GHS-0032E

SAFETY DATA SHEET

PRODUCT NAME Bromobenzene

Data of issue 01/30/2012
Date of revision -

1 Identification of the substance or mixture and the supplier

Product name:	Bromobenzene
Name of supplier:	Kyoto Electronics Manufacturing Co., Ltd.
Address:	68 Ninodan-cho, Shinden, Kisshoin, Minami-ku, Kyoto, Japan
Division:	Quality Assurance Department
Phone:	+81-75-691-4121
Fax:	+81-75-691-4127
Emergency phone No.:	+81-75-691-4125
MSDS No.	GHS-0032E

2 Hazard identification

GHS hazard class and category

Physical hazards;	Flammable liquids:	Category 3
Health hazards;	Acute toxicity oral:	Category 5
	Acute toxicity inhalationl (vapours):	Category 4
	Skin corrosion/irritation:	Category 2
	Specific target organ systemic toxicity (repeated exposure):	Category 2 (Liver, Nervous system)
Environmental hazards;	hazardous to the aquatic environment -Acute hazard:	Category 2
	hazardous to the aquatic environment -Chronis hazard:	Category 1

Other hazard identification are not shown above because of the reasons below;
Not applicable / Classification not possible

Label elements

Pictogram

Signal word Danger

Hazard statements
Flammable liquid and vapour
May be harmful if swallowed
Toxic if inhaled
Causes skin irritation
Warning May cause damage to organs (Liver, Nervous system) through prolonged or repeated exposure
Hazard statement toxic to aquatic life
Toxic to aquatic life with long lasting effects

Precautionary statements

Prevention	Keep container tightly closed. Keep away from ignition sources such as heat/sparks/open flames/ – No smoking. Wear protective gloves and eye/face protection. Ground/bond container and receiving equipment. – if electrostatically sensitive material is for reloading.– if product is as volatile as to generate hazardous atmosphere: Use explosion– proof equipment. Take precautionary measures against static discharge. Use only non– sparking tools. Use only outdoors or in a well–ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid release to the environment– if this is not the intended use.
Response	In case of fire, use for extinction appropriate media – if water increases risk. IH INHALALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. Take of contaminated clothing and wash before re–use. If skin irritation occurs, seek medical advice/attention. Get medical attention/advice if you unwell. Collect spillage.
Storage	Store locked up. Store container tightly closed in cool/well–ventilated place.
Disposal	Dispose of contents and container in accordance with regulation.

3 Composition/Information on ingredients

Substance/Mixture: Substance

Chemical identity (or common name): Bromobenzene

Ingredient name	Composition （%）	Chemical formula	CAS No.
Bromobenzene	Min. 99.0	C6H5Br	108–86–1

Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance;
None

4 First–aid measures

General description of necessary first aid measures:

[Emergency Response Guidebook]
Move victim to fresh air.
Call emergency medical service.
Apply artificial respiration if victim is not breathing.
Administer oxygen if breathing is difficult.
Remove and isolate contaminated clothing and shoes.
In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
Keep victim warm and quiet.

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is week, irregular or has stopped, open his airway, loosen his collar and belt and administer artificial respiration.
Skin contact:	[Emergency Response Guidebook] Wash skin with soap and water. Take off immediately all contaminated clothing.
Eye contact:	Gently rinse the affected eyes with clean water for at least 15 minutes. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.
Ingestion:	If swallowed, seek medical advice immediately and show this container or label. If swallowed rinse mouth with water (only if the person is conscious). Do not make an unconscious person vomit.
Protections for first-aid persons:	Protect yourself by wearing rubber gloves and air-tight safety goggles.
Information for the physician:	[Emergency Response Guidebook] Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

5 Fire-fighting measures

Extinguishing media:	[Emergency Response Guidebook] CAUTION: All these products have a very low flash point. Use of water spray when fighting fire may be inefficient. Small Fires: Dry chemical, CO2, water spray or alcohol-resistance foam. Large Fires: Water spray, fog or alcohol-resistance foam. : Use water spray or fog; do not use straight streams. : Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.
Incompatible extinguishing media:	[Emergency Response Guidebook] Do not use straight streams.
Specific hazards arising from the chemical (and with regard to fire-fighting measures):	[Emergency Response Guidebook] Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. Toxic gases will form upon combustion of : carbon monoxide / hydrogen bromide
Specific fire-fighting measures:	Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area. Dry chemical powder or dry sand should be used for small fires.
Special protective equipment and precautions for fire-fighters:	Fire-fighters should wear proper protective equipment.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:	[Emergency Response Guidebook] Do not touch or walk through spilled material. Evacuate non-essential personnel. Wear appropriate protective clothing.
Environmental precautions:	Do not let this product enter the environment.
Measures and materials for containment and clean up:	[Emergency Response Guidebook] Use clean non-sparking tools to collect absorbed material. For small spill, absorb spill with absorbent and move to a chemical waste container. For large spill, prevent leakage by surrounded with earth and lead the spill to a safety place to collect.
Appropriate containment techniques/clean up procedures:	Shut off the leakage source and stop leak if you can do it without risk.
Preventive measures for secondary accident:	[Emergency Response Guidebook] Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. All equipment used when handling the product must be grounded. Prevent entry into waterways, sewers, basements or confined areas.

