

Product name: GCX-4E02

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

1.1. Product identifier

Product form : Mixture
Product name : GCX-4E02

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Water based inks

1.2.2. Uses advised against

No additional 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 (USA) Brother International Corporation
200 Crossing Boulevard, Bridgewater, NJ 08807, USA
Telephone (for information): +1-877-276-8437

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

Importer (New Zealand) BROTHER INTERNATIONAL (NZ) LTD.
27 Matarawa Place, Taur ko Business Estate, Tauriko, Tauranga, New Zealand
Telephone (for information): +64-7-543-5600

Importer (Singapore) BROTHER INTERNATIONAL SINGAPORE PTE. LTD.
152 Beach Road, #25-01/04 Gateway East, Singapore 189721, Singapore
Telephone (for information): +65-6538-0311

Importer (Asia) BROTHER MACHINERY ASIA LTD.
12/F, PeakCastle, 476 Castle Peak Road, Kowloon, Hong Kong
Telephone (for information): +852-2777-0010

Importer (China) BROTHER MACHINERY SHANGHAI LTD.
Room B, 3/F., No.567, West Tianshan Rd., ChangNing District, Shanghai 200335, P.R.China
Telephone (for information): +86-21-2225-6666

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

1.4. Emergency telephone number

Emergency number : 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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

EUH phrases : EUH208 - Contains 1,2-benzisothiazol-3(2H)-one(2634-33-5). May produce an allergic reaction

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EUH210 - Safety data sheet available on request

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

SECTION 3: Composition/Information on ingredients

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
glycerol	(CAS No) 56-81-5 (EC no) 200-289-5	30	Not classified
1,2-benzisoxazol-3(2H)-one	(CAS No) 2634-33-5 (EC no) 220-120-9 (EC index no) 613-088-00-6	< 0.04	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400

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

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If symptoms persist, obtain medical attention.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, obtain medical attention.
- First-aid measures after skin contact : Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Wash out mouth with water and give 100-200 ml of water to drink. Get medical advice/attention if you feel unwell.

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

- Symptoms/injuries after inhalation : May be harmful if inhaled.
- Symptoms/injuries after skin contact : May produce an allergic reaction.
- Symptoms/injuries after eye contact : May cause eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Extinguish preferably with dry chemical, carbon dioxide, water mist, foam.
- Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
- Hazardous decomposition products in case of fire : Toxic gases may be formed upon combustion and represents a hazard to firefighters. Combustion products: See Section: 10.

5.3. Advice for firefighters

- Protection during firefighting : Self-contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all eye and skin contact and do not breathe vapor and mist.

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6.1.1. For non-emergency personnel

Protective equipment : Use personal protective equipment as required.
Emergency procedures : Ensure adequate ventilation. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection.

6.2. Environmental precautions

Avoid release to the environment. 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 cleaning up : Wipe up with absorbent material (for example cloth). Wash with water to remove remaining traces of ink.

6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed.
Storage temperature : 0 - 50 °C

7.3. Specific end use(s)

Water based ink for inkjet printing machine.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

glycerol (56-81-5)		
Belgium	Local name	Glycérine (brouillard)
Belgium	Limit value (mg/m ³)	10 mg/m ³
Czech Republic	Local name	Glycerol, mlha
Czech Republic	Exposure limits (PEL) (mg/m ³)	10 mg/m ³
Czech Republic	Exposure limits (PEL) (ppm)	2.4 ppm
Czech Republic	Exposure limits (NPK-P) (mg/m ³)	15 mg/m ³
Czech Republic	Exposure limits (NPK-P) (ppm)	3.7 ppm
Finland	Local name	Glyceroli
Finland	HTP-arvo (8h) (mg/m ³)	20 mg/m ³
France	Local name	Glycérine (aérosols de)
France	VME (mg/m ³)	10 mg/m ³
Ireland	Local name	Glycerol, mist
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³
Poland	Local name	Glicerol aerozole
Poland	NDS (mg/m ³)	10 mg/m ³
Portugal	Local name	Glicerina, névoas
Portugal	OEL TWA (mg/m ³)	10 mg/m ³
Spain	Local name	Glicerina
Spain	VLA-ED (mg/m ³)	10 mg/m ³ nieblas
United Kingdom	Local name	Glycerol
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ mist
USA - ACGIH	Local name	Glycerin mist
USA - ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ mist
USA - ACGIH	Remark (ACGIH)	URT irr

