

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

Product Name:	Canon Color BJ Cartridge BC-34e Photo
Product Code:	4612A / F45-2081
Manufacturer:	Canon Inc. 30-2, Shimomaruko 3-Chome, Ohta-ku, Tokyo 146-8501, Japan
Supplier:	Canon Singapore Pte Ltd 1 HarbourFront Avenue, #04-01, Keppel Bay Tower, Singapore 098632 cspl_msds@canon.com.sg
Use of the Product:	Ink for Ink Jet Printer

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS
< Ingredient(s) >

Chemical Name / Generic name	CAS # / EC #	Weight %	EU Symbol/ R-Phrase	USA OSHA PEL	ACGIH TLV	EU ILV	DFG MAK
Glycerin	56-81-5 / 200-289-5	5 - 10	None / None	(as mist) Total dust TWA = 15 mg/m ³ Respirable fraction TWA = 5 mg/m ³	(as mist) TWA = 10 mg/m ³	Not established	Not established
Ethylene glycol (Contained in black, cyan and magenta ink)	107-21-1 / 203-473-3	2 - 6	Xn / R22	Not established	(aerosol) Ceiling = 100 mg/m ³	TWA = 20 ppm, 52 mg/m ³ STEL = 40 ppm, 104 mg/m ³	10 ppm, 26 mg/m ³
Diethylene glycol	111-46-6 / 203-872-2	2 - 6	Xn / R22	Not established	Not established	Not established	10 ppm, 44 mg/m ³
Copper, [29H,31H-phthalocyaninato(2-) -N29,N30,N31,N32]-, aminosulfonyl sulfo derivs., sodium salts (Contained only in cyan ink)	90295-11-7 / 291-001-7	1 - 3	Xi / R36	Not established	Not established	Not established	Copper and its compounds Inhalable fraction 1.0 mg/m ³
Isopropyl alcohol	67-63-0 / 200-661-7	1 - 3	F / R11 Xi / R36 R67	TWA = 400 ppm, 980 mg/m ³	TWA = 200 ppm, 492 mg/m ³ STEL = 400 ppm, 984 mg/m ³	Not established	200 ppm, 500 mg/m ³
Quinoline derivative (Contained only in magenta ink)	Confidential	1 - 3	Xi / R36	Not established	Not established	Not established	Not established
Tetralithium 6-amino-4-hydroxy-3-(7-sulfonato -4-(5-sulfonato-2-naphthylazo)-1- naphthylazo)naphthalene-2,7-disu lfonate (Contained only in black ink)	107246-80-0 / 403-660-1	1 - 3	N / R51/53	Not established	Not established	Not established	Not established
Ammonia derivative	Confidential	5 - 10	None / None	Not established	Not established	Not established	Not established
Water	7732-18-5 / 231-79-12	60 - 80	None / None	Not established	Not established	Not established	Not established

< 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:

A set of four colors ink cartridges. (Black, Cyan, Magenta and Yellow)

All the ink is liquid mixture with slight odor.

Potential Health Effects and Symptoms:
Inhalation:

No adverse effects are expected under intended use.

Over exposure to vapor or mist may cause respiratory tract irritation, cough, dizziness, drowsiness, headache and nausea.

Ingestion:

May cause abdominal pain, diarrhea, dizziness, drowsiness, dullness, headache, nausea and vomiting.

Eye:

May cause minimal irritation. (See SECTION 11)

Skin:

Black , Cyan and Yellow : May cause mild irritation and no sensitization.

Magenta : Neither irritation nor sensitization is expected.

(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 lukewarm, gently flowing 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

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 NO_x

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.

In case of contact, wash out the contaminated area immediately.

Storage:

Keep in a cool and dry place. Protect from sunlight.

Keep away from heat and flame.

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. (See also 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

MATERIAL SAFETY DATA SHEET

 MSDS #: IC1168-0202
 Product Code: 4612A / F45-2081
SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black, cyan, magenta and yellow liquid
Odor:	Slight odor
pH:	8.1 - 10.3
Boiling Point/Range(°C):	Not available
Melting Point/Range(°C):	Not available
Decomposition Temperature(°C):	Not available
Flash Point(°C):	Estimate : 55 -57 (Tag Closed Cup. Combustion is not sustainable.)
Flammable (Explosive) Limits:	Not available
Autoignition Temperature(°C):	Not available
Flammability:	Classified as "Combustible liquid" under OSHA-HCS. Not classified as "flammable" or "combustible" under FHSA. Not classified as "flammable" under 1999/45/EC.
Explosive Properties:	None
Oxidizing Properties:	None
Vapor Pressure :	Not available
Vapor Density :	Not available
Density / Specific Gravity:	1.04 - 1.10
Water Solubility :	Miscible
Fat Solubility :	Not available
Partition Coefficient (n-Octanol/Water):	Not available
Percent Volatile (%):	60 - 80
Evaporation Rate:	Not available
Viscosity (mPa s):	1.6 - 2.5

