

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

1.1 Product identifier

Product name GC-50W50, GC-50W4K, GC-30W38 Ink

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

Relevant Identified Use(s) Water based pigment ink (Mixture).

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 Internationale Industriemaschinen GmbH
Dusseldorfer Str. 7-9, D-46446, Emmerich, am Rhein, Germany
Telephone (for information): +49-2-822-6090

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, Tauriko Business Estate, Tauriko, Tauranga, New Zealand
Telephone (for information): +64-7-543-5600

Importer (Singapore) BROTHER INTERNATIONAL SINGAPORE PTE. LTD.
10 Eunos Road 8, #14-01/02 Singapore Post Centre, Singapore 408600
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 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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Acute Tox. 4 (Oral) H302

Full text of H-phrases: see section 16

Classification according to Directive 1999/45/EC

Not classified as hazardous

Australia Classification

Classified as hazardous according to the criteria of NOHSC

2.2 Label elements

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

Hazard pictograms



Signal Word

Warning

Hazard Statements

H302 - Harmful if swallowed

Precautionary statements

P264 - Wash skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/ container to an approved waste disposal plant.

EUH-statements

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

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture: Water based pigment ink (Mixture).

Chemical Name	CAS-No	EC-No	w/w%	Classification (67/548/EEC)	Classification (EU Reg. 1272/2008)
Diethylene glycol	111-46-6	203-872-2	15-24	Xn; R22	Acute Tox. 4 (H302)
Titanium dioxide	13463-67-7	236-675-5	10-20	Not classified	Not classified
Aluminium hydroxide	21645-51-2	244-492-7	1-5	Not classified	Not classified
Silicic acid	1343-98-2	215-683-2	1-5	Not classified	Not classified
2,4,7,9-Tetramethyldec-5-yne-4,7-diol, ethoxylated	9014-85-1	500-022-5	1-5	Not classified	Not classified
Ammonia 25%	1336-21-6	215-647-6	< 1	C; R34 N; R50	Skin Corr. 1B, H314 Aquatic Acute 1, H400
Zinc oxide	1314-13-2	215-222-5	<= 0.25	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Poly(oxyethylene) a kyl ether	-	-	< 1	Not classified	Not classified
1,2-benzisothiazol-3(2H)-one	2634-33-5	220-120-9	< 0.05	Xn; R22 Xi; R41 Xi; R38 R43 N; R50	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	If symptoms persist, obtain medical attention.
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	Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water 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

Skin contact: Repeated and/or prolonged skin contact may cause irritation.
 Eye contact: May cause eye irritation. Tears. Reddening.
 Inhalation: May be harmful if inhaled.
 Ingestion: Nausea, headache, vomiting. Effects may be delayed.

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

Water based inkjet ink. The product is not itself flammable, but residue that remains if the water it contains has been allowed to evaporate is flammable.

5.3 Advice for firefighters

A 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

Wear suitable protective clothing. Gloves and eye/face protection.

6.2 Environmental precautions

Avoid release to the environment. Do not allow to enter drains, sewers or water courses.

6.3 Methods and materials for containment and cleaning up

Small spillage: Wash spill area with soapy water. To be disposed of as hazardous waste.
Large spillage: Absorb spillages onto sand, earth or any suitable adsorbent material. To be disposed of as hazardous waste.

6.4 Reference to other sections

For personal protection: See section 8.
For disposal considerations: See section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear suitable respiratory protective equipment. Avoid contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Avoid leaking, rolling or dropping.

7.3 Specific end use(s)

Water based pigment ink (Mixture).

