

Product name: HC-01BK (CARTRIDGE STD CBR-M1), HC-05BK
(CARTRIDGE HYD CBR-M1) ,CARTRIDGE INCLUDED CBR-M1

Issuing Date: 02-August-2011
Revision Date: 10-November-2012
Version: 6
SDS No: CBRK002-01-EUUSOTHER

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name (code) HC-01BK (CARTRIDGE STD CBR-M1) (LKA001001)
HC-05BK (CARTRIDGE HYD CBR-M1) (LKA039001)
CARTRIDGE INCLUDED CBR-M1 (LKA179001)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant Identified Use(s) Cartridge containing two water based inks (Black ink and Pre-coat) and a liquid (Optimizer) for inkjet printing machines. Information provided on this SDS is only consistent with the use specified by Brother.

1.3 Details of the supplier of the safety data sheet

Manufacturer Brother Industries, Ltd.
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan
Telephone (for information): +81-52-824-2735

Importer (USA) Brother International Corporation
200 Crossing Boulevard, Bridgewater, NJ 08807, USA
Telephone (for information): +1-800-284-4329

Importer (Canada) Brother International Corporation (Canada) Ltd.
1 Hotel de Ville, Dollard des Ormeaux, Quebec, H9B 3H6, Canada
Telephone (for information): +1-514-685-0600

Importer (Europe) Brother International Europe Ltd.
Brother House, 1 Tame Street, Guide Bridge, Audenshaw, Manchester M34 5JE, UK
Telephone (for information): +44-161-330-6531

Importer (Australia) Brother International (Aust.) Pty. Ltd. ACN 001 393 835
Level 3, Building A, 11 Talavera Road, Macquarie Park, NSW 2113, Australia
Telephone (for information): +61-2-9887-4344

E-mail Address sds.info@brother.co.jp

1.4 Emergency telephone number

Emergency Telephone (24 hours) CHEMTREC
+1-703-527-3887 (International)
+1-800-424-9300 (North America)

For France only:
Antipoison Center telephone number: ORFILA +33-1-45-425-959

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Not classified as hazardous

Classification according to Directive 1999/45/EC

Not classified as hazardous

Australia Classification

Not classified as hazardous according to the criteria of NOHSC

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms

None

Signal Word

None

Hazard Statements

None

Precautionary statements

None

2.3 Other hazards

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture: Two water based inks (Black ink and Pre-coat) and a liquid (Optimizer) for inkjet printing machines (Mixture)

Black Ink

Chemical Name	CAS-No	EC-No	w/w%	Classification (67/548/EEC)	Classification (EU Reg. 1272/2008)
Carbon Black	1333-86-4	215-609-9	1 - 10	Not classified	Not classified
Glycerol	56-81-5	200-289-5	10 - 20	Not classified	Not classified
Diethylene glycol	111-46-6	203-872-2	1 - 9	Xn; R22	Acute Tox. 4 (H302)
Water	7732-18-5	231-791-2	55 - 65	Not classified	Not classified

(Pre-coat)

Chemical Name	CAS-No	EC-No	w/w%	Classification (67/548/EEC)	Classification (EU Reg. 1272/2008)
Glycerol	56-81-5	200-289-5	35 - 45	Not classified	Not classified
Triethylene glycol monobutyl ether	143-22-6	205-592-6	1 - 5	Xi; R41	Eye Dam. 1 (H318)
Water	7732-18-5	231-791-2	50 - 60	Not classified	Not classified

(Optimizer)

Chemical Name	CAS-No	EC-No	w/w%	Classification (67/548/EEC)	Classification (EU Reg. 1272/2008)
Dipropylene glycol	**	**	< 1	Not classified	Not classified
Water	7732-18-5	231-791-2	99 - 100	Not classified	Not classified

For the full text of R-phrases and H-Statements see Section 16

** Registered

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	If symptoms persist, call a physician.
Inhalation	Obtain immediate medical attention. In case of accident by inhalation remove casualty to fresh air and keep at rest.
Skin contact	Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Ingestion	Obtain immediate medical attention. Wash out mouth with water and give 100-200 ml of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: No specific effects and/or symptoms have been reported or known. Over exposure to vapor or mist may cause symptoms such as respiratory irritation, cough, dizziness, headache and nausea.

Eye contact: Inks and liquid may cause slight irritation.

Skin contact: Prolonged exposure to inks or liquid may cause irritation.

