

## Chemical Safety Data Sheet MSDS / SDS

 **$\alpha$ -Bromo-2,3,4,5,6-pentafluorotoluene**

Revision Date:2024-11-30 Revision Number:1

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

Product name :  $\alpha$ -Bromo-2,3,4,5,6-pentafluorotoluene  
CBnumber : CB9238273  
CAS : 1765-40-8  
EINECS Number : 217-182-4  
Synonyms : 1-(bromomethyl)-2,3,4,5,6-pentafluorobenzene,PENTAFLUOROBENZYL BROMIDE

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P405 Store locked up.

**Hazard statements**

H227 Combustible liquid

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: $\alpha$ -Bromo-2,3,4,5,6-pentafluorotoluene
Synonyms	: 1-(bromomethyl)-2,3,4,5,6-pentafluorobenzene,PENTAFLUOROBENZYL BROMIDE
CAS	: 1765-40-8
EC number	: 217-182-4
MF	: C7H2BrF5
MW	: 260.99

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## SECTION 4: First aid measures

### Description of first aid measures

#### General advice

Show this safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### Special hazards arising from the substance or mixture

Carbon oxides, Hydrogen bromide gas, Hydrogen fluoride

### Advice for firefighters

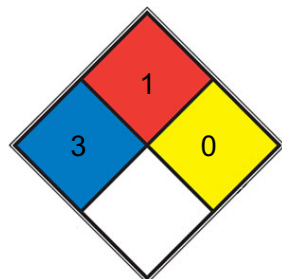
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable

protective clothing.

### Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet.

### NFPA 704



HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

FIRE 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

SPEC.

HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.

For personal protection see section 8.

### Environmental precautions

No special precautionary measures necessary.

### Methods and materials for containment and cleaning up

Observe possible material restrictions (see sections 7 and 10). Take up with liquid- absorbent material (e.g. Chemizorb? ). Dispose of properly. Clean up affected area.

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

## Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

For precautions see section 2.2.

## Conditions for safe storage, including any incompatibilities

Tightly closed. Moisture sensitive.

## Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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# SECTION 8: Exposure controls/personal protection

## control parameter

### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

## Exposure controls

### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

#### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact Material: Viton?

Minimum layer thickness: 0,70 mm Break through time: > 480 min

Material tested: Vitoject? (KCL 890 / Aldrich Z677698, Size M)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,40 mm Break through time: > 10 min

Material tested: Camatril? (KCL 730 / Aldrich Z677442, Size M)

#### Body Protection

protective clothing

#### Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

## Control of environmental exposure

No special precautionary measures necessary.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	liquid
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	Melting point/range: 19 - 20 °C - lit.
Initial boiling point and boiling range	174 - 175 °C - lit.
Flash point	83 °C - c.c.
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1,728 g/mL at 25 °C
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

### Other safety information

No data available

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## SECTION 10: Stability and reactivity

### Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

No data available

## Conditions to avoid

Strong heating.

## Incompatible materials

No data available

## Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen bromide gas, Hydrogen fluoride

Other decomposition products - No data available In the event of fire: see section 5

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# SECTION 11: Toxicological information

## Information on toxicological effects

### Acute toxicity

### Skin corrosion/irritation

Irritations

### Serious eye damage/eye irritation

Irritations

### Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

### Specific target organ toxicity - single exposure

May cause respiratory irritation.

Acute oral toxicity - Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath

### Specific target organ toxicity - repeated exposure Aspiration hazard

### Additional Information

RTECS: Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Quantitative data on the toxicity of this product are not available. Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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# SECTION 12: Ecological information

## Toxicity

## Persistence and degradability

## Bioaccumulative potential

## Mobility in soil

## Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## Other adverse effects

We have no quantitative data concerning the ecological effects of this product. Further information on ecology  
Discharge into the environment must be avoided.

