

Safety Data Sheet

according to 1907/2006/EC, Article 31

Revision: 29.07.2010

Printing date 29.07.2010

1 Identification of substance

Product details

Trade name

cis,cis-1,5-Cyclooctadiene

Stock number:

B21196, L13914

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com

Informing department:

Product safety department.

Emergency information:

Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon: +49(0)6131/19240

2 Hazards identification

Hazard designation:

Xn Harmful
N Dangerous for the environmentInformation pertaining to particular dangers
for man and environment

R 10 Flammable.
 R 20/22 Harmful by inhalation and if swallowed.
 R 36/37/38 Irritating to eyes, respiratory system and skin.
 R 43 May cause sensitisation by skin contact.
 R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS label elements



Warning

H226 - Flammable liquid and vapour.



Warning

H302 - Harmful if swallowed.
 H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 H317 - May cause an allergic skin reaction.
 H335 - May cause respiratory irritation.



H411 - Toxic to aquatic life with long lasting effects.

Prevention:

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

Response:

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.

Storage:

P405 Store locked up.

Disposal:

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

3 Composition/information on ingredients

Chemical characterization:

cis,cis-1,5-Cyclooctadiene (CAS# 1552-12-1); 100%

Designation: (CAS#)

Identification number(s):

216-291-4

EINECS Number:

Stabilized with:

Additional information:

50-200ppm Irganox 1076

4 First aid measures

After inhalation

Supply fresh air and call for doctor for safety reasons.

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.

After swallowing

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

Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents

CO2, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents

Water.

Special hazards caused by the material, its products of combustion or flue gases:

Can be released in case of fire:
 Carbon monoxide and carbon dioxide
 Wear self-contained breathing apparatus.
 Wear full protective suit.

Protective equipment:

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 of 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 information on disposal.

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7 Handling and storage

Handling	
Information for safe handling:	Handle under dry protective gas. Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
Information about protection against explosions and fires:	Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture.
Storage	
Requirements to be met by storerooms and containers:	No special requirements.
Information about storage in one common storage facility:	Store away from oxidizing agents. Store away from air.
Further information about storage conditions:	Store under dry inert gas. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. This product is air sensitive.

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 critical values that require monitoring at the workplace:	Not required.
Additional information:	No data
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. Use breathing protection with high concentrations.
Breathing equipment:	Check protective gloves prior to each use for their proper condition.
Protection of hands:	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.
Material of gloves	Impervious gloves
Penetration time of glove material	Not determined
Eye protection:	Safety glasses
Body protection:	Face protection Protective work clothing.

9 Physical and chemical properties:

General Information	
Form:	Liquid
Colour:	Colourless
Smell:	Unpleasant
Change in condition	
Melting point/Melting range:	-70°C
Boiling point/Boiling range:	151-152°C
Sublimation temperature / start:	Not determined
Flash point:	32°C
Ignition temperature:	270°C
Decomposition temperature:	Not determined
Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined
Steam pressure at 20°C:	5.4 hPa
Density at 20°C	0.88 g/cm ³
Solubility in / Miscibility with Water at 20°C:	<0.05 g/l
Viscosity:	
dynamic at 20°C:	1.4 mPas

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
Materials to be avoided:	Oxidizing agents
Dangerous reactions:	Air
Dangerous products of decomposition:	No dangerous reactions known Carbon monoxide and carbon dioxide

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11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral	LD50	1900 mg/kg (rat)
Dermal	LD50	>10000 mg/kg (rabbit)
Inhalative	LC50/4H	12900 mg/m3/4H (rat)

Primary irritant effect:

on the skin:

Irritant for skin and mucous membranes.

on the eye:

Irritant effect.

Sensitization:

Sensitization possible by skin contact.

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.

Sensitisation

May cause sensitisation by skin contact.

12 Ecological information:

Ecotoxic effects:

Remark:

Toxic for fish

Additional ecological information:

General notes:

Do not allow product to reach ground water, water bodies or sewage system.
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.
Do not allow material to be released to the environment without proper governmental permits.
Toxic for aquatic organisms

13 Disposal considerations

Product:

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.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)



ADR/RID-GGVS/E Class:

3 (F1) Flammable liquids.

Kemler Number:

30

UN-Number:

2520

Packaging group:

III

Label

3

Special marking:

Symbol (fish and tree)

Designation of goods:

2520 CYCLOOCTADIENES

Limited quantities (LQ)

LQ7

Transport category

3

Tunnel restriction code

D/E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class:

3

UN Number:

2520

Label

3

Packaging group:

III

Marine pollutant:

Yes (P)

Correct technical name:

Symbol (fish and tree)
CYCLOOCTADIENES

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class:

3

UN/ID Number:

2520

Label

3

Packaging group:

III

Correct technical name:

CYCLOOCTADIENES

UN "Model Regulation":

UN2520, CYCLOOCTADIENES, 3, III

Environmental hazards:

Environmentally hazardous substance, liquid; Marine Pollutant

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



Xn Harmful
N Dangerous for the environment

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Risk phrases:	10 Flammable. 20/22 Harmful by inhalation and if swallowed. 36/37/38 Irritating to eyes, respiratory system and skin. 43 May cause sensitisation by skin contact. 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases:	24 Avoid contact with skin. 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 36/37 Wear suitable protective clothing and gloves. 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

National regulations

Information about limitation of use: Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

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

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.

Contact: Zachariah Holt

Abbreviations and acronyms:
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 P: Marine Pollutant
 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

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