

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name GLYCEROL CLEAN FLUID BH  
Other Designation LK0504001 , LK0503001 , ZA9071001 , ZA9072001  
INITIAL LIQUID CU006 ,  
INITIAL LIQUID CU006 1KG , CU006  
Maintenance liquid for the ink-jet printing machine named  
"MFC580" , "MFC590" , "MFC880" , "MFC890" ,  
"MFC3100C" , "MFC5100C" , "MFC3200C" , "MFC5200C"

This product is water based fluid in a plastic bottle. Liquid volume in each bottle is approximately 100cc. All components in the fluid are listed in EPA TSCA inventory. All components in the fluid are listed in EINECS inventory and NLP inventory. All components in the fluid are listed in DSL inventory. All components in the fluid are listed in AICS inventory.

Manufacturer BROTHER INDUSTRIES, LTD.  
5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN  
Telephone Number for Information +81-52-824-3622

Importer In USA BROTHER INTERNATIONAL CORPORATION  
100 Somerset Corporate Boulevard, P.O.Box 6911, Bridgewater,  
NJ 08807-0911, USA  
Telephone Number for Information 800-284-4329  
Emergency Telephone Number 800-284-4329

Importer In Europe BROTHER INTERNATIONAL EUROPE LTD.  
Brother house, 1 Tame Street, Guide Bridge, Audenshaw, Manchester  
M34 5JE, UK  
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Importer In Canada BROTHER INTERNATIONAL CORP. (Canada) LTD.  
1 rue Hôtel de Ville, Dollard-des-Ormeaux, Québec, H9B 3H6, CANADA  
Telephone Number for Information 514-685-0600  
Emergency Telephone Number 514-685-0600

Importer In Australia BROTHER INTERNATIONAL (AUST.) PTY. LTD. ACN 001 393 835  
7 Khartoum Road, North Ryde, N.S.W. 2113 08875-6714, AUSTRALIA  
Telephone Number for Information 02-9887-4344  
Emergency Telephone Number 02-9887-4344

Date of Preparation: September 27, 2001 MSDS #BHS004  
Date of Revision:

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

**HAZARDOUS INGREDIENTS** in accordance with Hazard Communication Standard issued by Occupational Safety and Health Administration (OSHA HCS).

<u>INGREDIENT NAME</u> <u>CAS#</u>	<u>EXPOSURE LIMITS</u>	<u>% by weight</u>
Glycerol 56-81-5	OSHA PEL : (as mist) Total dust TWA 10mg/m <sup>3</sup> Respirable fraction TWA 5mg/m <sup>3</sup> ACGIH TLV : (as mist) Total dust TWA 10mg/m <sup>3</sup>	<20

Remaining ingredients are considered non-hazardous in accordance with OSHA HCS.

**HAZARDOUS INGREDIENTS** in accordance with EC-Directive 1999/45 and Approved Criteria of Worksafe Australia.

<u>INGREDIENT NAME</u> <u>CAS#</u>	<u>EEC#</u>	<u>% by weight</u>	<u>Symbol</u>	<u>R phrases</u>
1,2-Benzisothiazolin-3-one 2634-33-5	220-120-9	< 0.1	C	R34, R43

Remaining ingredients are considered non-hazardous in accordance with EC-Directive 1999/45 and Approved Criteria of Worksafe Australia.

**3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

The fluid is clear liquid with slight odor.  
Keep out of reach of children.  
The fluid poses little or no immediate hazard if spilled.

**POTENTIAL HEALTH EFFECTS**

**EYE CONTACT :** The fluid may cause irritation.  
**SKIN CONTACT :** The fluid may cause irritation.  
**INGESTION :** The fluid may cause gastrointestinal or other adverse effects.  
**INHALATION :** Not expected to be a route of exposure under normal use. If the fluid is heated, the vapor from the fluid may cause respiratory irritation.

**CHRONIC EFFECTS / CARCINOGENICITY :**

Specific data are not available. All ingredients of the fluid are not listed by IARC monographs, NTP, and OSHA regulated.

**4. FIRST AID MEASURES**

**EYE CONTACT :** Flush immediately with running water for at least 15 minutes and get medical attention.  
**SKIN CONTACT :** Wash with water and soap.  
**INGESTION :** Dilute with water and get medical attention.  
**INHALATION :** Remove to fresh air area and get medical attention.

## 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA :  
SUITABLE: Water, CO<sub>2</sub>, Foam, Dry chemical.  
NOT TO BE USED :  
SPECIAL EXPOSURE HAZARDS : Emits toxic fumes under fire conditions.  
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS :  
Use self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTION : In case of the fluid vapor formation use respirator.  
ENVIRONMENTAL PRECAUTION : Take care to minimize the fluid that reaches to a sewer.  
METHODES FOR CLEANING UP : Wipe up the fluid with absorbent towel. Wash with water to remove remaining traces of the fluid.

## 7. HANDLING AND STORAGE

HANDLING : Avoid skin contact with the fluid. Prevent eye contact with the fluid.  
STORAGE : Keep out of reach of children. Store in a cool, dark, and dry place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS : Provide general and/or local exhaust ventilation.  
RESPIRATORY PROTECTION : Not required under normal use.  
HAND PROTECTION : Use rubber gloves.  
EYE PROTECTION : Use protective eye glasses.  
SKIN PROTECTION : Use rubber apron and rubber boots, if necessary.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Clear liquid  
ODOR : Slight odor  
pH : 8 - 10  
BOILING POINT : >100°C  
FREEZING POINT : <0°C  
FLASH POINT : >100°C  
FLAMMABLE LIMITS : LEL : Not available UEL : Not available  
AUTOIGNITION TEMPERATURE : Not available  
VAPOR PRESSURE : Not available  
VAPOR DENSITY (AIR=1) : Not available  
DENSITY : 1.04 g/cc  
SOLUBILITY IN WATER : Soluble

## 10. STABILITY AND REACTIVITY

STABILITY : Stable.  
CONDITIONS TO AVOID : None.  
MATERIALS TO AVOID : Strong oxidizing agents.  
HAZARDOUS DECOMPOSITION PRODUCTS : Carbon monoxide, Carbon dioxide.  
HAZARDOUS POLYMERIZATION : Does not occur.

**11. TOXICOLOGICAL INFORMATION**

EYE EFFECTS : Not determined  
SKIN EFFECTS : Not determined  
ACUTE ORAL EFFECTS : Not determined

**12. ECOLOGICAL INFORMATION**

The fluid does not contain heavy metals nor halogenated compounds.

**13. DISPOSAL CONSIDERATIONS**

Dispose of the fluid in accordance with local regulations.

**14. TRANSPORT INFORMATION**

Special information about the fluid transportation is not known.

**15. REGULATORY INFORMATION**

All components in the fluid are listed in EPA TSCA inventory.

\*EPA:Environmental Protection Agency(USA)

\*TSCA:Toxic Substances Control Act(USA)

All components in the fluid are listed in EINECS inventory and NLP inventory.

\*EINECS:European Inventory of Existing Commercial Chemical Substances(EU)

\*NLP:No Longer Polymers List(EU)

All components in the fluid are listed in DSL inventory.

\*DSL:Domestic Substances List(Canada)

All components in the fluid are listed in AICS inventory.

\*AICS:Australian Inventory of Chemical Substances(Australia)

**16. OTHER INFORMATION**

The information relates only to this specific GLYCEROL CLEAN FLUID BH. It may not be valid for this fluid, 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).