

Revision Date: 26-Jul-2023

Issuing Date: 12-Oct-2018

Revision Number: 7.1

Product Name: GCX-4C-1, GCX-4C20-1, GCX-4C50-1, GCX-4C70-1, GCX-4C35-1,  
GCX-4C02-1, GCX-4C20K-1, GCX-6C18L-1, GCX-6C09L-1, GCX-4C09L-1

Safety data sheet number: GCX-4C-1

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

### **1.1. Product identifier**

**Product Name** GCX-4C-1, GCX-4C20-1, GCX-4C50-1, GCX-4C70-1, GCX-4C35-1, GCX-4C02-1, GCX-4C20K-1, GCX-6C18L-1, GCX-6C09L-1, GCX-4C09L-1

**Product Form** Mixture

**Safety data sheet number** GCX-4C-1

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

**Relevant identified uses** Water based ink for inkjet printing machine

**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** (Europe)  
Brother Internationale Industriemaschinen GmbH  
Dusseldorfer Str. 7-9, D-46446, Emmerich, am Rhein, Germany  
Telephone (for information): +49-2-822-6090  
(UK)  
MHM Direct  
Unit 9, The Stairway Langham Park Industrial Estate, Lows Ln, Stanton by Dale, Ilkeston  
DE7 4RJ,U.K.  
Telephone (for information): +44-115-944-2285  
(Asia)  
BROTHER MACHINERY ASIA LTD.  
17/F., Fugro House-KCC 2, No.1 Kwai On Road, Kwai Chung, New Territories, Hong  
Kong SAR  
Telephone (for information): +852-2777-0010

### **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)  
CHEMTREC +61-290372994 (Australia)

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.

EUH210 - Safety data sheet available on request

### 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

Chemical name	CAS No	EC No	EC Index No	Weight-%	Specific concentration limit (SCL)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Water	7732-18-5	231-791-2	-	55-65	-	Not classified	Not applicable
Glycerol	56-81-5	200-289-5	-	15-20	-	Not classified	Not applicable
Ethylene glycol	107-21-1	203-473-3	603-027-00-1	15-20	-	Acute Tox. 4 (H302)	Not applicable
Cyan pigment	**	-	-	<10	-	Not classified	Not applicable
1,2-Benzisothiazolin-3-one	2634-33-5	220-120-9	613-088-00-6	<0.03	Skin Sens. 1 :: C>=0.05%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)	Not applicable

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

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## Section 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	If symptoms persist, call a physician.
<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
<b>Eye contact</b>	In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical advice/attention.
<b>Skin contact:</b>	Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
<b>Ingestion</b>	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

<b>Symptoms</b>	Inhalation ( Vapor / Mist ) : 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
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically.
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## Section 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , water spray or regular foam
<b>Unsuitable extinguishing media</b>	None

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards arising from the chemical</b>	Thermal decomposition can lead to release of irritating and toxic gases and vapors Carbon monoxide , Carbon dioxide (CO <sub>2</sub> ) , Nitrogen oxides (NO <sub>x</sub> ) , Oxides of sulfur
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### 5.3. Advice for firefighters

<b>Special protective equipment for fire-fighters</b>	Wear self contained breathing apparatus for fire fighting if necessary.
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## **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**

