

# Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 12/19/2007

Reviewed on 11/09/2007

## 1 Identification of substance:

### Product details:

**Product name:** Dicyclopentadiene

**Stock number:** 32546

### Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company  
Johnson Matthey Catalog Company, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Emergency Phone: (978) 521-6300  
CHEMTREC: (800) 424-9300  
Web Site: www.alfa.com

**Information Department:** Health, Safety and Environmental Department

### Emergency information:

During normal hours the Health, Safety and Environmental Department.  
After normal hours call Chemtrec at (800) 424-9300.

## 2 Composition/Data on components:

### Chemical characterization:

#### Description: (CAS#)

Dicyclopentadiene (CAS# 77-73-6); 100%

#### Identification number(s):

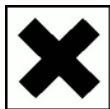
**EINECS Number:** 201-052-9

**EU Number:** 601-044-00-9

**Material is stabilized with:** 4-tert-Butylcatechol (CAS# 98-29-3)

## 3 Hazards identification

### Hazard description:



Xn Harmful

F Highly flammable

N Dangerous for the environment

### Information pertaining to particular dangers for man and environment

R 11 Highly flammable.

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

### Classification system

#### HMIS ratings (scale 0-4)

#### (Hazardous Materials Identification System)

HEALTH	3
FIRE	3
REACTIVITY	1

Health (acute effects) = 3

Flammability = 3

Reactivity = 1

## 4 First aid measures

### After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

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**After skin contact**

Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.

**After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing** Seek immediate medical advice.

**5 Fire fighting measures****Suitable extinguishing agents**

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

**6 Accidental release measures****Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Keep away from ignition sources.

**Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**7 Handling and storage****Handling****Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:**

Keep ignition sources away.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

**Storage****Requirements to be met by storerooms and receptacles:**

Store in a cool location.

**Information about storage in one common storage facility:**

Store away from oxidizing agents.

Do not store together with alkalis (caustic solutions).

Do not store together with acids.

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**Further information about storage conditions:**

Protect from heat and direct sunlight.

Avoid contact with air/oxygen.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

**8 Exposure controls and personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Components with limit values that require monitoring at the workplace:**

Dicyclopentadiene

	ppm
ACGIH TLV	5
Belgium TWA	5
Denmark TWA	5
Finland TWA	5, 10 STEL (skin)
France TWA	5
Germany TWA	0.5
Ireland TWA	5
Netherlands TWA	0.5
Russia TWA	5 mg/m <sup>3</sup>
Switzerland TWA	5
United Kingdom TWA	5

**Additional information:** No data**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:**

Use suitable respirator when high concentrations are present.

**Protection of hands:** Impervious gloves**Eye protection:** Safety glasses**Body protection:** Protective work clothing.**9 Physical and chemical properties:****General Information**

<b>Form:</b>	Liquid
<b>Color:</b>	Yellowish
<b>Odor:</b>	Not determined

**Change in condition**

<b>Melting point/Melting range:</b>	-1°C (30°F)
<b>Boiling point/Boiling range:</b>	170°C (338°F)
<b>Sublimation temperature / start:</b>	Not determined

**Flash point:** 27°C (81°F)

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<b>Ignition temperature:</b>	503°C (937°F)
<b>Decomposition temperature:</b>	Not determined
<b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures is possible.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Vapor pressure at 20°C (68°F):</b>	3 hPa (2 mm Hg)
<b>Density at 20°C (68°F):</b>	1.071 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with Water:</b>	Insoluble Not miscible or difficult to mix

**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

**Materials to be avoided:**

Oxidizing agents

Acids

Bases

**Dangerous reactions**

Possible formation of peroxides.

Reacts with oxidizing agents

Reacts with alkali (lyes)

Reacts with acids

**Dangerous products of decomposition:** Carbon monoxide and carbon dioxide

**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	1010 mg/kg (brd) 1200 mg/kg (ctl) 190 mg/kg (mus) 353 mg/kg (rat)
Dermal	LD50	5080 mg/kg (rbt)
Inhalative	LC50/4H	770 ppm/4H (gpg) 145 ppm/4H (mus) 771 ppm/4H (rbt)
Irritation of skin	LCLo/4H	1000 ppm/4H (rat)
	moderate	20 mg/24H (rbt)
	severe	10 mg/24H (rbt)
Irritation of eyes	mild	500 mg/24H (rbt)
	severe	9300 µg/24H (rbt)

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**Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:** No sensitizing effects known.**Subacute to chronic toxicity:**

Dicyclopentadiene is irritating to the eyes, skin and mucous membranes. Vapors may cause headaches, dizziness, nausea and narcosis. Pulmonary edema or brochiopneumonia may be caused by liquid aspirated into the lungs following ingestion. Chronic exposure may cause injury to the lungs, liver and kidneys.

**Additional toxicological information:**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:****Ecotoxical effects:****Remark:** Toxic for fish**General notes:**

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies.

Do not allow material to be released to the environment without proper governmental permits.

Toxic for aquatic organisms

**13 Disposal considerations****Product:****Recommendation**

Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**14 Transport information****DOT regulations:****Hazard class:**

3

**Identification number:**

UN2048

**Packing group:**

III

**Proper shipping name (technical name):**

DICYCLOPENTADIENE

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**Label** 3**Land transport ADR/RID (cross-border)**

**ADR/RID class:** 3 (F1) Flammable liquids  
**Danger code (Kemler):** 30  
**UN-Number:** 2048  
**Packaging group:** III  
**Description of goods:** 2048 DICYCLOPENTADIENE

**Maritime transport IMDG:**

**IMDG Class:** 3  
**UN Number:** 2048  
**Label** 3  
**Packaging group:** III  
**Proper shipping name:** DICYCLOPENTADIENE

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 3  
**UN/ID Number:** 2048  
**Label** 3  
**Packaging group:** III  
**Proper shipping name:** DICYCLOPENTADIENE

**15 Regulations****Product related hazard informations:****Hazard symbols:**

Xn Harmful  
 F Highly flammable  
 N Dangerous for the environment

**Risk phrases:**

11 Highly flammable.  
 20/22 Harmful by inhalation and if swallowed.  
 36/37/38 Irritating to eyes, respiratory system and skin.  
 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**Safety phrases:**

36/37 Wear suitable protective clothing and gloves.  
 61 Avoid release to the environment. Refer to special instructions/  
 Safety data sheets

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**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

**Information about limitation of use:**

For use only by technically qualified individuals.

This substance is subject to a Significant New Use Rule (SNUR) promulgated under Section 5(a)(2) of the Toxic Substances Control Act (TSCA). See 40 CFR 721. This product is being sold for research and development use only for the significant new use listed.

This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing MSDS:** Health, Safety and Environmental Department.

**Contact:** Paul V. Connolly