Ingestion: Inks and liquid may cause gastrointestinal or other adverse effects.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable Extinguishing Media	Extinguish preferably with dry chemical, carbon dioxide, water, foam.
Unsuitable Extinguishing Media	None.

5.2 Special hazards arising from the substance or mixture

May produce toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides and sulfur oxides.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Do not allow to enter drains, sewers or water courses.

6.3 Methods and materials for containment and cleaning up

Wipe up with absorbent towel. Wash with water to remove remaining traces of ink or liquid.

6.4 Reference to other sections

See section 8.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling** Avoid contact with skin, eyes and clothing.
- 7.2 Conditions for safe storage, including any incompatibilities** Keep out of the reach of children. Keep in a cool, well ventilated place.
- 7.3 Specific end use(s)** Cartridge containing two water based inks (Black ink and Pre-coat) and a liquid (Optimizer) for inkjet printing machines.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical Name	Carbon Black 1333-86-4
ACGIH TLV	TWA: 3 mg/m ³ inhalable fraction
OSHA PEL	TWA: 3.5 mg/m ³
European Union	-
The United Kingdom	STEL: 7 mg/m ³ TWA: 3.5 mg/m ³
France	TWA: 3.5 mg/m ³
Spain	TWA: 3.5 mg/m ³
Germany	Carc
Portugal	TWA: 3.5 mg/m ³
Finland	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³
Denmark	TWA: 3.5 mg/m ³
Poland	TWA: 4.0 mg/m ³
Norway	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³
Ireland	TWA: 3.5 mg/m ³ STEL: 7 mg/m ³
Chemical Name	Glycerol 56-81-5
ACGIH TLV	TWA: 10 mg/m ³ mist
OSHA PEL	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction
European Union	-
The United Kingdom	STEL: 30 mg/m ³ TWA: 10 mg/m ³
France	TWA: 10 mg/m ³
Spain	TWA: 10 mg/m ³
Germany	TWA: 50 mg/m ³ Ceiling / Peak: 100 mg/m ³
Portugal	TWA: 10 mg/m ³
Finland	TWA: 20 mg/m ³
Switzerland	STEL: 100 mg/m ³ TWA: 50 mg/m ³
Poland	TWA: 10 mg/m ³
Ireland	TWA: 10 mg/m ³
Chemical Name	Diethylene glycol 111-46-6
ACGIH TLV	-
OSHA PEL	-
European Union	-

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The United Kingdom	STEL: 69 ppm STEL: 303 mg/m ³ TWA: 23 ppm TWA: 101 mg/m ³
Germany	TWA: 10 ppm TWA: 44 mg/m ³ Ceiling / Peak: 40 ppm Ceiling / Peak: 176 mg/m ³
Denmark	TWA: 2.5 ppm TWA: 11 mg/m ³
Austria	STEL 40 ppm STEL 176 mg/m ³ TWA: 10 ppm TWA: 44 mg/m ³
Switzerland	STEL: 40 ppm STEL: 176 mg/m ³ TWA: 10 ppm TWA: 44 mg/m ³
Poland	TWA: 10 mg/m ³
Ireland	TWA: 23 ppm TWA: 100 mg/m ³

8.2 Exposure controls

Appropriate engineering controls Good general ventilation should be sufficient under normal use.

Personal protective equipment Not normally required.

Eye Protection Not normally required.

Hand Protection Not normally required.

Skin and body protection Not normally required.

Respiratory protection Not normally required.

Environmental Exposure Controls Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	Liquid
Color	Black (Black ink), Colorless (Pre-coat and Optimizer)
Odor	Slight
Odor Threshold	No information available
pH	7 - 9
Melting point/freezing point	<= 0 °C
Initial boiling point and boiling range	> 100 °C
Flash Point	Not less than 93.3 °C (Tag closed cup, Cleveland open cup)
Evaporation rate	No information available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	1.0 - 1.2 (Black Ink and Pre-coat) 0.9 - 1.1 (Optimizer)
Solubility(ies)	Soluble (water)
Partition coefficient: n-octanol/water	No information available
Auto-ignition temperature	>390 °C
Decomposition temperature	No information available
Viscosity	3 – 6 mPa·s (Black Ink and Pre-coat) 0.8 - 1.2 mPa·s (Optimizer)
Explosive properties	No information available
Oxidizing properties	No information available

