

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

Revision Date: 10-Mar-2020

Issuing Date: 02-Aug-2011

Revision Number: 8

Safety data sheet number: CBRK002-01

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

1.1. Product identifier

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

Product Form Mixture

Safety data sheet number CBRK002-01

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

Relevant identified uses 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.

Uses advised against No information available

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

For further information, please contact

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

1.4. Emergency telephone number

Emergency Telephone CHEMTREC +1-703-527-3887 (International)

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

Section 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

EUH208 - Contains 1,2-Benzisothiazolin-3-one May produce an allergic reaction.

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).

Section 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Black ink

| Chemical name | CAS No | EC No | EC Index No | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH Registration Number |
|----------------------------|-----------|------------------------|--------------|----------|---|---------------------------|
| Water | 7732-18-5 | 231-791-2 | - | 55-65 | Not classified | No data available |
| Glycerol | 56-81-5 | 200-289-5 | - | 10-20 | Not classified | No data available |
| Diethylene glycol | 111-46-6 | 203-872-2 | 603-140-00-6 | 1-9 | Acute Tox. 4 (H302) | No data available |
| Carbon Black | 1333-86-4 | 215-609-9 435-640-3 | - | 1-10 | Not classified | Registered |
| 1,2-Benzisothiazolin-3-one | 2634-33-5 | 220-120-9 | 613-088-00-6 | <0.05 | Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) | No data available |

Pre-coat

| Chemical name | CAS No | EC No | EC Index No | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH Registration Number |
|---------------|-----------|-----------|-------------|----------|---|---------------------------|
| Water | 7732-18-5 | 231-791-2 | - | 50-60 | Not classified | No data available |
| Glycerol | 56-81-5 | 200-289-5 | - | 35-45 | Not classified | No data available |

Revision Date: 10-Mar-2020

Issuing Date: 02-Aug-2011

Revision Number: 8

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

Safety data sheet number: CBRK002-01

| | | | | | | |
|-------------------------------------|-----------|-----------|--------------|-------|---|-------------------|
| Triethylene glycol, monobutyl ether | 143-22-6 | 205-592-6 | 603-183-00-0 | 1-5 | Eye Dam. 1 (H318) | No data available |
| 1,2-Benzisothiazolin-3-one | 2634-33-5 | 220-120-9 | 613-088-00-6 | <0.05 | Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) | No data available |

Optimizer

| Chemical name | CAS No | EC No | EC Index No | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH Registration Number |
|----------------------------|-----------|-----------|--------------|----------|---|---------------------------|
| Water | 7732-18-5 | 231-791-2 | - | 99-100 | Not classified | No data available |
| 1,2-Benzisothiazolin-3-one | 2634-33-5 | 220-120-9 | 613-088-00-6 | <0.05 | Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) | No data available |

Full text of H- and EUH-phrases: see section 16

Section 4: First aid measures

4.1. Description of first aid measures

| | |
|-----------------------|--|
| General advice | If symptoms persist, call a physician. |
| Inhalation | Get immediate medical advice/attention. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. |
| Eye contact | Get immediate medical advice/attention. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. |
| Skin contact: | Take off contaminated clothing. Wash off immediately with soap and plenty of water. |
| Ingestion | Obtain immediate medical attention. Wash out mouth with water and give 100-200 ml of water to drink. |

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

Revision Date: 10-Mar-2020

Issuing Date: 02-Aug-2011

Revision Number: 8

Safety data sheet number: CBRK002-01

4.2. Most important symptoms and effects, both acute and delayed

Symptoms
Inhalation : No specific effects and/or symptoms have been reported or known
For large quantities: May cause irritation to the respiratory system. Increased difficulty in breathing. Sneezing. Coughing
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

Note to physicians Treat symptomatically.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical, CO₂, water spray or regular foam

Unsuitable extinguishing media None

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Thermal decomposition can lead to release of toxic/corrosive gases and vapors.
. Carbon monoxide. . Carbon dioxide (CO₂). . Nitrogen oxides (NOx). . Oxides of sulfur.

5.3. Advice for firefighters

Special protective equipment for fire-fighters In case of fire: Wear self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid contact with skin, eyes or clothing.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent substance entering sewers. Washings must be prevented from entering surface water drains.

6.3. Methods and material for containment and cleaning up

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

Revision Date: 10-Mar-2020

Issuing Date: 02-Aug-2011

Revision Number: 8

Safety data sheet number: CBRK002-01

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Wipe up with absorbent towel Wash with water to remove remaining traces of ink.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific 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.

Section 8: Exposure controls and personal protection

8.1. Control parameters

Exposure Limits

| Chemical name | European Union | United Kingdom | France | Spain | Germany |
|-------------------------------|----------------|--|----------------------------|----------------------------|--|
| Glycerol 56-81-5 | - | TWA: 10 mg/m ³ STEL: 30 mg/m ³ | TWA: 10 mg/m ³ | TWA: 10 mg/m ³ | TWA: 200 mg/m ³ |
| Diethylene glycol 111-46-6 | - | TWA: 23 ppm TWA: 101 mg/m ³ STEL: 69 ppm STEL: 303 mg/m ³ | - | - | TWA: 10 ppm TWA: 44 mg/m ³ |
| Carbon Black 1333-86-4 | - | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ | TWA: 3.5 mg/m ³ | TWA: 3.5 mg/m ³ | - |
| Chemical name | Italy | Portugal | Netherlands | Finland | Denmark |
| Glycerol 56-81-5 | - | TWA: 10 mg/m ³ | - | TWA: 20 mg/m ³ | - |