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical Name	Diethylene glycol 111-46-6
ACGIH TLV	-
OSHA PEL	-
European Union	-
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
Chemical Name	Titanium dioxide 13463-67-7
ACGIH TLV	TWA: 10 mg/m ³
OSHA PEL	TWA: 15 mg/m ³ total dust
European Union	-
The United Kingdom	STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³
France	TWA: 10 mg/m ³
Spain	TWA: 10 mg/m ³
Germany	Carc
Portugal	TWA: 10 mg/m ³
Denmark	TWA: 6 mg/m ³
Austria	STEL 10 mg/m ³ TWA: 5 mg/m ³
Switzerland	TWA: 3 mg/m ³
Poland	NDSCh: 30 mg/m ³ TWA: 10.0 mg/m ³ TWA: 10 mg/m ³
Norway	TWA: 5 mg/m ³ STEL: 10 mg/m ³
Ireland	TWA: 10 mg/m ³ TWA: 4 mg/m ³

S* - Possibility of significant uptake through the skin

8.2 Exposure controls

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

Eye Protection	Safety goggles.
Hand Protection	Protective gloves.
Skin and body protection	Long sleeved clothing and long pants.
Respiratory protection	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

Appearance	
Physical state	Liquid
Color	White
Odor	Slight
Odor Threshold	No information available
pH	7 - 8
Melting point/freezing point	No information available
Initial boiling point and boiling range	> 100 °C
Flash Point	Does not flash at 93.3°C or lower (closed 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 (H ₂ O=1)
Solubility(ies)	Miscible (water)
Partition coefficient: n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	Confidential
Explosive properties	Not explosive
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	No information available.
10.4 Conditions to avoid	No information available.
10.5 Incompatible materials	Strong oxidizing agents.
10.6 Hazardous decomposition products	Contains: Carbon dioxide (CO ₂). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	Harmful if swallowed.
ATE CLP (oral)	1854.000 mg/kg body weight
ATE CLP (dermal)	45631.000 mg/kg body weight
	21.3 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
Skin corrosion/irritation	Repeated or prolonged contact may cause irritation.
Serious eye damage/irritation	May cause eye irritation. Tears. Reddening.
Respiratory or skin sensitisation	Repeated and/or prolonged contact may cause skin sensitization. Contains: <0.03% Preservative
Mutagenicity	No information available.
Carcinogenicity	Titanium dioxide: IARC Classification: Group 2B - Possibly Carcinogenic to Humans. Printing Ink: IARC Classification: Group 3. Non-classified Human Carcinogen.
	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
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)

12.2 Persistence and degradability No information available.

12.3 Bioaccumulative potential

Chemical Name	log Pow
Diethylene glycol	-1.98

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.

SECTION 14: Transport information

Not classified according to the United Nations "Recommendations on the Transport of Dangerous Goods"

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

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.

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3	<p>R22 - Harmful if swallowed</p> <p>R34 - Causes burns</p> <p>R38 - Irritating to skin</p> <p>R41 - Risk of serious damage to eyes</p> <p>R43 - May cause sensitisation by skin contact</p> <p>R50 - Very toxic to aquatic organisms</p> <p>R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment</p>
Full text of H-Statements referred to under section 3	<p>H302 - Harmful if swallowed</p> <p>H314 - Causes severe skin burns and eye damage</p> <p>H315 - Causes skin irritation</p> <p>H317 - May cause an allergic skin reaction</p> <p>H318 - Causes serious eye damage</p> <p>H400 - Very toxic to aquatic life</p> <p>H410 - Very toxic to aquatic life with long lasting effects</p>
Revision Note	Section1
References:	<p>U.S. 29CFR Part 1910</p> <p>ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices</p> <p>IARC Monographs on the Evaluation Carcinogenic Risks to Humans World Health Organization</p> <p>EU Directive 91/322/EEC and 2000/39/EC</p> <p>NTP 11th Report on Carcinogens</p>

Product name: GC-50W50, GC-50W4K, GC-30W38 Ink

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Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International carriage of Dangerous goods by Road (EU)
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
RID: Regulations concerning the International carriage of goods by Rail (EU)
TLV: Threshold Limit Value (ACGIH)
TSCA: Toxic Substances Control Act (US)
WHMIS: Workplace Hazardous Material Information System (Canada)