

# SAFETY DATA SHEET

Revision Date 19-Dec-2025

## Revision Number 6

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

|                             |  |
|-----------------------------|--|
| <b>Product Name</b>         | 1,4-Cyclohexadiene, stabilized                     |
| <b>Cat No. :</b>            | AC154820000; AC154820050; AC154820250; AC154821000 |
| <b>CAS No</b>               | 628-41-1   |
| <b>Synonyms</b>             | No information available                           |
| <b>Recommended Use</b>      | Laboratory chemicals.                              |
| <b>Uses advised against</b> | Food, drug, pesticide or biocidal product use.     |

## Details of the supplier of the safety data sheet

## Company

## **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

## Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Flammable liquids Category 2

## Label Elements

## Signal Word

## Danger

## Hazard Statements

#### **Hazard Statements**

**Precautionary Statements****Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground and bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

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

Take action to prevent static discharges

Use non-sparking tools

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

**Storage**

Store in a well-ventilated place. Keep cool

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

**Other hazards**

Contains a known or suspected endocrine disruptor.

### 3. Composition/information on Ingredients

| Component                  | CAS No   | Weight % |
|----------------------------|----------|----------|
| 1,4-Cyclohexadiene         | 628-41-1 | >96      |
| 2,6-Di-tert-butyl-p-cresol | 128-37-0 | 0.1      |

### 4. First-aid measures

**General Advice**

If symptoms persist, call a physician.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Ingestion**

Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects**

None reasonably foreseeable. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Notes to Physician**

Treat symptomatically

## 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers. |
| <b>Unsuitable Extinguishing Media</b>   | No information available  |
| <b>Flash Point</b>                      | -6 °C / 21.2 °F   |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | No information available  |
| <b>Explosion Limits</b>                 |   |
| Upper                                   | No data available   |
| Lower                                   | No data available   |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

### Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

|  | Health | Flammability | Instability | Physical hazards |
|--|--------|--------------|-------------|------------------|
|  | 0      | 3            | 0           | N/A              |

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions** Should not be released into the environment.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## 7. Handling and Storage

**Handling** Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

**Storage.** Keep in a dry place. Keep container tightly closed. Keep away from heat, sparks and flame. Refrigerator/flammables. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed in a dry and well-ventilated place. Incompatible Materials. Strong oxidizing agents.

## 8. Exposure controls / personal protection

### Exposure Guidelines

| Component                  | ACGIH TLV                | OSHA PEL                            | NIOSH                            | Mexico OEL (TWA)         |
|----------------------------|--------------------------|-------------------------------------|----------------------------------|--------------------------|
| 2,6-Di-tert-butyl-p-cresol | TWA: 2 mg/m <sup>3</sup> | (Vacated) TWA: 10 mg/m <sup>3</sup> | REL = 10 mg/m <sup>3</sup> (TWA) | TWA: 2 mg/m <sup>3</sup> |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Appearance****Physical State**

Liquid

**Color**

Colorless

**Odor**

Odorless

**Odor Threshold**

No information available

**Property****Values****Remarks****• Method****Melting Point/Range**

-49.2 °C / -56.6 °F

**Softening Point**

No data available

**Boiling Point/Range**

81 - 82 °C / 177.8 - 179.6 °F

@ 760 mmHg

**Flash Point**

-6 °C / 21.2 °F

**Method** - No information available**Flammability (liquid)**

Highly flammable

On basis of test data

**Flammability (solid,gas)**

Not applicable

Liquid

**Explosion Limits**

No data available

**Autoignition Temperature**

No data available

**Decomposition Temperature**

No data available

**pH**

No information available

**Viscosity**

No data available

**Water Solubility**

No information available

**Solubility in other solvents**

No information available

**Partition Coefficient (n-octanol/water)****log Pow****Component**

5.1

**Vapor Pressure**

No data available

**Density / Specific Gravity**

0.840

**Bulk Density**

Not applicable

Liquid

**Vapor Density**

2.8

(Air = 1.0)

**Particle characteristics**

Not applicable (liquid)

**Other Information****Molecular Formula**

C6 H8

**Molecular Weight**

80.13

**Explosive Properties** Vapors may form explosive mixtures with air

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

**Incompatible Materials** Strong oxidizing agents

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

**Hazardous Polymerization** No information available.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Information on expected route of exposure

**Inhalation** Not an expected route of exposure.

**Ingestion** May be harmful if swallowed.

**Eyes** Avoid contact with eyes.

**Skin** Avoid contact with skin.

### Toxicology data for the components

| Component                  | LD50 Oral        | LD50 Dermal      | LC50 Inhalation |
|----------------------------|------------------|------------------|-----------------|
| 2,6-Di-tert-butyl-p-cresol | > 6 g/kg ( Rat ) | > 2 g/kg ( Rat ) | -               |