**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 cool. Protect from sunlight.

### **7.3. Specific end use(s)**

**Specific use(s)** Water based ink for inkjet printing machine

**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 <sup>3</sup> STEL: 30 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>
Ethylene glycol 107-21-1	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> *	TWA: 10 mg/m <sup>3</sup> TWA: 20 ppm TWA: 52 mg/m <sup>3</sup> STEL: 40 ppm STEL: 104 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> Sk*	TWA: 20 ppm TWA: 52 mg/m <sup>3</sup> STEL: 40 ppm STEL: 104 mg/m <sup>3</sup> *	TWA: 20 ppm TWA: 52 mg/m <sup>3</sup> STEL: 40 ppm STEL: 104 mg/m <sup>3</sup> vía dérmica*	TWA: 10 ppm TWA: 26 mg/m <sup>3</sup> H*
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Glycerol 56-81-5	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 20 mg/m <sup>3</sup>	-
Ethylene glycol 107-21-1	TWA: 20 ppm TWA: 52 mg/m <sup>3</sup> STEL: 40 ppm STEL: 104 mg/m <sup>3</sup> pelle*	TWA: 20 ppm TWA: 52 mg/m <sup>3</sup> STEL: 40 ppm STEL: 104 mg/m <sup>3</sup> Ceiling: 100 mg/m <sup>3</sup> P*	TWA: 52 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> STEL: 104 mg/m <sup>3</sup> H*	TWA: 20 ppm TWA: 50 mg/m <sup>3</sup> STEL: 40 ppm STEL: 100 mg/m <sup>3</sup> iho*	TWA: 10 ppm TWA: 26 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Glycerol 56-81-5	-	TWA: 50 mg/m <sup>3</sup> STEL: 100 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-	-
Ethylene glycol 107-21-1	TWA: 10 ppm TWA: 26 mg/m <sup>3</sup> STEL 20 ppm STEL 52 mg/m <sup>3</sup> H*	TWA: 10 ppm TWA: 26 mg/m <sup>3</sup> STEL: 20 ppm STEL: 52 mg/m <sup>3</sup> H*	STEL: 50 mg/m <sup>3</sup> TWA: 15 mg/m <sup>3</sup>	TWA: 20 ppm TWA: 52 mg/m <sup>3</sup> STEL: 104 mg/m <sup>3</sup> STEL: 40 ppm H*	TWA: 10 mg/m <sup>3</sup> TWA: 20 ppm TWA: 52 mg/m <sup>3</sup> STEL: 40 ppm STEL: 30 mg/m <sup>3</sup> STEL: 104 mg/m <sup>3</sup> Sk*

**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. For use other than in normal operating procedures (such as in the event of large spill), the following should be applied:

**Eye/face protection** Safety goggles.

<b>Hand protection</b>	Protective gloves.
<b>Skin and body protection</b>	If there is a risk of contact:, Apron, Boots
<b>Respiratory protection</b>	Use appropriate respiratory protection.
<b>Environmental exposure controls</b>	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	blue
Odor	None
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	8.0 - 9.5	
Melting point / freezing point	No data available °C	
Boiling point / boiling range	100 °C	
Flash point	No data available	None known
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	1.1	(H <sub>2</sub> O=1)
Water solubility	Soluble in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	<6.0 mPa s	@ 25°C

<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available

### **9.2. Other information**

#### **9.2.1. Information with regard to physical hazard classes**

No information available

#### **9.2.2. Other safety characteristics**

No information available

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## Section 10: Stability and reactivity

### 10.1. Reactivity

None.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None under normal processing.

### 10.4. Conditions to avoid

Keep away from heat. Keep away from water or moist air.

### 10.5. Incompatible materials

Acids, Bases, Oxidizing agent, Reducing agent

### 10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Oxides of sulfur

## 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	May be harmful if swallowed

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	2,748.10 mg/kg
ATEmix (dermal)	29,418.70 mg/kg

Skin corrosion/irritation No information available

Serious eye damage/eye irritation No information available

**Respiratory or skin sensitization** No information available

**Germ cell mutagenicity** No information available

**Carcinogenicity** Printing inks: IARC Classification: Group 3 (Non-classified Human Carcinogen)

**Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA**

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available

**Aspiration hazard** No information available.

**Potential health effects**  
 Eye : May cause slight irritation  
 Skin : Prolonged exposure may cause skin irritation  
 Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea  
 Inhalation : Not an expected route of exposure Over exposure may cause respiratory irritation.

**11.2. Information on other hazards**

No information available

**Section 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity** Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity** Contains 3 % of components with unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Glycerol	-	LC50: 51 - 57mL/L (96h, <i>Oncorhynchus mykiss</i> )	-	-
Ethylene glycol	EC50: 6500 - 13000mg/L (96h, <i>Pseudokirchneriella subcapitata</i> )	LC50: 14 - 18mL/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: 40000 - 60000mg/L (96h, <i>Pimephales promelas</i> ) LC50: =16000mg/L (96h, <i>Poecilia reticulata</i> ) LC50: =27540mg/L (96h, <i>Lepomis macrochirus</i> )	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	EC50: =46300mg/L (48h, <i>Daphnia magna</i> )

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		LC50: =40761mg/L (96h, Oncorhynchus mykiss) LC50: =41000mg/L (96h, Oncorhynchus mykiss)		
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**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
Ethylene glycol	-1.93
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. Endocrine disrupting properties**

No information available.

**12.7. 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
- 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 Not applicable

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**IBC Code**

**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**

**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**

**Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed  
H315 - Causes skin irritation

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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 (Short Term Exposure Limit)

\*\* Trade secret

**Key literature references and sources for data**

No information available

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**Revision Note**

SDS sections updated : 1

**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).