SECTION 10 STABILITY AND REACTIVITY

Stability:	<input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable
Conditions to Avoid:	None
Materials to Avoid:	Acids, bases, oxidizing materials and reducing agents
Hazardous Decomposition Products:	CO, CO ₂ , NOx and Ammonia
Hazardous Polymerization:	<input type="checkbox"/> May Occur <input checked="" type="checkbox"/> Will Not Occur
Conditions to Avoid:	None

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

Inhalation:

Not available

Ingestion:

Black and Cyan : Estimated LD₅₀ > 2500 mg/kg, 0/6 mortalities at 2000 mg/kg (rat)

Magenta : [Data of similar composition ink] Estimated LD₅₀ > 2500 mg/kg (rat)

OECD Guidelines No.423 (1996)

96/54/EC Method B1 tris

Yellow : Not available

Eye:

Black : Minimal irritant, Maximum Group Mean Score = 3.3, Class 3 (rabbit)

Cyan : Minimal irritant, Maximum Group Mean Score = 5.3, Class 3 (rabbit)

Yellow : Minimal irritant, Maximum Group Mean Score = 4.7, Class 3 (rabbit)

Magenta : [Data of similar composition ink] Minimal irritant (rabbit)

OECD Guidelines No.405 (1987)

92/69/EEC Method B5

Skin:

Black : Mild irritant, Primary Irritation Index = 0.7 (rabbit)

Cyan : Mild irritant, Primary Irritation Index = 1.8 (rabbit)

Yellow : Mild irritant, Primary Irritation Index = 0.2 (rabbit)

Magenta : [Data of similar composition ink] Non irritant (rabbit)

OECD Guidelines No.404 (1992)

92/69/EEC Method B4

Sensitization:

Black and Cyan : Non sensitizer, Sensitization rate = 0 % (0/9) (guinea pig)

Yellow : Non sensitizer, Sensitization rate = 0 % (0/10) (guinea pig)

Magenta : [Data of similar composition ink] Non sensitizer (guinea pig)

OECD Guidelines No.406 (1992)

96/54/EC Method B6

Mutagenicity:

Ames test :

All colors : Negative (test strains: *S.typhimurium* & *E.Coli*)

Reproductive Toxicity:

Not available

Carcinogenicity:

Not available

Others:

Not available

SECTION 12 ECOLOGICAL INFORMATION

Mobility: Not available

Persistence / Degradability: Not available

Bioaccumulation: Not available

Ecotoxicity: Tetralithium 6-amino-4-hydroxy-3-[7-sulfonato-4-(5-sulfonato-2-naphthylazo)-1-naphthylazo] naphthalene-2,7-disulfonate (107246-80-0) :
Fish, Acute Toxicity Test : 96 Hour LC50 560-1000 mg/l , NOEC 560 mg/l (Cyprinus Carpio)
OECD Guideline No. 203(1984) & 84/449/EEC Method C1
Daphnia sp. , Acute Immobilization Test :
24 Hour EC50 560-1000 mg/l , NOEC 560 mg/l (Daphnia magna)
OECD Guideline No.202 (1984) & 84/449/EEC Method C2
Daphnia sp. , Acute Reproduction Test : 19-Day NOEC 5.6 mg/l , LOEC 18 mg/l (Daphnia magna)
OECD Guideline No.202 (1984)
NOEC : No Observed Effect Concentration , LOEC : Lowest Observed Effect Concentration

Other Adverse Effects: Not available

SECTION 13 DISPOSAL CONSIDERATION

Method of Disposal: Disposal should 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 No **Chemical name (wt%):**

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

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

(EC)304/2003: Not regulated

Others: None

< 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:

<u>Chemical Name</u>	<u>Weight %</u>
"Ethylene glycol" (107-21-1) (Contained in black, cyan and magenta ink)	2 - 6
"Copper Compounds" (Contained only in cyan ink) (as Cu)	1 - 3 (<0.35)

California Proposition 65:

<u>Chemical Name</u>	<u>Weight %</u>
None	

< 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 or dizziness.

R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

<Revised information from the previous version>

Section 2, 3, 4, 7, 8, 11 and 13

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, 1999/45/EC
- EU Regulation (EC)2037/2000, (EC)304/2003
- Canada Workplace Hazardous Materials Information System
- Australia National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances [NOHSC:1008]

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.
EU ILV: Indicative Limit Values for Occupational Exposure under EU Directive 91/322/EEC and 2000/39/EC.
DFG MAK: MAK(Maximale Arbeitsplatzkonzentrationen) under Deutsche Forschungsgemeinschaft.
TWA: Time Weighted Average.
IARC: International Agency for Research on Cancer.
NTP: National Toxicology Program (USA).
OSHA HCS: Occupational Safety and Health Act, Hazard Communication Standard (USA).
FHSA: Federal Hazardous Substances Act (USA).
WHMIS: Workplace Hazardous Materials Information System.
NOHSC: National Occupational Health and Safety Commission Act 1985.

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