

1 Identification of substance**Product details**

Trade name **4',4''(5'')-Di-tert-butylidibenzo-18-crown-6**
Stock number: L14559

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 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.

GHS label elements**Warning**

H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
P280 Wear protective gloves/clothing.

Prevention:**Response:**

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

3 Composition/information on ingredients**Chemical characterization:**

Designation: (CAS#) 4',4''(5'')-Di-tert-butylidibenzo-18-crown-6 (CAS# 29471-17-8)

4 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.

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, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

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

Measures for environmental protection:

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

Measures for cleaning/collecting:

Dispose of contaminated material as waste according to item 13.

Additional information:

Ensure adequate ventilation.

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:**

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:

Keep ignition sources away - Do not smoke.

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.

Further information about storage conditions:

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

Breathing equipment:**Protection of hands:**

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Material of gloves	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.	(Contd. of page 1)
Penetration time of glove material	Impervious gloves	
Eye protection:	Not determined	
Body protection:	Safety glasses Face protection Protective work clothing.	

9 Physical and chemical properties:

General Information		
Form:	Solid.	
Colour:	White	
Smell:	Odourless	
Change in condition		
Melting point/Melting range:	≈110 °C	
Boiling point/Boiling range:	Not determined	
Sublimation temperature / start:	Not determined	
Ignition temperature:	Not determined	
Decomposition temperature:	Not determined	
Danger of explosion:	Product is not explosive.	
Critical values for explosion:		
Lower:	Not determined	
Upper:	Not determined	
Steam pressure:	Not determined	
Density	Not determined	

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:	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	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:	None
Maritime transport IMDG/GGVSea:	
IMDG/GGVSea Class:	None
Marine pollutant:	No
Air transport ICAO-TI and IATA-DGR:	
ICAO/IATA Class:	None
Transport/Additional information:	Not dangerous according to the above specifications.

15 Regulatory information

Designation according to EC guidelines:	
Code letter and hazard designation of product:	 Xn Harmful
Risk phrases:	22 Harmful if swallowed. 36/38 Irritating to eyes and skin.
Safety phrases:	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.
National regulations	
Information about limitation of use:	Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals.

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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
 CAS: Chemical Abstracts Service (division of the American Chemical Society)

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