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# SECTION 13: Disposal considerations

## Waste treatment methods

## Product

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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# SECTION 14: Transport information

## SECTION 14: Transport information

UN number

ADR/RID:IMDG:IATA:ADR/RID:IMDG:IATA:

UN number

ADR/RID:IMDG:IATA:ADR/RID:IMDG:IATA:

UN number

ADR/RID:IMDG:IATA:ADR/RID:IMDG:IATA:

UN number

ADR/RID:IMDG:IATA:

IATA:

UN number

ADR/RID:IMDG:IATA:ADR/RID:IMDG:IATA:

IATA:

## Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: 1224 IMDG: 1224 IATA: 1224

ADR/RID: - IMDG: - IATA: -

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: 2811 IMDG: 2811 IATA: 2811

ADR/RID: 1445 IMDG: 1445 IATA: 1445

ADR/RID: FLAMMABLE LIQUID, N.O.S. (Hexamethyldisilane) IMDG: FLAMMABLE LIQUID, N.O.S. (Hexamethyldisilane) IATA: Flammable liquid, n.o.s. (Hexamethyldisilane)

ADR/RID: 2811 IMDG: 2811 IATA: 2811

ADR/RID: - IMDG: - IATA: -

ADR/RID: 2811 IMDG: 2811 IATA: 2811

ADR/RID: - IMDG: - IATA: -

ADR/RID: - IMDG: - IATA: -

### **Packaging group**

ADR/RID: - IMDG: - IATA: -

ADR/RID: - IMDG: - IATA: -

ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (Ethyl-2-thiourea) IMDG: TOXIC SOLID, ORGANIC, N.O.S. (Ethyl-2-thiourea) IATA: Toxic solid, organic, n.o.s. (Ethyl-2-thiourea)

ADR/RID: - IMDG: - IATA: -

ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (P7C3) IMDG: TOXIC SOLID, ORGANIC, N.O.S. (P7C3) IATA: Toxic solid, organic, n.o.s. (P7C3)

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: BARIUM CHLORATE, SOLID IMDG: BARIUM CHLORATE, SOLID IATA: Barium chlorate, solid

ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (Neurodazine) IMDG: TOXIC SOLID, ORGANIC, N.O.S. (Neurodazine) IATA: Toxic solid, organic, n.o.s. (Neurodazine)

ADR/RID: II IMDG: II IATA: II

ADR/RID: - IMDG: - IATA: -

ADR/RID: KETONES, LIQUID, N.O.S. (Heptane-3,5-dione) IMDG: KETONES, LIQUID, N.O.S. (Heptane-3,5-dione) IATA: Ketones, liquid, n.o.s. (Heptane-3,5-dione)

ADR/RID: II IMDG: II IATA: II

### **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: no IMDG Marine pollutant: no IATA: no Special precautions for user Further information Not classified as dangerous in the meaning of transport regulations.

ADR/RID: no IMDG Marine pollutant: no IATA: no

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

ADR/RID: 5.1 (6.1) IMDG: 5.1 (6.1) IATA: 5.1 (6.1)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

ADR/RID: no IMDG Marine pollutant: no IATA: no

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

ADR/RID: no IMDG Marine pollutant: no IATA: no

ADR/RID: no IMDG Marine pollutant: no IATA: no Special precautions for user Further information Not classified as dangerous in the meaning of transport regulations.

### **Special precautions for user**

No data available

ADR/RID: III IMDG: III IATA: III



No data available

ADR/RID: III IMDG: III IATA: III

ADR/RID: II IMDG: II IATA: II

ADR/RID: III IMDG: III IATA: III

No data available

ADR/RID: III IMDG: III IATA: III

No data available

### **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

ADR/RID: no IMDG Marine pollutant: no IATA: no

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

ADR/RID: no IMDG Marine pollutant: no IATA: no

ADR/RID: no IMDG Marine pollutant: no IATA: no Special precautions for user No data available

### **Special precautions for user**

No data available

No data available

No data available

No data available

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## SECTION 15: Regulatory information

### **Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **Regulations on the Safety Management of Hazardous Chemicals**

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

#### **Measures for Environmental Management of New Chemical Substances**

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Not Listed. website: <https://www.mee.gov.cn/>

Korea Existing Chemicals List (KECL):Not Listed. website: <http://ncis.nier.go.kr>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Not Listed. website: <https://emb.gov.ph/>

United States Toxic Substances Control Act (TSCA) Inventory:Not Listed. website: <https://www.epa.gov/>

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## SECTION 16: Other information

### **Abbreviations and acronyms**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit

TWA: Time Weighted Average

## References

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

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.