

1 Identification of substance**Product details****Trade name****Carbachol****Stock number:**

L06674

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:**

T Toxic

Information pertaining to particular dangers for man and environment GHS label elements

R 25 Toxic if swallowed.

**Danger****Prevention:**

H300 - Fatal if swallowed.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

Response:

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

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#)**

Carbachol (CAS# 51-83-2): 100%

Identification number(s):**EINECS Number:**

200-127-3

4 First aid measures**General information**

Instantly remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

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

Do not induce vomiting; instantly call for medical help.

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

Nitrogen oxides (NO_x)

Hydrogen chloride (HCl)

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

6 Accidental release measures**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation

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:

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 water.

Store away from oxidizing agents.

Further information about storage conditions:

This product is hygroscopic.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Protect from humidity and keep away from water.

Store in a locked cabinet or with access restricted to technical experts or their assistants.

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

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

Revision: 20.08.2010

Printing date 20.08.2010

Trade name **Carbachol**

(Contd. of page 1)

Personal protective equipment	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.
General protective and hygienic measures	
Breathing equipment:	Use breathing protection with high concentrations.
Protection of hands:	Check protective gloves prior to each use for their proper condition.
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. Impervious gloves
Penetration time of glove material	Not determined
Eye protection:	Safety glasses
Body protection:	Protective work clothing.

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

Form:	Crystalline powder
Colour:	White
Smell:	Not determined

Change in condition	
Melting point/Melting range:	210°C (dec)
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

Flash point:	Not applicable
---------------------	----------------

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:	Water/moisture Oxidizing agents
Dangerous reactions:	No dangerous reactions known
Dangerous products of decomposition:	Carbon monoxide and carbon dioxide Nitrogen oxides (NO _x) Hydrogen chloride (HCl)

11 Toxicological information**Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral LD50	15 mg/kg (mouse)
	40 mg/kg (rat)

Primary irritant effect:	
on the skin:	May cause irritation
on the eye:	May cause irritation
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:	6.1 (T2) Toxic substances.
Kemler Number:	60
UN-Number:	2811
Packaging group:	II
Label	6.1
Designation of goods:	2811 TOXIC SOLID, ORGANIC, N.O.S. (Carbachol)
Limited quantities (LQ)	LQ18

(Contd. on page 3)
GB

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

Revision: 20.08.2010

Printing date 20.08.2010

Trade name **Carbachol**

(Contd. of page 2)

Tunnel restriction code D/E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 6.1
 UN Number: 2811
 Label: 6.1
 Packaging group: II
 Marine pollutant: No
 Correct technical name: TOXIC SOLID, ORGANIC, N.O.S. (Carbachol)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 6.1
 UN/ID Number: 2811
 Label: 6.1
 Packaging group: II
 Correct technical name: TOXIC SOLID, ORGANIC, N.O.S. (Carbachol)

UN "Model Regulation": UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, II

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



T Toxic

Risk phrases: 25 Toxic if swallowed.

Safety phrases: 36 Wear suitable protective clothing.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent

GB