

# **SAFETY DATA SHEET**

Revision Date 24-Dec-2021 Revision Number 5

1. Identification

Product Name 1,4-Cyclohexadiene, stabilized

Cat No.: AC154820000; AC154820050; AC154820250; AC154821000

**CAS No** 628-41-1

Synonyms No information available

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410
Fair Lawn, NJ 07410

Tel: (201) 796-7100

Emergency Telephone Number For information US call: 001-800-ACROS-01 / 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 by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids Category 2

Label Elements

Signal Word

Danger

**Hazard Statements** 

Highly flammable liquid and vapor



### **Precautionary Statements**

### Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Use only non-sparking tools

Take precautionary measures against static discharge

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

Skir

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

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

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

#### 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

**Notes to Physician** 

None reasonably foreseeable. . Inhalation of high vapor concentrations may cause

symptoms like headache, dizziness, tiredness, nausea and vomiting

Treat symptomatically

# 5. Fire-fighting measures

Suitable Extinguishing Media Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam, Water mist may

be used to cool closed containers.

No information available **Unsuitable Extinguishing Media** 

-6 °C / 21.2 °F **Flash Point** 

Method -No information available

**Autoignition Temperature** 

**Explosion Limits** 

No information available

No data available Upper Lower No data available Sensitivity to Mechanical Impact No information available Sensitivity to Static Discharge 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 (CO2).

### **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

Physical hazards Health **Flammability** Instability 0 N/A

### 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.

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

Methods for Containment and Clean Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Up

Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

### Handling and storage

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid Handling

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.

Keep in a dry place. Keep container tightly closed. Keep away from heat, sparks and flame. Storage.

> 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 IDLH	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>	TWA: 10 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>

Legend

ACGIH - American Conference of Governmental Industrial Hygienists OSHA - Occupational Safety and Health Administration

NIOSH IDLH: 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.

# Physical and chemical properties

Physical StateLiquidAppearanceColorlessOdorOdorless

Odor Threshold

PH

No information available
No information available
No information available

 Melting Point/Range
 -49.2 °C / -56.6 °F

 Boiling Point/Range
 81 - 82 °C / 177.8 - 179.6 °F @ 760 mmHg

Flash Point -6 °C / 21.2 °F
Evaporation Rate No information available

Flammability (solid, gas)

Not applicable

Flammability or explosive limits

UpperNo data availableLowerNo data availableVapor PressureNo information available

Vapor Density 2.8 Specific Gravity 0.840

Solubility

Partition coefficient; n-octanol/water

Autoignition Temperature

No information available
No information available
No information available

Decomposition Temperature

Viscosity

No information available
No information available

Molecular Formula C6 H8
Molecular Weight 80.13

# 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 (CO2)

**Hazardous Polymerization**No information available.

### 1,4-Cyclohexadiene, stabilized

**Hazardous Reactions** 

None under normal processing.

## 11. Toxicological information

**Acute Toxicity** 

**Product Information** 

No acute toxicity information is available for this product

**Component Information** 

Component LD50 Oral		LD50 Dermal	LC50 Inhalation	
2,6-Di-tert-butyl-p-cresol	> 6 g/kg ( Rat )	> 2 g/kg ( Rat )	Not listed	

**Toxicologically Synergistic** 

No information available

**Products** 

Delayed and immediate effects as well as chronic effects from short and long-term exposure

No information available Irritation

Sensitization No information available

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-cres	128-37-0	Not listed				
ol						

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

No information available. **Developmental Effects** 

**Teratogenicity** No information available.

None known STOT - single exposure STOT - repeated exposure None known

No information available **Aspiration hazard** 

delayed

Symptoms / effects,both acute and Inhalation of high vapor concentrations may cause symptoms like headache, dizziness,

tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

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

# 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 EC50 = 6 mg/L 72 h	LC50 = 0.199 mg/L 96h	EC50 = 7.82 mg/L 5 min EC50 = 8.57 mg/L 15 min 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	4.17

# 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 ||

TDG

**UN-No** UN3295

Proper Shipping Name Hydrocarbons, liquid, n.o.s.

Hazard Class 3
Packing Group ||

<u>IATA</u>

UN-No UN3295

Proper Shipping Name Hydrocarbons, liquid, n.o.s.

Hazard Class 3 Packing Group II

IMDG/IMO

UN-No UN3295

Proper Shipping Name Hydrocarbons, liquid, n.o.s.

Hazard Class 3
Packing Group ||

# 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 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	-	Х	211-043-1	Х	-		Х	-	KE-09158
2,6-Di-tert-butyl-p-cresol	128-37-0	Х	-	204-881-4	Х	Х	Х	Х	Х	KE-03079

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

#### U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

## 1,4-Cyclohexadiene, stabilized

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

**OSHA** - Occupational Safety and

Health Administration

Not applicable

CERCLA Not applicable

**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	Χ	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

### 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

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident	(2012/18/EC) - (2012/18/EC) - Qualifying Quantities		Basel Convention (Hazardous Waste)
		Notification	Requirements		
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

Prepared By Regulatory Affairs

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 Revision Date
 24-Dec-2021

 Print Date
 24-Dec-2021

**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard

replacing the current legislation under 29 CFR 1910.1200 to align with the Globally

Harmonized System of Classification and Labeling of Chemicals (GHS).

Revision Date 24-Dec-2021

#### **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**