

# Material Safety Data Sheet

## Dicyclopentadiene, 95%, stabilized with 100-200 ppm p-tert-butylcatechol

ACC# 69509

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Dicyclopentadiene, 95%, stabilized with 100-200 ppm p-tert-butylcatechol

**Catalog Numbers:** AC150760000, AC150760010, AC150760025, AC150760050, AC150761000, AC9915019, NC9003305, NC9100901, NC9169467, NC9225404, XXAC15076-20, XXAC15076-200K, XXAC15076-400K

**Synonyms:** Cyclopentadiene dimer; 3a,4,7,7a-Tetrahydro-4,7-methanoindene; DCPD.

**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
77-73-6	Dicyclopentadiene	95	201-052-9
98-29-3	4-tert-Butylcatechol	0.015	202-653-9

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 26 deg C.

**Warning! Flammable liquid and vapor.** Causes eye, skin, and respiratory tract irritation. Harmful if inhaled or swallowed. May form explosive peroxides.

**Target Organs:** Respiratory system, eyes, skin.

#### Potential Health Effects

**Eye:** Causes eye irritation.

**Skin:** Causes skin irritation. A single prolonged skin exposure is not likely to result in the material being absorbed in harmful amounts.

**Ingestion:** Harmful if swallowed. May cause digestive tract disturbances. May cause central nervous system depression.

**Inhalation:** Causes respiratory tract irritation. May cause headache. Overexposure produces central nervous system depression.

**Chronic:** Not available. Kidney damage has been reported in rats exposed to dicyclopentadiene for 7 hours per day for 89 days at levels of 34 or 74 ppm in air.

### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**Skin:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Liquid will float and may reignite on the surface of water. Flammable liquid and vapor. May polymerize explosively when involved in a fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. May accumulate static electricity.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Water may be ineffective.

**Flash Point:** 26 deg C ( 78.80 deg F)

**Autoignition Temperature:** 503 deg C ( 937.40 deg F)

**Explosion Limits, Lower:** 0.8 vol %

**Upper:** 6.3 vol %

**NFPA Rating:** (estimated) Health: 2; Flammability: 3; Instability: 1

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Use and store under nitrogen. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor or mist.

**Storage:** Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Storage under a nitrogen blanket has been recommended. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. All peroxidizable substances should be stored away from heat and light and be protected from ignition sources.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Dicyclopentadiene	5 ppm TWA	5 ppm TWA; 30 mg/m <sup>3</sup> TWA	none listed
4-tert-Butylcatechol	none listed	none listed	none listed

**OSHA Vacated PELs:** Dicyclopentadiene: 5 ppm TWA; 30 mg/m<sup>3</sup> TWA 4-tert-Butylcatechol: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear chemical splash goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** clear, colorless

**Odor:** disagreeable odor - camphor

**pH:** Not available.

**Vapor Pressure:** 2.29 mm Hg @ 25 deg C

**Vapor Density:** 4.6 (air=1)

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 170 deg C @ 760 mm Hg

**Freezing/Melting Point:** -1 deg C

**Decomposition Temperature:** 150 deg C

**Solubility:** Insoluble.

**Specific Gravity/Density:** 0.98

**Molecular Formula:** C<sub>10</sub>H<sub>12</sub>

**Molecular Weight:** 132.20

## Section 10 - Stability and Reactivity

**Chemical Stability:** Under normal storage conditions, peroxidizable compounds can form and accumulate peroxides which may explode when subjected to heat or shock. This material is most hazardous when peroxide levels are concentrated by distillation or evaporation. DCPD will decompose to cyclopentadiene at temperatures > 150°C.

**Conditions to Avoid:** Ignition sources, excess heat, evaporating to near dryness, prolonged exposure to air, loss of inhibitor.

**Incompatibilities with Other Materials:** Strong oxidizing agents, polymerizing initiators.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** May occur.

## Section 11 - Toxicological Information

### RTECS#:

CAS# 77-73-6: PC1050000

CAS# 98-29-3: UX1400000

### LD50/LC50:

CAS# 77-73-6:

Draize test, rabbit, skin: 20 mg/24H Moderate;

Inhalation, mouse: LC50 = 145 ppm/4H;  
Inhalation, mouse: LC50 = 400 mg/m<sup>3</sup>/2H;  
Inhalation, rabbit: LC50 = 771 ppm/4H;  
Inhalation, rabbit: LC50 = 4200 mg/m<sup>3</sup>;  
Inhalation, rat: LC50 = 660 ppm/4H;  
Inhalation, rat: LC50 = 610 mg/m<sup>3</sup>/4H;  
Oral, mouse: LD50 = 190 mg/kg;  
Oral, rat: LD50 = 353 mg/kg;  
Oral, rat: LD50 = 520 mg/kg;  
Oral, rat: LD50 = 370 mg/kg;  
Skin, rabbit: LD50 = 5080 mg/kg;  
Skin, rabbit: LD50 = 5.08

CAS# 98-29-3:

Draize test, rabbit, skin: 750 ug/24H Severe;  
Oral, rat: LD50 = 2820 mg/kg;  
Skin, rabbit: LD50 = 630 uL/kg;

**Carcinogenicity:**

CAS# 77-73-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 98-29-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.

**Teratogenicity:** No data available.

**Reproductive Effects:** No data available.

**Mutagenicity:** No data available.

**Neurotoxicity:** No data available.

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	FLAMMABLE LIQUIDS, TOXIC, N.O.S.	DICYCLOPENTADIENE
<b>Hazard Class:</b>	3	3
<b>UN Number:</b>	UN1992	UN2048
<b>Packing Group:</b>	III	III
<b>Additional Info:</b>		FLASHPOINT 26 C

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 77-73-6 is listed on the TSCA inventory.

CAS# 98-29-3 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

CAS# 77-73-6: Testing required by manufacturers, processors      CAS# 98-29-3: Testing required by manufacturers, processors

#### Section 12b

CAS# 77-73-6: Section 4      CAS# 98-29-3: Section 4

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 77-73-6: immediate, delayed, fire, reactive.

#### Section 313

This material contains Dicyclopentadiene (CAS# 77-73-6, 95%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 77-73-6 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 98-29-3 can be found on the following state right to know lists: Pennsylvania, Minnesota, Massachusetts.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations****European Labeling in Accordance with EC Directives****Hazard Symbols:**

XN N

**Risk Phrases:**

R 10 Flammable.

R 19 May form explosive peroxides.

R 20/22 Harmful by inhalation and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety Phrases:**

S 36/37 Wear suitable protective clothing and gloves.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

**WGK (Water Danger/Protection)**

CAS# 77-73-6: 2

CAS# 98-29-3: No information available.

**Canada - DSL/NDSL**

CAS# 77-73-6 is listed on Canada's DSL List.

CAS# 98-29-3 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of B2, D2B, D1B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 77-73-6 is listed on the Canadian Ingredient Disclosure List.

CAS# 98-29-3 is listed on the Canadian Ingredient Disclosure List.

**Section 16 - Additional Information**

**MSDS Creation Date:** 2/09/1998

**Revision #5 Date:** 5/10/2004

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*