

SAFETY DATA SHEET

Creation Date 20-May-2010

Revision Date 14-Feb-2020

Revision Number 2

1. Identification

Product Name Dicyclopentadiene

Cat No. : 32546

CAS-No 77-73-6
Synonyms 3a,4,7,7a-Tetrahydro-4,7-methanoindene; Cyclopentadiene dimer; DCPD

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.
Details of the supplier of the safety data sheet

Company

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|---|------------|
| Flammable liquids | Category 3 |
| Acute oral toxicity | Category 4 |
| Acute Inhalation Toxicity - Vapors | Category 2 |
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system, Central nervous system (CNS). | |
| Specific target organ toxicity - (repeated exposure) | Category 2 |
| Target Organs - Kidney. | |

Label Elements

Signal Word

Danger

Hazard Statements

Flammable liquid and vapor
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
Fatal if inhaled
May cause respiratory irritation
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear respiratory protection
Wear protective gloves/protective clothing/eye protection/face protection
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
Keep cool

Response

Get medical attention/advice if you feel unwell

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell

Skin

If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Fire

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

Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|-------------------|---------|----------|
| Dicyclopentadiene | 77-73-6 | >95 |

4. First-aid measures

| | |
|--|---|
| General Advice | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. |
| Inhalation | Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Most important symptoms and effects | Difficulty in breathing. . Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | 32 °C / 89.6 °F |
| Method - | No information available |
| Autoignition Temperature | 503 °C / 937.4 °F |
| Explosion Limits | |
| Upper | 6.3 vol % |
| Lower | 0.8 vol % |
| 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. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
4Flammability
3Instability
0Physical hazards
N/A

6. Accidental release measures

| | |
|---|--|
| Personal Precautions | Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. |
| Environmental Precautions | Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage. |
| Methods for Containment and Clean Up | Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. |

7. Handling and storage

| | |
|-----------------|---|
| Handling | Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges. |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. |

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|-------------------|-----------------------------|---|---|---|
| Dicyclopentadiene | TWA: 0.5 ppm STEL: 1 ppm | (Vacated) TWA: 5 ppm (Vacated) TWA: 30 mg/m ³ | TWA: 5 ppm TWA: 30 mg/m ³ | TWA: 5 ppm TWA: 30 mg/m ³ |

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 only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. |
|-----------------------------|---|

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. Tight sealing safety goggles. Face protection shield. |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

9. Physical and chemical properties

| | |
|-----------------------|-----------|
| Physical State | Liquid |
| Appearance | Colorless |

| | |
|--|-----------------------------|
| Odor | Strong |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | 11 - 13 °C / 51.8 - 55.4 °F |
| Boiling Point/Range | 170 °C / 338 °F @ 760 mmHg |
| Flash Point | 32 °C / 89.6 °F |
| Evaporation Rate | No information available |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | 6.3 vol % |
| Lower | 0.8 vol % |
| Vapor Pressure | 1.8 hPa @ 20 °C |
| Vapor Density | 4.6 (Air = 1.0) |
| Specific Gravity | 0.982 |
| Solubility | No information available |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | 503 °C / 937.4 °F |
| Decomposition Temperature | No information available |
| Viscosity | No information available |
| Molecular Formula | C10 H12 |
| Molecular Weight | 132.2 |

10. Stability and reactivity

| | |
|---|---|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. |
| Incompatible Materials | Strong oxidizing agents |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO ₂) |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Product Information

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------------|-------------------|----------------------|---------------------|
| Dicyclopentadiene | 353 mg/kg (Rat) | 5.08 g/kg (Rabbit) | 0.6 mg/L 4h (Rat) |

Toxicologically Synergistic Products No information available

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

| | |
|------------------------|--|
| Irritation | Irritating to eyes, respiratory system and skin |
| 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 |
|-------------------|---------|------------|------------|------------|------------|------------|
| Dicyclopentadiene | 77-73-6 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available

| | |
|--|---|
| Reproductive Effects | No information available. |
| Developmental Effects | No information available. |
| Teratogenicity | No information available. |
| STOT - single exposure STOT - repeated exposure | Respiratory system Central nervous system (CNS) Kidney |
| Aspiration hazard | No information available |
| Symptoms / effects, both acute and delayed | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |
| Endocrine Disruptor Information | No information available |
| Other Adverse Effects | See actual entry in RTECS for complete information. |

12. Ecological information

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|-------------------|--|--|------------|--------------------------------------|
| Dicyclopentadiene | EC50: > 100 mg/L, 96h (Pseudokirchneriella subcapitata) | LC50: 10 - 14.2 mg/L, 96h static (Pimephales promelas) LC50: 13 - 19.5 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 23 mg/L, 96h (Lepomis macrochirus) LC50: 11.5 - 17.6 mg/L, 96h static (Lepomis macrochirus) | Not listed | EC50: = 11 mg/L, 48h (Daphnia magna) |

Persistence and Degradability May persist based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility . Is not likely mobile in the environment due its low water solubility.

| Component | log Pow |
|-------------------|---------|
| Dicyclopentadiene | 2.89 |

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 | UN2048 |
| Proper Shipping Name | Dicyclopentadiene |
| Hazard Class | 3 |
| Packing Group | III |

TDG

| | |
|-----------------------------|-------------------|
| UN-No | UN2048 |
| Proper Shipping Name | Dicyclopentadiene |
| Hazard Class | 3 |
| Packing Group | III |

IATA

UN-No UN2048
 Proper Shipping Name Dicyclopentadiene
 Hazard Class 3
 Packing Group III

IMDG/IMO

UN-No UN2048
 Proper Shipping Name Dicyclopentadiene
 Hazard Class 3
 Packing Group III

15. Regulatory information**United States of America Inventory**

| Component | CAS-No | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|-------------------|---------|------|---|-----------------------------|
| Dicyclopentadiene | 77-73-6 | X | ACTIVE | - |

Legend:

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), Australia (AICS), China (IECSC), Korea (ECL).

| Component | CAS-No | DSL | NDSL | EINECS | PICCS | ENCS | AICS | IECSC | KECL |
|-------------------|---------|-----|------|-----------|-------|------|------|-------|----------|
| Dicyclopentadiene | 77-73-6 | X | - | 201-052-9 | X | X | X | X | KE-34129 |

U.S. Federal Regulations**SARA 313**

| Component | CAS-No | Weight % | SARA 313 - Threshold Values % |
|-------------------|---------|----------|-------------------------------|
| Dicyclopentadiene | 77-73-6 | >95 | 1.0 |

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

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 |
|-------------------|---------------|------------|--------------|----------|--------------|
| Dicyclopentadiene | X | 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 Serious risk, Grade 3

16. Other information

Prepared By Health, Safety and Environmental Department
Email: tech@alfa.com
www.alfa.com

Creation Date 20-May-2010

Revision Date 14-Feb-2020

Print Date 14-Feb-2020

Revision Summary SDS authoring systems update, replaces ChemGes SDS No. 77-73-6.

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