



Safety Data Sheet C-22

3,3',5,5'-tetra-tert-butyl-(1,1'-Biiphenyl)-2,2'-Diol

Section 1 - Chemical Product and Company Identification

MSDS Name: C-22 (3,3',5,5'-tetra-tert-butyl-(1,1'-Biiphenyl)-2,2'-Diol)

Synonyms:

(1,1'-Biphenyl)-2,2'-diol, 3,3',5,5'-tetrakis(1,1-dimethylethyl)-
2,2'-dihydroxy-3,3',5,5'-tetra-tert-butylbiphenyl
3,3',5,5'-tetra-tert-butylbiphenyl-2,2'-diol

Company Identification:

Cymer, LLC
124 Cymer Lane
Decatur, TN 37322

For information, call: 423-334-2778

For CHEMTEL assistance, call: 1-888.255.3924

For International CHEMTEL assistance, call:+1.813.248.0573

Section 2 - Hazards Identification

Emergency Overview

OSHA Hazards

Irritant

GHS Classification

Acute toxicity, Oral (Category 5)


Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3)

Hazardous to the Aquatic Environment (Category 4)

GHS Label elements, including precautionary statements

Pictogram	
Signal word	Warning

Hazard statement(s)

H303 May be Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H413 May cause long lasting harmful effects on aquatic life

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P273 Avoid release to the environment

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

HMS Classification

Health hazard: 2

Flammability: 1

Physical hazards: 0

NFPA Rating

Health hazard: 2

Fire: 1

Reactivity Hazard: 0

Potential Health Effects

Inhalation Causes respiratory tract irritation.

Skin Causes skin irritation.

Eyes Causes eye irritation.

Ingestion May be harmful if swallowed.

Section 3 - Composition, Information on Ingredients

C-22: 3,3',5,5'-tetra-tert-butyl-(1,1'-Biiphenyl)-2,2'-Diol

Synonyms:

(1,1'-Biphenyl)-2,2'-diol, 3,3',5,5'-tetrakis(1,1-dimethylethyl)-

2,2'-dihydroxy-3,3',5,5'-tetra-tert-butylbiphenyl

3,3',5,5'-tetra-tert-butylbiphenyl-2,2'-diol

Formula: C₂₈H₄₂O₂

Molecular Weight: 410.63 g/mol

CAS#	Chemical Name	Percent	EINECS/ELINCS
6390-69-8	3,3',5,5'-tetra-tert-butyl-(1,1'-Biiphenyl)-2,2'-Diol	80.0-100.0	407-920-5

Section 4 - First Aid Measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 - Fire Fighting Measures

Flammable properties – Non-flammable

Flash point >200 °F

Ignition temperature no data available

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

Section 6 - Accidental Release Measures

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

Section 7 - Handling and Storage

Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place.

Section 8 - Exposure Controls, Personal Protection

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
3,3',5,5'-tetra-tert-butyl-(1,1'-Biiphenyl)-2,2'-Diol	none listed	none listed	none listed

OSHA Vacated PELs: 3,3',5,5'-tetra-tert-butyl-(1,1'-Biiphenyl)-2,2'-Diol: No OSHA Vacated PELs are listed for this chemical.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: White powder, crystalline

Odor: none

Odor Threshold: no data available

pH: 3.0 - 6.0

Vapor Pressure: 1.98E-09 mmHg at 25 °C.

Vapor Density: Not available.

Ignition temperature: no data available

Auto ignition temperature: no data available

Combustible Dust Minimum Exclusivity Concentration: 34 g/m³

Combustible Dust Minimum Ignition Energy: 1.2 mJ

Upper explosion limit: no data available

Flash point: 186.8 °C (368.2° F)

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 469.3 °C at 760 mmHg.

Freezing/Melting Point: Melting point/range: 192 - 198 °C (378 - 388 °F)

Decomposition Temperature: Not available.

Solubility: Insoluble in water

Specific Gravity/Density: 0.981 g/cm³

Molecular Formula: C₂₈H₄₂O₂

Molecular Weight: 410.63 g/mol

Section 10 - Stability and Reactivity

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

Acute toxicity

no data available

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

no data available

Signs and Symptoms of Exposure

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

Potential Health Effects

Inhalation Causes respiratory tract irritation.

Skin Causes skin irritation.

Eyes Causes eye irritation.

Ingestion May be harmful if swallowed.

Section 12 - Ecological Information

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data 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.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	No information available.	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Section 15 - Regulatory Information

OSHA Hazards

Irritant

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

New Jersey Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

Section 16 - Additional Information

MSDS Creation Date: 5/30/1998

Revision #1 Date: 8/18/2012

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 Cymer, LLC 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 Cymer has been advised of the possibility of such damages.