| | | | | | |
|-------------------------------|---|---|----------------------------|---|--|
| Diethylene glycol 111-46-6 | - | - | - | - | TWA: 2.5 ppm TWA: 11 mg/m ³ |
| Carbon Black 1333-86-4 | - | TWA: 3.5 mg/m ³ | - | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ | TWA: 3.5 mg/m ³ |
| Chemical name | Austria | Switzerland | Poland | Norway | Ireland |
| Glycerol 56-81-5 | - | TWA: 50 mg/m ³ STEL: 100 mg/m ³ | TWA: 10 mg/m ³ | - | TWA: 10 mg/m ³ STEL: 30 mg/m ³ |
| Diethylene glycol 111-46-6 | TWA: 10 ppm TWA: 44 mg/m ³ STEL 40 ppm STEL 176 mg/m ³ | TWA: 10 ppm TWA: 44 mg/m ³ STEL: 40 ppm STEL: 176 mg/m ³ | TWA: 10 mg/m ³ | - | TWA: 23 ppm TWA: 100 mg/m ³ STEL: 69 ppm STEL: 300 mg/m ³ |
| Carbon Black 1333-86-4 | - | - | TWA: 4.0 mg/m ³ | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ | TWA: 3 mg/m ³ STEL: 15 mg/m ³ |

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

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

Personal protective equipment Not normally required.

Eye/face 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

Property

Values

Remarks • Method

pH

7 - 9

Melting point / freezing point

<= 0 °C

Boiling point / boiling range

> 100 °C

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

Safety data sheet number: CBRK002-01

| | | |
|----------------------------------|---|-------------------------------------|
| Flash point | > 94 °C | Tag Closed Cup, Cleveland Open Cup, |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability limit: | No data available | |
| Lower flammability limit: | No data available | |
| Vapor pressure | No data available | None known |
| Vapor density | No data available | None known |
| Relative density | 1.0 - 1.2 (Black Ink and Pre-coat) 0.9 - 1.1 (Optimizer) | (H ₂ O=1) |
| Water solubility | Soluble in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | > 390 °C | |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | 3 - 6 mPa s (Black Ink and Pre-coat) 0.8 - 1.2 mPa·s (Optimizer) | |
| Explosive properties | No information available | 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 under normal conditions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Keep away from heat. Keep away from water or moist air. Protect from direct sunlight.

10.5. Incompatible materials

Acids, Bases, Oxidizing agent, Reducing agent

10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NO_x), Oxides of sulfur

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

Revision Date: 10-Mar-2020

Issuing Date: 02-Aug-2011

Revision Number: 8

Safety data sheet number: CBRK002-01

Section 11: Toxicological information

11.1. Information on toxicological effects

Product Information

Inhalation No information available

Eye contact No information available

Skin contact: No information available

Ingestion Acute LD₅₀ > 2000 mg/kg (OECD 420 method)

Skin corrosion/irritation Non-irritant. (Black ink and Optimizer) (Method: OECD#404)
Mild Irritant. (Pre-coat) (Method: OECD#404)

Serious eye damage/eye irritation Mild Irritant. (Black Ink and Pre-coat) (Method: OECD#405)
Minimal irritant to the eye. (Optimizer) (Method: OECD#405)

Respiratory or skin sensitization Respiratory sensitization: No information available.
None of the components are skin sensitizers. (Method: OECD#429)

Germ cell mutagenicity AMES test : Negative (OECD 471 method)

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.

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

Ecotoxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|----------------------|--|----------------------------|--------------------------------------|
| Glycerol | - | 51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static | - | 500: 24 h Daphnia magna mg/L EC50 |

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

Safety data sheet number: CBRK002-01

| | | | | |
|-------------------|---|--|--------------------------|-------------------------------------|
| Diethylene glycol | - | 75200: 96 h Pimephales promelas mg/L LC50 flow-through | EC50 = 29228 mg/L 15 min | 84000: 48 h Daphnia magna mg/L EC50 |
| Carbon Black | - | 1000:96 h Brachydanio rerio mg/L LC50 | - | 5600: 24 h Daphnia magna mg/L EC50 |

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

There is no data for this product.

Component Information

| Chemical name | Partition coefficient |
|----------------------------|-----------------------|
| Glycerol | -1.76 |
| Diethylene glycol | -1.98 |
| 1,2-Benzisothiazolin-3-one | 1.3 |

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 in accordance with federal, state and local regulations

Section 14: Transport information

IMDG

| | |
|---------------------------|---------------|
| 14.1 UN/ID no | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Hazard Class | Not regulated |
| 14.4 Packing group | Not regulated |

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

Revision Date: 10-Mar-2020

Issuing Date: 02-Aug-2011

Revision Number: 8

Safety data sheet number: CBRK002-01

14.5 Marine pollutant Not applicable
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

RID

14.1 UN/ID no Not regulated
14.2 Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

ADR

14.1 UN/ID no Not regulated
14.2 Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

IATA

14.1 UN/ID no Not regulated
14.2 Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

- * Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XVII.
- * Contains no substance listed in REACH Regulation (EC) No.1907/2006 Candidate List for Authorization.
- * Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XIV.

National Regulations

No information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Section 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

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

Revision Date: 10-Mar-2020

Issuing Date: 02-Aug-2011

Revision Number: 8

Safety data sheet number: CBRK002-01

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H400 - Very toxic to aquatic life

Legend

SVHC: Substances of Very High Concern for Authorization:

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

**

Trade secret

Key literature references and sources for data

No information available

Revision Date 10-Mar-2020

Issuing Date 02-Aug-2011

Revision Note No information available

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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).