

SAFETY DATA SHEET

SDS No.1021-21001

Revised Date June 12, 2014 1/5 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Chlorobenzene
NAME OF MANUFACTURER : GL Sciences Inc.
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION : International Sales Section
TELEPHONE No. : +81-3-5323-6620
FACSIMILE No. : +81-3-5323-6621
PRODUCT No. : 1021-21001
SDS No. : 1021-21001
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable liquid : Category 3
Acute toxicity - inhalation : Category 4
Serious eye damage/eye irritation : Category 2
Skin corrosion/irritation : Category 2
Germ cell mutagenicity : Category 2
Carcinogenicity : Category 2
Reproductive toxicity : Category 2
Specific target organ toxicity (single exposure)
: Category 1 <systemic toxicity>
: Category 3 <anesthesia>
Specific target organ toxicity (repeated exposure)
: Category 1 <central nervous system,
peripheral nervous system,
blood system>
: Category 2 <
: Category 2 <kidney, adrenal gland,
liver>
Hazardous to the aquatic environment –acute hazard
: Category 1
Hazardous to the aquatic environment –chronic hazard
: Category 1

HAZARDS SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENT :

H226 Flammable liquid and vapour
H332 Harmful if inhaled
H315 Cause skin irritation
H319 Cause serious eye irritation
H341 Suspected of causing genetic defects
H351 Suspected of causing cancer
H370 Causes damage to the organs <liver, nervous system, respiratory organ>
H336 May cause drowsiness or dizziness
H372 Causes damage to organs <liver> through prolonged or repeated exposure
H373 May cause damage to organs <liver, kidney, thyroid> through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS :

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P280	Wear protective gloves/eye protection.
P260	Do not breathing gas/mist/vapours.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P303+P361+P353	IF ON SKIN or hair: Take off immediately all contaminated clothing. Rinse skin with water.
P370+P378	In case of fire: Use appropriate medias to extinguish.
P304+P340	IF INHALED: Remove person to fresh air and akeep comfortable.
P332+P313	If skin irritation occurs: Get medical attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical attention.
P308+P313	IF exposed or concerned: Get medical attention.
P314	Get medical attention if you feel unwell.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	: Chlorobenzene
SYNONYMS	: Monochlorobenzene, 1-Chlorobenzene
CHEMICAL FOMULA	: C ₆ H ₅ Cl
CONTENT	: > 99 %
MOLECULAR WEIGHT	: 112.6
CAS No.	: 108-90-7
TSCA INVENTORY	: Listed
EINECS No.	: 203-628-5
EC INDEX No.	: 602-033-00-1

4. FIRST AID MEASURES

GENERAL ADVICE	: Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.
INHALATION	: Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.
SKIN CONTACT	: Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, consult a physician.
EYE CONTACT	: Remove any contact lenses at once. Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If irritation persists, consult a physician.
INGESTION	: Rinse mouth. Give plenty of water to induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.

5. FIRE FIGHTING MEASURES

- EXTINGUISHING MEDIA : Carbon dioxide, dry chemical powder, foam, water spray
 FIRE & EXPLOSION HAZARDS : Noncombustible. Toxic, irritating fumes or smoke may be emitted.
 SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS : Fireman should wear normal protective equipment(full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS : Remove ignition sources and ventilate the area.
 In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.
 ENVIROMENTAL PRECATIONS : Prevent spills from entering sewers, watercourses or low areas.
 METHODS FOR CLEAN UP : Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill site with soap and water and ventilate the area. Pull all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose contaminated clothing.

