

# SDS

## SAFETY DATA SHEET

Oakwood Products, Inc  
730 Columbia HWY N  
Estill, SC 29918  
[www.oakwoodchemical.com](http://www.oakwoodchemical.com)

**Phone Numbers:**

Product Information	803-739-8800
Transportation Emergency	800-451-8346
Outside the USA	760-602-8700

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**MATERIAL IDENTIFICATION**

NAME: [1,1'-Bi(cyclohexane)]-4,4'-dione  
CAS#: [23391-99-3]  
CAT#: 239562  
For R&D use only.

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**HAZARDS IDENTIFICATION****GHS Classification**

Acute toxicity, oral (Category 4)  
Skin corrosion/irritation (Category 2)  
Serious eye damage/eye irritation (Category 2A)  
Respiratory tract irritation (Category 3)

**GHS Label elements, including precautionary statements**

Pictograms



Signal Word

Warning

Hazard Statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Precautionary Statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P301 + P312	IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.
P302 + P352	IF ON SKIN: wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

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## COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 4,4'-Bi[cyclohexanone], 4,4'-Dioxo-2,2',3,3',5,5',6,6'-octahydro-1,1'-biphenyl, Bis(4-cyclohexanone)

Formula : C<sub>12</sub>H<sub>18</sub>O<sub>2</sub>

Molecular Weight : 194.28 g/mol

CAS	Description	Concentration
23391-99-3	[1,1'-Bi(cyclohexane)]-4,4'-dione	98%

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## FIRST AID MEASURES

### In case of eye contact

Immediately flush eyes with running water for at least 15 minutes while keeping eyes open. Seek medical attention.

### In case of skin contact

Wash thoroughly with soap and plenty of water. Seek medical attention.

### If inhaled

Remove victim from source of exposure to fresh air. If breathing is difficult, administer oxygen. Seek medical attention.

### If swallowed

Do not induce vomiting. Give water to victim to drink. Seek medical attention.

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## FIRE-FIGHTING MEASURES

### Suitable extinguishing media

Use carbon dioxide, dry chemical powder, alcohol-resistant or polymer foam.

### Special protective equipment for fire-fighters

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

### Unusual fire and explosion hazards/decomposition of product

emits toxic fumes under fire conditions.

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## ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid breathing fumes, vapors, mists or gas. Ventilate area. Remove all sources of ignition. Evacuate personnel.

### Environmental precautions

Prevent further leakage if safe to do so.

### Methods and materials for containment and clean up

Absorb spills on sand or vermiculite and place in closed container for disposal.

**HANDLING AND STORAGE****Precautions for safe handling**

Avoid prolonged use. Avoid all direct contact with material. Do not breathe dust or vapor. Wash thoroughly after handling.

**Precautions for safe storage**

Keep container tightly closed. Store in a cool, dry, well-ventilated area.

**EXPOSURE CONTROL/PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values.

**Personal protective equipment****Eye/face protection**

Wear protective safety goggles or face shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Hand/skin protection**

Avoid all direct contact with product.

Wear chemical-resistant gloves.

Wear protective clothing and boots.

After contact with skin, wash immediately.

**Respiratory protection**

Ensure adequate ventilation during use. Approved respiratory equipment must be used when airborne concentrations are unknown or exceed the exposure limits.

**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	solid
Odour	no data available
Odour Threshold	no data available
Melting point/Freezing Point	no data available
Boiling Point	no data available
Flash Point	no data available
Evaporation Rate	no data available
Flammability (solid, gas)	no data available
Upper/Lower Flammability or Explosive limits	no data available
Vapour pressure	no data available
Relative Density	no data available
Solubility(ies)	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Refractive Index	no data available

**STABILITY AND REACTIVITY**

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

no data available

**Conditions to avoid**

no data available

**Incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

May evolve carbon monoxide and carbon dioxide.

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**TOXICOLOGICAL INFORMATION**

**Acute toxicity**

no data available

**Skin corrosion/irritation**

Causes skin irritation

**Serious eye damage/eye irritation**

Causes serious eye irritation

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

May cause respiratory irritation

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

**Exposure Routes**

Irritating to skin, eyes, and respiratory system.

May have harmful effects if inhaled or swallowed.

To the best of our knowledge, the health hazards of this material have not been fully investigated.

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**ECOLOGICAL INFORMATION**

**Toxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

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**DISPOSAL CONSIDERATIONS**

Dissolve in or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all Federal, State and local laws.

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**TRANSPORT INFORMATION**

**DOT**

Classed non-hazardous for shipping.

**IMDG**

Classed non-hazardous for shipping.

**IATA**

Classed non-hazardous for shipping.

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**REGULATORY INFORMATION**

**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: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.

**New Jersey Right to Know Components**

This product may contain a chemical on the New Jersey Right to Know Components List.

[1,1'-Bi(cyclohexane)]-4,4'-dione

**CAS**

23391-99-3

**California Prop. 65 Components**

This product does not contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

## **OTHER INFORMATION**

Version : 1.0

Revision Date : 2/14/2018

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Oakwood shall not be held liable for any damage resulting from handling or from contact with the above product.