9.2 Other information

No information available

SECTION 10: Stability and reactivity

10.1 Reactivity	No information available.
10.2 Chemical stability	Stable.
10.3 Possibility of hazardous reactions	None known.
10.4 Conditions to avoid	Keep away from heat, high humidity and direct sunlight.
10.5 Incompatible materials	Acids. Bases. Oxidizing agents. Reducing agents.
10.6 Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO ₂). Nitrogen oxides (NO _x). Sulfur oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation	No information available.
Eye contact	No information available.
Skin contact	No information available.
Ingestion	LD ₅₀ > 2000 mg/kg inks and liquid (Method: OECD#420)

Skin corrosion/irritation	Non-irritant. (Black ink and Optimizer) (Method: OECD#404) Mild Irritant. (Pre-coat) (Method: OECD#404)
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Serious eye damage/irritation	Mild Irritant. (Black Ink and Pre-coat) (Method: OECD#405) Minimal irritant to the eye. (Optimizer) (Method: OECD#405)
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Respiratory or skin sensitisation	Respiratory sensitization: No information available. None of the components are skin sensitizers. (Method: OECD#429)
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Mutagenicity	Negative. (Method: OECD#471)
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Carcinogenicity	Carbon Black: In 1996, the IARC re-evaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals, for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors.
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Other ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA

SECTION 12: Ecological information

12.1 Toxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Carbon Black 1333-86-4			EC ₅₀ : >5600 mg/L 24 h (Daphnia magna)
Glycerol 56-81-5		LC ₅₀ : 51 - 57 mL/L 96 h static (Oncorhynchus mykiss)	EC ₅₀ : >500 mg/L 24 h (Daphnia magna)
Diethylene glycol 111-46-6		LC ₅₀ : 75200 mg/L 96 h flow-through (Pimephales promelas)	EC ₅₀ : 84000 mg/L 48 h (Daphnia magna)
Triethylene glycol monobutyl ether 143-22-6	EC ₅₀ : >500 mg/L 72 h (Desmodesmus subspicatus)	LC ₅₀ : 2200 - 4600 mg/L 96 h static (Leuciscus idus) LC ₅₀ : 2400 mg/L 96 h static (Pimephales promelas) LC ₅₀ : 2400 mg/L 96 h (Pimephales promelas)	EC ₅₀ : >500 mg/L 48 h (Daphnia magna)

12.2 Persistence and degradability No information available.

12.3 Bioaccumulative potential

Chemical Name	log Pow
Glycerol	-1.76
Diethylene glycol	-1.98
Triethylene glycol monobutyl ether	0.51

12.4 Mobility in soil No information available.

12.5 Results of PBT and vPvB assessment This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods Dispose of in accordance with Federal, State, and local regulations.

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SECTION 14: Transport information

14.1 UN Number	None
14.2 UN proper shipping name	None
14.3 Transport hazard class(es)	None
14.4 Packing Group	None
14.5 Environmental hazards	None
14.6 Special precautions for user	None
14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code	Not applicable

Not regulated under DOT, IMDG, IATA.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	<p>EU:Not classified as dangerous for supply/use. (1999/45/EC)</p> <p>USA: All chemical substances contained in this product are and had been listed on the TSCA Chemical Substances Inventory, and none is subject to any of the following TSCA requirements: section 4 test rules; proposed or final section 5(a)(2) significant new use rules; section 5(e) consent orders; section 8(a) preliminary assessment information rules; and section 8(d) health and safety data reporting rules.</p> <p>Canada: WHMIS: Not applicable. (Manufactured article)</p>
15.2 Chemical Safety Assessment	No.

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SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3	R22 - Harmful if swallowed R41 - Risk of serious damage to eyes
Full text of H-Statements referred to under sections 2 and 3	H302 - Harmful if swallowed H318 - Causes serious eye damage
Additional information	The information relates only to this product. It may not be valid, if used in combination with any other materials or in any other process, and it is based on our best knowledge as of the date of preparation (revision).
Revision Note	Section 1 updated.
Abbreviations:	ACGIH: American Conference of Governmental Industrial Hygienists DOT: Department Of Transportation (US) IARC: International Agency for Research on Cancer IATA: International Air Transport Association IMDG: International Maritime Dangerous Goods NOHSC: National Occupational Health and Safety Commission (Australia) NTP: National Toxicology Program (US) OSHA: Occupational Safety and Health Administration (US) PEL: Permissible Exposure Limit STEL: Short Term Exposure Limit TLV: Threshold Limit Value (ACGIH) TSCA: Toxic Substances Control Act (US) TWA: Time Weighted Average WHMIS: Workplace Hazardous Material Information System (Canada)