

1: Identification of substance / mixture

1. Product Identifier

Substance

Product Name **Benzene D6 >99.96% +T.M.S.**
Product Code D-340-B
CAS Number 1076-43-3
Other Names Benzol
Cyclohexatriene
IUPAC
MFCD Number MFCD00003010
EC/EINECS 214-061-8
REACH Number

2. Relevant identified uses of the substance or mixture and uses advised against

Research and Development

3. Details of the supplier of the safety data sheet

Fluorochem Ltd
Unit 14, Graphite Way
Hadfield
Derbyshire
SK13 1QH
United Kingdom

Telephone: +44(0)1457 860111
Fax number: +44(0)1457 892799
Email: MSDS@fluorochem.co.uk



4. Emergency telephone number

07855 268577

2. Hazards Identification

1. Classification of the substance or mixture

H225	Flam Liq. 2	R10, R11
H304	Asp Tox. 1	R65
H315	Skin Irrit. 2	R38
H319	Eye Irrit. 2	R36
H350	Carc. 1A	
H372	STOT RE 1	

* The risk codes have been generated using Annex VII of directive 67/548/EEC. Risk code combinations are not included.

2. Label elements

Signal Word **Danger**

Hazard Statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H350	May cause cancer .
H372	Causes damage to organs .

Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
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P260	Do not breathe dust/fume/gas/mist/vapours/spray.
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. Continue rinsing.
P370 + P378	In case of fire: Use CO ₂ , powder or sand for extinction.
P405	Store locked up.

3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

3. Composition / Information on Ingredients

1. Substances

Benzene D6 >99.96% +T.M.S.

Assay:100% CAS Number :1076-43-3

2. Mixtures

Not Relevant

4. First Aid Measures

1. Description of first aid measures

Skin Contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/ attention. Wash immediately with plenty of soap and water. Transfer to hospital if there are burns or symptoms of poisoning.

Eye Contact If eye irritation persists: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion Induce vomiting and call for medical help.

Inhalation Remove casualty from exposure ensuring one's own safety whilst doing so.

2. Most important symptoms and effects

There may be irritation and redness.

3. Indication of any immediate medical attention

No additional measures required

5. Firefighting measures

1. Extinguishing Media

Suitable In case of fire: Use CO₂, powder or sand
Carbon dioxide.
Dry chemical powder.
sand

Unsuitable Do not use water.

2. Special Hazards arising from the substance or mixture

Highly flammable.
In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

3. Advice for Fire Fighters

Wear self-contained breathing apparatus.
Wear protective clothing to prevent contact with skin and eyes.

6. Accidental Release Measures

1. Personal Precautions

Refer to section 8 of SDS for personal protection details.
Eliminate all sources of ignition.

2. Environmental Precautions

Do not discharge into drains or rivers.

3. Methods & Materials

Mix with sand or vermiculite.
Never add water to this product.
Clean-up should be dealt with only by qualified personnel familiar with the specific substance.
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

7. Handling and Storage

1. Personal Precautions

<i>Safe Handling</i>	Ensure there is sufficient ventilation of the area. Smoking is forbidden. Wash hands thoroughly after handling.
<i>Protection against explosions and fires</i>	Take off contaminated clothing and wash before reuse. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting/. Use only non-sparking tools. normal measures for preventive fire protection

2. Conditions for safe storage, including any incompatibilities

<i>Managing Storage Risks</i>	Store in cool, well ventilated area. Keep away from sources of ignition. Keep container tightly closed. Avoid contact with water or humidity. Prevent the build up of electrostatic charge in the immediate area. Avoid incompatible materials and conditions - see section 10 of SDS.
<i>Storage Controls</i>	No special requirements
<i>Maintaining Integrity</i>	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep cool. Store away from oxidising agents
<i>Other advice</i>	Store locked up. no further information available

3. Specific End Uses

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The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

