

# SAFETY DATA SHEETS

According to the UN GHS revision 8

Version: 1.0 Creation Date: July 15, 2019 Revision Date: July 15, 2019

## 1. **SECTION 1: Identification**

1.1. GHS Product identifier

**Product name** 6-Bromo-1-hexene

1.2. Other means of identification

Product number -

Other names bromo hexene;1-Hexene,6-bromo;1-Bromo-5-hexene

1.3. Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research uses.

Uses advised against no data available

1.4. Supplier's details

**Company** GM Chemical Co., Ltd

Address Room 202, No 1602 West Zhongshan Road,

Shanghai, 200235, China

**Telephone** 021-80264647

1.5. Emergency phone number

**Emergency phone number** 13817691973

**Service hours** Monday to Friday, 9am-5pm (Standard time zone:

UTC/GMT +8 hours).

## 2. SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Flammable liquids, Category 3

Skin irritation, Category 2

Eye irritation, Category 2

Specific target organ toxicity – single exposure, Category 3

2.2. GHS label elements, including precautionary statements

Pictogram(s)

Signal word Warning

Hazard statement(s) H226 Flammable liquid and vapourH315 Causes skin

irritationH319 Causes serious eye irritationH335 May

cause respiratory irritation

**Precautionary statement(s)** 

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**Prevention** P210 Keep away from heat, hot surfaces, 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

[electrical/ventilating/lighting/...] equipment.P242 Use non-sparking tools.P243 Take action to prevent

static discharges.P280 Wear protective

gloves/protective clothing/eye protection/face protection/hearing protection/...P264 Wash ... thoroughly after handling.P261 Avoid breathing dust/fume/gas/mist/vapours/spray.P271 Use only

outdoors or in a well-ventilated area.

**Response** P303+P361+P353 IF ON SKIN (or hair): Take off

immediately all contaminated clothing. Rinse affected areas with water [or shower].P370+P378 In case of fire: Use ... to extinguish.P302+P352 IF ON SKIN: Wash with plenty of water/...P321 Specific treatment (see ... on this label).P332+P317 If skin irritation occurs: Get medical help.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.P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.P319

Get medical help if you feel unwell.

**Storage** P403+P235 Store in a well-ventilated place. Keep

cool.P403+P233 Store in a well-ventilated place. Keep container tightly closed.P405 Store locked up.

**Disposal** P501 Dispose of contents/container to an appropriate

treatment and disposal facility in accordance with applicable laws and regulations, and product

characteristics at time of disposal.

2.3. Other hazards which do not result in classification

no data available

# 3. SECTION 3: Composition/information on ingredients

#### 3.1. Substances

| Chemical name | Common names and synonyms | CAS<br>number | EC<br>number | Concentration |
|---------------|---------------------------|---------------|--------------|---------------|
| 6-Bromo-1-    | 6-Bromo-1-hexene          | 2695-47-8     | 220-267-9    | >98.0%        |
| hexene        |                           |               |              |               |

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# 4. SECTION 4: First-aid measures

#### 4.1. Description of necessary first-aid measures

Medical attention is required. Consult a doctor. Show this safety data sheet (SDS) to the doctor in attendance.

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### **Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### **Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

# 4.2. Most important symptoms/effects, acute and delayed

no data available

# **4.3.** Indication of immediate medical attention and special treatment needed, if necessary

no data available

# 5. SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

# 5.2. Specific hazards arising from the chemical

no data available

## 5.3. Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

# 6. SECTION 6: Accidental release measures

# **6.1.** Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

## **6.2.** Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

# 6.3. Methods and materials for containment and cleaning up

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Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

# 7. SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

# **7.2.** Conditions for safe storage, including any incompatibilities Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

# 8. SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### Occupational Exposure limit values

no data available

#### **Biological limit values**

no data available

#### **8.2.** Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

# **8.3.** Individual protection measures, such as personal protective equipment (PPE)

#### **Eye/face protection**

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### **Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### **Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

# 9. SECTION 9: Physical and chemical properties and safety characteristics

Physical state

Liquid

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**Colorless** to pale yellow

**Odour** Weak **Melting point/freezing point** 208°C(lit.) **Boiling point or initial** 147°C(lit.)

boiling point and boiling

range

**Flammability** no data available **Lower and upper explosion** no data available

limit/flammability limit

Flash point 54°C(lit.)