7. HANDLING AND STORAGE

- HANDLING : Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection.
 After this product, dispose of contents/container in accordance with all applicable regulations and appropriate ways.
 STORAGE : Store away from sunlight in well-ventilated dry place at 2 - 10°C.
 Keep container tightly closed.
 INCOMOPATIBLE PRODUCTS : Strong oxidizers and acids, strong bases

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits.
 Use only with adequate ventilation.
 VENTILATION : Local Exhaust ; Necessary, Mechanical(General) ; Recommended
 PERSONAL PROTECTION
 RESPIRATORY PROTECTION : Use respirators approved under appropriate government standards and follow all regulations.
 HAND PROTECTION : Chemical resistant gloves
 EYE PROTECTION : Safety glasses(goggles)
 SKIN PROTECTION : Protective clothing
 CONTROL PARAMETERS
 OSHA : TWA 75ppm(350mg/m³)
 NIOSH REL : No data available
 ACGIH : TWA 10ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

- APPEARANCE : Clear
 SHAPE : Liquid
 ODOR : Characteristic odor
 pH : No data available
 BOILING POINT : 132°C
 MELTING POINT : -45°C
 FLASH POINT : 28°C
 FLAMMABILITY : lower: 1.3% upper: 7.1%
 AUTOIGNITION TEMPERATURE : 590°C
 VAPOR PRESSURE : 1.17kPa(20°C)
 VAPOR DENCITY : 3.7
 DENCITY : No data available
 SPECIFIC GRAVITY : 1.109(20°C/4°C)
 SOLUBILITY IN
 WATER : Slightly soluble(3.5g/100mL,25°C)
 Organic solvent : soluble
 PARTITION COEFFICIENT: n-octanol/water : 2.84

DECOMPOSITION TEMPERATURE: Not available

10. STABILITY AND REACTIVITY

REACTIVITY : Decomposes on contact with hot surfaces or flames.

CHEMICAL STABILITY : No data available

CONDITION TO AVOID : Heat, contact with incompatible materials.

INCOMPATIBLE MATERIALS : Strong oxidizer, strong bases

HAZARDOUS DECOMPOSITION PRODUCTS

: CO, CO₂, Hydrogen chloride, Hydrogen bromide

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (inhalation) : Rat LD50= 13.5mg/L(EHC 167,1995)

(CERI·NITE Hazard Data sheet No.38,2004)

SKIN CORROSION/IRRITATION : rabbit, human – moderate (CERI Hazard Data Sheet No.82, 2005)

EYE DAMAGE/EYE IRRITATION : rabbit – moderate (CERI Hazard Data Sheet No.82,2005)

GERM CELL MUTAGENICITY : Negative (CERI Hazard Data Sheet No.82,2005)

CARCINOGENICITY : Classified at ACGIH: A3(2001).

REPRODUCTIVE TOXICITY : Not classified.

SPECIFIC TARGET ORGAN TOXICITY-single exposure

: Human: debilitation, vomiting, lethargy (CERI·NITE Hazard Data sheet No.82, 2005).

SPECIFIC TARGET ORGAN TOXICITY-repeated exposure

: Human: numbing ability, cyanosis, hyperesthesia, twitch (CERI·NITE Hazard Data sheet No.82, 2005).

ASPIRATION TOXICITY : May cause to chemical pneumonia (ICSC(J), 2003)

12. ECOLOGICAL INFORMATION

ECOTOXICITY : Crustacea: EC50=585.52µg/L/48hr (CICAD 60,2004)

BIODEGRADABILITY : 5%

BIOACCUMULATION POTENTIAL : BCF=39.6

MOBILITY IN SOIL : No data available

OTHER ADVERSE EFFECTS : Not listed in Montreal Protocol list.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION

IATA

UN NUMBER : UN 1134

UN PROPER SHIPPING NAME : CHLOROGENZENE

CLASS or DIVISION : Flammable liquid (Class 3)

PACKING GROUP : III

DOT

IDENTIFICATION NUMBER : UN 1134

PROPER SHIPPING NAME : Chlorobenzene

HAZARD CLASS : Flammable liquid (Class 3)

MARINE POLLUTANT : Yes

15. REGULATORY INFORMATION

US REGULATIONS : Labeling according to US regulations; See section 2

EU REGULATIONS : Labeling according to EC Directives; See section 2

16. OTHER INFORMATION

NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.