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DFG MAK



MATERIAL SAFETY DATA SHEET

USA

ACGIH TLV

EU ILV

MSDS #: IC1047-0202 Product Code: 7721A001AA

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE

EU Symbol/

COMPANY/UNDERTAKING

Product Name: Canon Ink Tank BCI-1302PC

CAS#/

Product Code: 7721A001AA

Company Name: Canon Europa N.V.

Address: Bovenkerkerweg 59-61, 1185 XB, Amstelveen, The Netherlands

Use of the Product: Ink for Ink Jet Printer

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Weight

< Ingredient(s) >	
Chemical Name /	

Chemical Name / Generic Name	EC#	weight %	R-Phrase	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/m³ Respirable fraction TWA = 5 mg/m³	(as mist) TWA = 10 mg/m ³	Not established	Not established
Ethylene glycol	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
Poly(oxy-1,2-ethanediyl), .alpha.,alpha.'-[1,4-dimethyl-1,4- bis(2-methylpropyl)-2-butyne-1,4- diyl]bis[.omegahydroxy-	9014-85-1 / Not applicable	1 - 3	Xi / R41	Not established	Not established	Not established	Not established
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
Glycol	Confidential	5 - 10	None / None	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 / 231-791-2	50 - 70	None / None	Not established	Not established	Not established	Not established



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< 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 tank containing cyan liquid ink with slight odor.

Combustible liquid and vapor.

Vapor or mist may cause respiratory tract, skin and eye irritation.

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 mild irritation. (See SECTION 11)

Skin:

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



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	GHTING MEASURES
Fire Fighting Measures:	
Extinguishing Media:	
CO ₂ , water, foam or dr	
Unsuitable Extinguishing	g Media:
None	
Special Fire Fighting Pr None	ocedures:
Unusual Fire and Explos None	ion Hazards:
	(Con also Continue).
Fire and Explosive Propertie Hazardous Combustion	
CO, CO ₂ , NOx and SO	
Other Properties:	**
None	
SECTION 6 ACCIDE	NTAL RELEASE MEASURES
Personal Precautions:	
Avoid contact with skin,	
Avoid breathing vapor ar	nd mist.
Environmental Precautions:	
	surface water or ground water.
Method for Cleaning Up:	
Wipe off with wet cloth o	or paper.
SECTION 7 HANDLI	ING AND STORAGE
Handling:	
Handling: Avoid breathing vapor as	
Avoid breathing vapor as Use with adequate ventile	nd mist. ation.
Avoid breathing vapor as Use with adequate ventile	nd mist.
Avoid breathing vapor as Use with adequate ventile	nd mist. ation.
Avoid breathing vapor as Use with adequate ventile Avoid contact with skin, Storage: Keep in a cool and dry pl	nd mist. ation. eyes and clothing. In case of contact, wash out the contaminated area immediately.
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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES				
Appearance:	Cyan liquid			
Odor:	Slight odor			
pH:	9 - 10			
Boiling Point/Range(°C):	Not available			
Melting Point/Range(°C):	Not available			
Decomposition Temperature(°C):	Not available			
Flash Point(°C):	Estimate: 58 - 63 (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:	1.0 - 1.1			
Water Solubility:	Miscible			
Fat Solubility:	Not available			
$Partition\ Coefficient\ (n\hbox{-}Octanol/Water)\hbox{:}$	Not available			
Percent Volatile (%):	50 - 70			
Evaporation Rate:	Not available			
Viscosity (mPa s):	1-3			
SECTION 10 STABILITY AND REA	ACTIVITY			
Stability:	Stable Unstable			
Conditions to Avoid:	None			
Materials to Avoid:	Acids, bases, oxidizing materials and reducing agents			
Hazardous Decomposition Products:	CO, CO ₂ , NOx, SOx and Ammonia			
Hazardous Polymerization:	☐ May Occur ☑ Will Not Occur			
Conditions to Avoid:	None			

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Others:

Not available

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SECTION 11 TOXICOLOGICAL INFORMATION **Acute Toxicity:** Inhalation: Not available **Ingestion:** Not available Eye: [Data of similar composition ink] Mild irritant (rabbit) OECD Guidelines No.405 (1987) 92/69/EEC Method B5 Skin: [Data of similar composition ink] Non-irritant (rabbit) OECD Guidelines No.404 (1992) 92/69/EEC Method B4 **Sensitization:** [Data of similar composition ink] Non-sensitizer (guinea pig) OECD Guidelines No.406 (1992) 96/54/EC Method B6 Mutagenicity: Ames test: Negative (S. typhimurium & E. Coli) **Reproductive Toxicity:** Not available Carcinogenicity: Not available

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SECTION 12	ECOLOGICAL INFORMATION
Mobility:	Not available
Persistence / Degradability:	Not available
Bioaccumulation:	Not available
Ecotoxicity:	Not available
Other Adverse Effe	Not available Not available
	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 None
UN Classification:	None
UN Packing Group:	None
Marine Pollutant:	☐ Yes Chemical name (wt%): ☑ No
Special Precautions	
SECTION 15 < EU Information >	REGULATORY INFORMATION
Information on the l Symbol & Indic	
R-Phrase: Not required	
S-Phrase: Not required	
Dangerous Com None	iponent(s):
Special Precaut	tions under 1999/45/EC Annex V:
Safety data s	sheet available for professional user on request.
Specific Provisions i	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

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< USA Information >

Information on the Label under OSHA HCS:

Signal Word: Not required

Hazard warning:

COMBUSTIBLE LIQUID AND VAPOR.

VAPOR OR MIST MAY CAUSE RESPIRATORY TRACT, SKIN AND EYE IRRITATION.

Safety Advice:

Not required

Hazardous Component(s):

Glycerin (56-81-5) 5 - 10 % Ethylene glycol (107-21-1) 2 - 6 % Isopropyl alcohol (67-63-0) 1 - 3 %

SARA Title III §313:

Chemical Name Weight %

"Ethylene glycol" (107-21-1) 2 - 6

California Proposition 65:

Chemical Name Weight %

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.

R41: Risk of serious damage to eyes.

R67: Vapours may cause drowsiness and dizziness.

<Revised information from the previous version>

Section 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 13



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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
- 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 Arbeitsplatz-Konzentration) under Deutsche Forschungsgemeinschaft.

TWA: Time Weighted Average. STEL: Short Term Exposure Limit.

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.

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