

1 Identification of substance**Product details**

Trade name 1,3,5,7-Cyclooctatetraene
Stock number: B22636
Manufacturer/Supplier: Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / Germany

E-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

Information pertaining to particular dangers for man and environment

R 10 Flammable.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 62 Possible risk of impaired fertility.

GHS label elements**Danger**

H225 - Highly flammable liquid and vapour.

**Warning**

H361 - Suspected of damaging fertility or the unborn child.

**Warning**

H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

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:****Designation: (CAS#)** 1,3,5,7-Cyclooctatetraene (CAS# 629-20-9): 100%**Identification number(s):****EINECS Number:** 211-080-3**4 First aid measures****After inhalation**

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

After skin contactSeek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.**After eye contact**

Seek immediate medical advice.

After swallowingRinse 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.

Measures for environmental protection:**Measures for cleaning/collecting:**

Ensure adequate ventilation
Keep away from ignition sources
Do not allow material to be released to the environment without proper governmental permits.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

Additional information:

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.

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

Handle under dry protective gas.
Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

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:

Refrigerate

Information about storage in one common storage facility:

Store away from oxidizing agents.
Store away from air.

Safety Data Sheet
according to 1907/2006/EC, Article 31

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Further information about storage conditions:

Protect from heat.
Store under dry inert gas.
Keep container tightly sealed.
Refrigerate
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:
Additional information:**

Not required.
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.

**Breathing equipment:
Protection of hands:
Material of gloves**

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.

Penetration time of glove material

Impervious gloves
Not determined

Eye protection:

Safety glasses

Body protection:

Face protection
Protective work clothing.

9 Physical and chemical properties:**General Information**

Form: Liquid
Colour: Yellow
Smell: Unpleasant

Change in condition

Melting point/Melting range: -5°C
Boiling point/Boiling range: 142-143°C
Sublimation temperature / start: Not determined

Flash point:

22°C

Ignition temperature:

250°C

Decomposition temperature:

Not determined

Critical values for explosion:

Lower: Not determined
Upper: Not determined

Steam pressure at 25°C:

10.5 hPa

Density at 20°C0.925 g/cm³**Solubility in / Miscibility with
Water:**

Not miscible or difficult to mix

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
Air
Heat

Dangerous reactions:

No dangerous reactions known

Dangerous products of decomposition:

Carbon monoxide and carbon dioxide

11 Toxicological information**Acute toxicity:****Primary irritant effect:
on the skin:**

Irritant for skin and mucous membranes.

on the eye:

Irritant effect.

Sensitization:

No sensitizing effect known.

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:**Additional ecological information:****General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations**Product:
Recommendation**

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

**Uncleaned packagings:
Recommendation:**

Disposal must be made according to official regulations.

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14 Transport information

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



ADR/RID-GGVS/E Class: 3 (F1) Flammable liquids.
 Kemler Number: 33
 UN-Number: 2358
 Packaging group: II
 Label: 3
 Designation of goods: 2358 CYCLOOCTATETRAENE
 Limited quantities (LQ): LQ4
 Transport category: 2
 Tunnel restriction code: D/E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 3
 UN Number: 2358
 Label: 3
 Packaging group: II
 Marine pollutant: No
 Correct technical name: CYCLOOCTATETRAENE

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 3
 UN/ID Number: 2358
 Label: 3
 Packaging group: II
 Correct technical name: CYCLOOCTATETRAENE

UN "Model Regulation":

UN2358, CYCLOOCTATETRAENE, 3, II

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



Xn Harmful

Risk phrases:

10 Flammable.
 36/37/38 Irritating to eyes, respiratory system and skin.
 62 Possible risk of impaired fertility.

Safety phrases:

16 Keep away from sources of ignition - No smoking.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 37 Wear suitable gloves.
 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.
 Employment restrictions concerning women of child-bearing age must be observed.
 For use only by technically qualified individuals.

Water hazard class:

Water hazard class 1 (Self-assessment): slightly 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)
 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)