8. Exposure Controls/Personal Protection

1. Control Parameters

No Data Available

2. Exposure Controls

<i>General protective and hygiene measures</i>	Wear protective gloves/protective clothing/eye protection/face protection. . Workplace exposure limits 8hr TWA 1ppm
<i>Engineering measures</i>	Ensure there is sufficient ventilation of the area.
<i>Eye / Face Protection</i>	Safety Glasses with side-shields.
<i>Hand protection</i>	Protective gloves.
<i>Respiratory protection</i>	Do not breathe dust/fume/gas/mist/vapours/spray. . Use breathing protection with high concentrations
<i>Skin protection</i>	Handle with gloves. Wash and dry hands. Protective clothing.
<i>Other personal protection advice</i>	no data

9. Physical and Chemical Properties

1. Physical and Chemical Properties

Appearance	Colourless liquid
Odour	Not Applicable
Odour threshold	Not Applicable
PH	Not Applicable
Melting point / Freezing point	6.8°C
Initial boiling point and boiling range	79.1°C
Flash point	-11°C
Evaporation rate	Not Applicable
Flammability(solid,gas)	Not Applicable
Upper/lower flammability or explosive limits	1.3% (lower) 8% (upper)
Vapour pressure	74.6mmHg @ 20°C
Vapour density	Not Applicable
Relative density	0.950
Solubility(ies):	Not Applicable
Partition coefficient: n-octanol/water	Not Applicable
Auto-ignition temperature	Not Applicable
Decomposition temperature	Not Applicable
Viscosity	Not Applicable
Explosive properties	Not Applicable
Oxidising properties	Not Applicable

2. Other Information

No additional information available

10. Stability and Reactivity

1. Reactivity

no unusual reactivity

2. Stability

Stable under normal conditions.

3. Possibility of Hazardous Reactions

no hazardous reactions known

4. Conditions to Avoid

Heat.
Hot Surfaces.
Flames.
Direct Sunlight.

5. Incompatible Materials

Acids.
Oxidising agents.
Bases.
Halogens.
Metal salts.

6. Hazardous Decomposition Products

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

11. Toxicology information

1. Information

<i>Acute Toxicity</i>	no data
<i>Skin corrosion/irritation</i>	irritant for skin and mucous membranes
<i>Serious eye Damage/irritation</i>	irritant effect
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	not known
<i>Carcinogenicity</i>	not known
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known
<i>Aspiration hazard</i>	not known

2. Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

12. Ecological Information

1. Toxicity

not known

2. Persistence and degradability

not known

3. Bio-Accumulative Potential

not known

4. Mobility and Soil

not known

5. Results of PBT & vPvB assessment

not known

6. Other adverse effects

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

13. Disposal Considerations

1. Waste Treatment Methods

Disposal Operations

Disposal of Packaging Disposal must be made according to official regulations.

14. Transport Information

Air (ICAO)

1. **UN Number:** 1114
2. **UN proper shipping name:** Benzene
3. **Transport hazard class(es):** Class: 3 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

Road (ADR)

1. **UN Number:** 1114
2. **UN proper shipping name:** BENZENE
3. **Transport hazard class(es):** Class: 3 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**

7. Transport in bulk:

Sea (IMDG)

1. **UN Number:** 1114
 2. **UN proper shipping name:** Benzene
 3. **Transport hazard class(es):** Class: 3 Sub Class :



4. **Packing group:** II
 5. **Environmental hazards:**
 6. **Special Precautions for user:**
 7. **Transport in bulk:** IBCINS: IBC02

UNTANKINS: T4
TANKPROV: TP1

15. Safety, health and environmental regulations

1. Safety, health and environmental regulations:

product is not subject to any additional regulations or provisions

2. Safety Assessment

No Chemical Safety Assessment

16. Other Information

1. Other Information:

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by road)
 RID: Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the ICAO
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 CAS: Chemical Abstracts Service

2. Associated risk phrases according to european directive 67/548/EEC

R10	Flammable.
R11	Highly flammable.
R36	Irritating to eyes.
R38	Irritating to skin.
R65	Harmful: may cause lung damage if swallowed.

3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user.