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available

#### (d) respiratory or skin sensitization;

Respiratory No data available  
Skin No data available

**(e) germ cell mutagenicity;** No data available

#### (f) carcinogenicity;

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component                  | CAS No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|----------------------------|----------|------------|------------|------------|------------|------------|
| 1,4-Cyclohexadiene         | 628-41-1 | Not listed |
| 2,6-Di-tert-butyl-p-cresol | 128-37-0 | Not listed |

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties**

**Assess endocrine disrupting properties for human health** Contains a substance on the National Authorities Endocrine Disruptor Lists

| Component                                     | EU National Authorities Endocrine Disruptor Lists - Health |
|---|--|
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 (0.1 ) | List II  |

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

| Component                  | Freshwater Algae                            | Freshwater Fish       | Microtox   | Water Flea          |
|----------------------------|---|-----------------------|--|---------------------|
| 2,6-Di-tert-butyl-p-cresol | EC50 = 0.758 mg/L 96h<br>EC50 = 6 mg/L 72 h | LC50 = 0.199 mg/L 96h | EC50 = 7.82 mg/L 5 min<br>EC50 = 8.57 mg/L 15 min<br>EC50 = 8.98 mg/L 30 min | EC50 >0.31 mg/L 48h |

**Persistence and Degradability** Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its volatility.

| Component                  | log Pow |
|----------------------------|---------|
| 2,6-Di-tert-butyl-p-cresol | 5.1     |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, n.o.s.  
**Hazard Class** 3  
**Packing Group** II

### TDG

**UN-No** UN3295

|                      |                              |
|----------------------|------------------------------|
| Proper Shipping Name | Hydrocarbons, liquid, n.o.s. |
| Hazard Class         | 3                            |
| Packing Group        | II                           |
| <b>IATA</b>          |                              |
| UN-No                | UN3295                       |
| Proper Shipping Name | Hydrocarbons, liquid, n.o.s. |
| Hazard Class         | 3                            |
| Packing Group        | II                           |
| <b>IMDG/IMO</b>      |                              |
| UN-No                | UN3295                       |
| Proper Shipping Name | Hydrocarbons, liquid, n.o.s. |
| Hazard Class         | 3                            |
| Packing Group        | II                           |

## 15. Regulatory Information

### United States of America Inventory

| Component                  | CAS No   | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|----------------------------|----------|------|---|-----------------------------|
| 1,4-Cyclohexadiene         | 628-41-1 | X    | ACTIVE  | -                           |
| 2,6-Di-tert-butyl-p-cresol | 128-37-0 | X    | ACTIVE  | -                           |

#### Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b) - Notices of Export** Not applicable

### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component                  | CAS No   | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|----------------------------|----------|-----|------|-----------|-------|------|------|------|-------|----------|
| 1,4-Cyclohexadiene         | 628-41-1 | -   | X    | 211-043-1 | X     | -    |      | X    | -     | KE-09158 |
| 2,6-Di-tert-butyl-p-cresol | 128-37-0 | X   | -    | 204-881-4 | X     | X    | X    | X    | X     | KE-03079 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### U.S. Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Component                  | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|----------------------------|---------------|------------|--------------|----------|--------------|
| 2,6-Di-tert-butyl-p-cresol | X             | X          | X            | -        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Authorisation/Restrictions according to EU REACH** Not applicable

| Component                  | CAS No   | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------------------|----------|---|---|---|
| 1,4-Cyclohexadiene         | 628-41-1 | -   | -   | -   |
| 2,6-Di-tert-butyl-p-cresol | 128-37-0 | -   | -   | -   |

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

| Component                  | CAS No   | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|----------------------------|----------|----------------|------------------------------|---------------------------|--|
| 1,4-Cyclohexadiene         | 628-41-1 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |
| 2,6-Di-tert-butyl-p-cresol | 128-37-0 | Listed         | Not applicable               | Not applicable            | Not applicable                             |

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

| Component                  | CAS No   | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|----------------------------|----------|---|--|----------------------------|------------------------------------|
| 1,4-Cyclohexadiene         | 628-41-1 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |
| 2,6-Di-tert-butyl-p-cresol | 128-37-0 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

**16. Other Information**

|                         |   |
|-------------------------|---|
| <b>Prepared By</b>      | Product stewardship (Regulatory Affairs)<br>Thermo Fisher Scientific<br>email - begel.sdsdesk@thermofisher.com  |
| <b>Revision Date</b>    | 19-Dec-2025   |
| <b>Print Date</b>       | 19-Dec-2025   |
| <b>Revision Summary</b> | Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024. |

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**