7 Handling and storage

Precautions for safe handling:

Countermeasure technique(s):	(Exposure control for handling personnel) Wear proper equipment and take measures according to [8. Exposure control/personal protection].
Local exhaust ventilation system/general ventilation:	Ventilation according to [8. Exposure control/personal protection].
Preventive measures:	[Emergency Response Guidebook] Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Many liquids are lighter than water. Use with an enclosed system or a local exhaust ventilation.
Incompatible contact(s):	See [10. Stability and reactivity]
Safety measures/ incompatibility:	Do not shock, overturn, drop, or drag containers.

Conditions for safe storage, including any incompatibilities:

Countermeasure technique(s):	Take precautionary measures against static discharges. Take measures to prevent electrostatic charging. Keep away from sources of ignition and heat. Tightly closed in a well-ventilated place.
Incompatibilities:	See [10. Stability and reactivity]

Storage:	(Recommendation for storage) Keep tightly closed in dark cool place. (incompatible storage condition) See [10. Stability and reactivity].
Recommendation on container and packaging materials:	Glass, etc.

8 Exposure controls/Personal protection

Appropriate engineering controls:	Keep source tightly closed or install local exhaust ventilation. Provide shower and vanity unit nearby and make clear the location of these.
Control value:	Japan control value (2005) Not established.
Adopted value:	[JSOH] Not established. [ACGIH] Not established.

Individual protection measures, such as personal protective equipment (PPE):

Eye/face protection:	Wear protective eyeglasses or chemical safety goggles. Wear face protection.
Hand protection:	Wear impervious glove made from chloroprene, as appropriate.
Skin and body protection:	[Emergency Response Guidebook] Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. To prevent any contact, wear impervious clothing such as apron, boots, or whole-body suits made from chloroprene, as appropriate.
Respiratory protector:	[Emergency Response Guidebook] Wear positive pressure self-contained breathing apparatus (SCBA). Gas masks for halogens

9 Physical and chemical properties

Appearance, color:	Colorless to very pale yellow liquid
Odor:	Aromatic odor
pH:	Not available
Melting point/ freezing point:	Approx. -30C
Boiling point:	155C
Flash point:	51C (C.C.)
Auto-ignition temperature:	565C
Upper/lower flammability or explosive limits:	Lower limit; 6.0vol% Upper limit; 36.5vol%
Vapour pressure:	0.55kPa (25C)
Vapour density (Air = 1):	5.41

Specific gravity (Density):	1.494g/cm3(20C)
Solubility:	Solubility in water; Very Slightly soluble Solubility in solvent; Soluble in ethanol Freely soluble in diethyl ether
Octanol/water partition coefficient (log Pow):	2.99
Decomposition temperature:	Not available
Viscosity:	Not available

10 Stability and reactivity

Chemical stability:	This product is considered a stable material under normal and anticipated storage and handling conditions.
Possibility of hazardous reactions:	Decomposes on burning producing toxic gases and irritating fumes.
Conditions to avoid:	Sunlight, heat
Incompatible materials:	Not available
Hazardous decomposition products:	Toxic fumes of hydrogen bromide (except for carbon monoxide, carbon dioxide and water)

11 Toxicological information

(Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.)

Acute toxicity:

[Emergency Response Guidebook]
May cause toxic effects if inhaled or absorbed through skin.

Oral:	rat	LD50 2.7 g/kg
Inhalation:	rat	LC50/2H 21000 mg/m3

Irritant properties:

[Emergency Response Guidebook]
Inhalation or contact with material may irritate or burn skin and eyes.

Irritating to skin.

Allergenic and sensitizing effects:

Not available

Chronic toxicity:

May cause damage to organs (liver, nervous system) through prolonged or repeated exposure.

Carcinogenic effects:

Not available

Mutagenic effects:

Not available

Toxicity for reproduction:

Not available

12 Ecological information

(Insufficient data are available on the effect of this substance on the environment, therefore utmost care must be taken.)

Ecotoxicity:

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Fish toxicity: Daphnia magna LC50/24H 1.6 mg/L

Persistence and degradability:

Not available

Bioaccumulative potential:

Hardly biodegrability
0% by BOD (National institute of Technology and Evaluation, Japan)

Biotransportability:

Low residualibity in fish or shells.

13 Disposal considerations

Contact a licensed professional waste disposal service to dispose of this material. Comply with all country, national and local regulations. Do not dump this product into sewers, on the ground or into any body of water.

14 Transport information

Basic classification information for the transporting/shipment:

Sea; Controlled under IMDG's regulations.

UN Number:	2514
UN Proper shipping name:	Bromobenzene
Class or Division:	3
Packing group:	Ⅲ
Marine pollutant:	P

Air; Controlled under ICAO/IATA's regulations.

UN Number:	2514
UN Proper shipping name:	Bromobenzene
Class or Division:	3
Packing group:	Ⅲ

Special precautions which a user needs to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises:

Protection from direct sun light in transportation, and confirm the container does not leak.
Carefully load it onto a transporter without dropping, overturning or damaging so that it will stably stays on the transporter.
Fire is strictly prohibited.

15 Regulatory information

Follow all laws and regulations in your country.

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.