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glycerol (56-81-5)		
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ Total dust 5 mg/m ³ Respirable Fraction

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:
Hand protection	: protective gloves.
Eye protection	: Safety goggles.
Skin and body protection	: Long sleeved clothing and long pants.
Respiratory protection	: In case of large spillages: Wear suitable respiratory protective equipment.
Environmental exposure controls	: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear
Color	: Colorless
Odor	: None
Odor threshold	: No information available
pH	: 8 - 9
Relative evaporation rate (butyl acetate=1)	: No information available
Melting point	: 0 °C
Freezing point	: No information available
Boiling point	: 100 °C
Flash point	: Does not flash at 93.3°C or lower (closed cup)
Auto-ignition temperature	: No information available
Decomposition temperature	: No information available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: No information available
Relative vapor density at 20 °C	: No information available
Relative density	: 1.1 @ 20°C
Solubility	: Water: Soluble
Log Pow	: No information available
Log Kow	: No information available
Viscosity, kinematic	: < 2 mPa·s @ 25°C
Viscosity, dynamic	: No information available
Explosive properties	: Not explosive
Oxidizing properties	: No information available
Explosion limits	: No information available

9.2. Other information

No additional 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

No information available.

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10.4. Conditions to avoid

Avoid temperature above: 80°C. Do not freeze.

10.5. Incompatible materials

Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified. (OECD 431 method) pH: 8 - 9
Serious eye damage/irritation	: Not classified (OECD 405 method) pH: 8 - 9
Respiratory or skin sensitization	: Not classified. (OECD 429 method) Contains 1,2-Benzisothiazol-3(2H)-one. May produce an allergic reaction
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No information available.

glycerol (56-81-5)	
LC50 fish	51 - 57 ml/l 96 h - Oncorhynchus mykiss
EC50 Daphnia	> 500 mg/l 24 h - Daphnia magna

12.2. Persistence and degradability

Persistence and degradability : No information available.

12.3. Bioaccumulative potential

Log Pow : No information available
Log Kow : No information available
Bioaccumulative potential : Not expected to bioaccumulate.

glycerol (56-81-5)	
Log Pow	-1.76

12.4. Mobility in soil

Ecology - soil : Low mobility (soil).

12.5. Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
Results of PBT assessment : Not available

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12.6. Other adverse effects

Other adverse effects : No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in accordance with federal, state and local regulations.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / DOT / UN

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR/RID) : None

Proper Shipping Name (IATA) : None

Proper Shipping Name (IMDG) : None

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : None

14.6. Special precautions for user

Special transport precautions : None

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IBC code : Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Regional legislation : 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.
Canada: WHMIS: Not applicable. (Manufactured article).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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SECTION 16: Other information

- Data sources : U.S. 29CFR Part 1910
ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
IARC Monographs on the Evaluation Carcinogenic Risks to Humans World Health Organization
EU Directive 91/322/EEC and 2000/39/EC
NTP 11th Report on Carcinogens.
- Abbreviations and acronyms : IARC (International Agency for Research on Cancer)
IATA (International Air Transport Association)
IMDG (International Maritime Dangerous Goods Code)
IOELV (Indicative Occupational Exposure Limit)
REACH (Registration, Evaluation and Authorisation of CHemicals)
WHMIS (Workplace Hazardous Material Information System (Canada))
ACGIH (American Conference of Government Industrial Hygienists)
DOT (Department Of Transportation (US))
ICAO (International Civil Aviation Organization)
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).
- Other information : The information only relates to this specific 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).

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
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
EUH208	Contains . May produce an allergic reaction
EUH210	Safety data sheet available on request