Auto-ignition temperature no data available no data available

octanol/water

**Vapour pressure** 4.36mmHg at 25°C

**Density and/or relative** 1.217

density

**Relative vapour density** no data available **Particle characteristics** no data available

# 10. SECTION 10: Stability and reactivity

#### 10.1. Reactivity

no data available

# 10.2. Chemical stability

no data available

# 10.3. Possibility of hazardous reactions

no data available

#### 10.4. Conditions to avoid

no data available

#### 10.5. Incompatible materials

no data available

## 10.6. Hazardous decomposition products

no data available

# 11. SECTION 11: Toxicological information

#### **Acute toxicity**

• Oral: no data available

• Inhalation: no data available

• Dermal: no data available

Skin corrosion/irritation

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no data available

#### Serious eye damage/irritation

no data available

#### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

no data available

#### Carcinogenicity

no data available

#### Reproductive toxicity

no data available

#### **STOT-single exposure**

no data available

#### **STOT-repeated exposure**

no data available

#### **Aspiration hazard**

no data available

# 12. SECTION 12: Ecological information

#### 12.1. Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

#### 12.2. Persistence and degradability

no data available

#### 12.3. Bioaccumulative potential

no data available

## 12.4. Mobility in soil

no data available

#### 12.5. Other adverse effects

no data available

# 13. SECTION 13: Disposal considerations

#### 13.1. Disposal methods

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable

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for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

# 14. SECTION 14: Transport information

**14.1. UN Number** 

ADR/RID: UN1993 **IMDG: UN1993** IATA: UN1993

**14.2. UN Proper Shipping Name** 

ADR/RID: FLAMMABLE IMDG: FLAMMABLE IATA: FLAMMABLE

LIQUID, N.O.S. LIQUID, N.O.S. LIQUID, N.O.S.

14.3. Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

14.4. Packing group, if applicable

ADR/RID: III IMDG: III IATA: III

14.5. Environmental hazards

ADR/RID: No IMDG: No IATA: No

14.6. Special precautions for user

no data available

14.7. Transport in bulk according to IMO instruments

no data available

# 15. SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

| Chemical name   | Common   | CAS    | EC     |
|---|----------|--------|--------|
|   | names    | number | number |
|   | and      |        |        |
|   | synonyms |        |        |
| 6-Bromo-1-hexene  | 6-Bromo- | 2695-  | 220-   |
|   | 1-hexene | 47-8   | 267-9  |
| <b>European Inventory of Existing Commercial Chemical</b> | Listed.  |        |        |
| Substances (EINECS)                                       |          |        |        |
| EC Inventory  | Listed.  |        |        |
| <b>United States Toxic Substances Control Act (TSCA)</b>  | Listed.  |        |        |
| Inventory   |          |        |        |
| China Catalog of Hazardous chemicals 2015                 | Not      |        |        |
|   | Listed.  |        |        |
| New Zealand Inventory of Chemicals (NZIoC)                | Not      |        |        |
|   | Listed.  |        |        |
| Philippines Inventory of Chemicals and Chemical           | Not      |        |        |
| Substances (PICCS)  | Listed.  |        |        |
| Vietnam National Chemical Inventory                       | Listed.  |        |        |

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| Chinese Chemical Inventory of Existing Chemical |         |
|---|---------|
| Substances (China IECSC)                        | Listed. |
| Korea Existing Chemicals List (KECL)            | Listed. |

# 16. SECTION 16: Other information

**Information on revision** 

**Creation Date** July 15, 2019 **Revision Date** July 15, 2019

#### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

#### References

- IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal The Global Portal to Information on Chemical Substances by OECD, website:
  - http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA European Chemicals Agency, website: https://echa.europa.eu/

Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.

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