 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 Regulation (EC) 3093/94, (EEC)2455/92 and their amendments.

### **Other Information:**

None

### **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.
- "IARC" stands for International Agency for Research on Cancer.
- "NTP" stands for National Toxicology Program (USA).
- '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.

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. And it is based on the level of our knowledge as of the date of preparation.