

Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 26.06.2012

Printing date 02.07.2013

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name

Dicyclopentadiene

Stock number:

A13643

CAS Number:

77-73-6

EC number:

201-052-9

Index number:

601-044-00-9

1.2 Relevant identified uses of the substance or mixture and uses advised against.

Identified use:

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
A Johnson Matthey Company
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R20/22: Harmful by inhalation and if swallowed.

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

F; Highly flammable

R11: Highly flammable.

N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:

Other hazards that do not result in classification

Not applicable

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

The substance is classified and labelled according to the CLP regulation.

GHS02, GHS07, GHS09

Danger

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P405

Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

CAS# Designation:

77-73-6 Dicyclopentadiene

Identification number(s):

201-052-9

EC number:

601-044-00-9

Index number:

Stabilised with:

4-tert-Butylcatechol (CAS# 98-29-3)

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The presence of oxygen is required for this stabiliser to function properly. Product should be vented periodically to add oxygen.

SECTION 4: First aid measures**4.1 Description of first aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

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

After eye contact

Seek immediate medical advice. Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents**

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

5.2 Special hazards arising from the substance or mixtureIf this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide**5.3 Advice for firefighters****Protective equipment:**Wear self-contained breathing apparatus.
Wear full protective suit.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation**6.2 Environmental precautions:**Keep away from ignition sources
Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.**6.3 Methods and material for containment and cleaning up:**Keep away from ignition sources.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.**Prevention of secondary hazards:****6.4 Reference to other sections**Keep away from ignition sources.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.**SECTION 7: Handling and storage****7.1 Precautions for safe handling**Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.**Information about protection against explosions and fires:**Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.**7.2 Conditions for safe storage, including any incompatibilities****Storage**
Requirements to be met by storerooms and containers:

Store in cool location.

Information about storage in one common storage facility:Store away from oxidizing agents.
Store away from strong bases.**Further information about storage conditions:**Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.**7.3 Specific end use(s)**

No further relevant information available.

SECTION 8: Exposure controls/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.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:****77-73-6 Dicyclopentadiene (100,0%)**AGW (Germany) 2,7 mg/m³, 0,5 ppm
1(l);DFGREL (USA) 30 mg/m³, 5 ppmTLV (USA) 27 mg/m³, 5 ppm**Additional information:**

No data

8.2 Exposure controls**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.

Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Use breathing protection with high concentrations.

Check protective gloves prior to each use for their proper condition.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Breathing equipment:**Protection of hands:**

Impervious gloves

Not determined

Safety glasses

Face protection

Material of gloves**Penetration time of glove material****Eye protection:**(Contd. on page 3)
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Body protection: Protective work clothing.

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SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form: Liquid
 Colour: Yellowish
 Smell: Unpleasant
 Odour threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: Not determined
 Boiling point/Boiling range: 171-173 °C
 Sublimation temperature / start: Not determined

Flash point: 26 °C
 Inflammability (solid, gaseous): Not applicable.
 Ignition temperature: 503 °C
 Decomposition temperature: Not determined
 Self-inflammability: Not determined.

Critical values for explosion:

Lower: 0,8 Vol %
 Upper: 6,3 Vol %
 Steam pressure at 20 °C: 3 hPa
 Density at 20 °C: 0,982 g/cm³
 Relative density: Not determined.
 Vapour density: Not determined.
 Evaporation rate: Not determined.

Solubility in / Miscibility with

Water: Not miscible or difficult to mix
 Partition coefficient (n-octanol/water): Not determined.

Viscosity:
 dynamic: Not determined.
 kinematic: Not determined.

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

No information known.

10.2 Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known

10.5 Incompatible materials:

Oxidizing agents

Bases

10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Additional information:

Avoid loss of stabilizer.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity:**

Harmful if inhaled.

Harmful if swallowed.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:

| | | |
|------------|---------|--|
| Oral | LD50 | 1200 mg/kg (mam) 353 mg/kg (rat) |
| Dermal | LD50 | 5080 mg/kg (rabbit) 5,08 mL/kg (rabbit) |
| Inhalative | LC50 | 2100 mg/m3 (guinea pig) 4200 mg/m3 (rabbit) |
| | LC50/4H | 770 ppm/4H (guinea pig) 400 mg/m3/4H (mouse) 145 ppm/4H (mouse) 610 mg/m3/4H (rat) 660 ppm/4H (rat) 771 ppm/4H (rabbit) |
| | LC50/6H | 284 ppm/6H (rat) |

Skin irritation or corrosion:

Causes skin irritation.

Eye irritation or corrosion:

Causes serious eye irritation.

Sensitization:

No sensitizing effect known.

Germ cell mutagenicity:

No effects known.

Carcinogenicity:

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

Reproductive toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

May cause respiratory irritation.

Aspiration hazard:

No effects known.

Additional toxicological information:

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

SECTION 12: Ecological information**12.1 Toxicity**

No further relevant information available.

Aquatic toxicity:

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

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Ecotoxicological effects:**Remark:****Additional ecological information:****General notes:**

Toxic for fish

Do not allow product to reach ground water, water bodies or sewage system.
 Toxic for aquatic organisms
 Do not allow material to be released to the environment without proper governmental permits.
 Water hazard class 2 (Self-assessment): hazardous for water.
 Danger to drinking water if even small quantities leak into soil.
 Also poisonous for fish and plankton in water bodies.
 Toxic to aquatic life.
 May cause long lasting harmful effects to aquatic life.
 Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment**PBT:**

Not applicable.

vPvB:

Not applicable.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation**

Hand over to disposers of hazardous waste.
 Must be specially treated under adherence to official regulations.
 Consult state, local or national regulations for proper disposal.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to official regulations.

SECTION 14: Transport information**UN-Number****ADR, IMDG, IATA**

UN2048

14.2 UN proper shipping name**ADR****IMDG, IATA**2048 DICYCLOPENTADIENE
DICYCLOPENTADIENE**14.3 Transport hazard class(es)****ADR****Class****Label****IMDG, IATA**

3 (F1) Flammable liquids.

3

**Class****Label**

3 Flammable liquids.

3

Packing group**ADR, IMDG, IATA**

III

14.5 Environmental hazards:

Environmentally hazardous substance, liquid

14.6 Special precautions for user**Kemler Number:**Warning: Flammable liquids.
30**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC****Code**

Not applicable.

Transport/Additional information:**ADR****Excepted quantities (EQ):****Limited quantities (LQ)****Transport category****Tunnel restriction code**

E1

LQ7

3

D/E

UN "Model Regulation":

UN2048, DICYCLOPENTADIENE, 3, III

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Chemical****Substances**

Substance is listed.

Standard for the Uniform Scheduling of**Drugs and Poisons**

Substance is not listed.

National regulations**Information about limitation of use:**

Employment restrictions concerning young persons must be observed.
 For use only by technically qualified individuals.

Classification according to VbF:

A II

Water hazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

Other regulations, limitations and prohibitive**regulations****ELINCS (European List of Notified Chemical****Substances)**

Substance is not listed.

Substances of very high concern (SVHC)**according to REACH, Article 57**

Substance is not listed.

REACH - Pre-registered substances

Substance is listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 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 data specification sheet:

Health, Safety and Environmental Department.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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