


<p>Page 1 of 4</p> <p>Print Date 21.11.2018</p>	<p><b>Material Safety Data Sheet</b> according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Methacholiniumchlorid, API</p>	 <p>Revision Date 21.11.2018</p>
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## 1 Identification of the substance/mixture and of the company/undertaking

- Informations to product No. 4400
- Product name:

**Methacholiniumchlorid, API**  
Methacholinii chloridum

- Supplier of the Product / responsible Company:

Caesar & Loretz GmbH  
Herderstr. 31  
40721 Hilden  
Tel.: 02103/4994-0  
Fax: 02103/32360  
e-mail: info@caelo.de

- Emergency telephone:

Giftinformationszentrum Mainz  
Langenbeckstr. 1, 55131 Mainz  
Tel.: 06131/19240

- Relevant identified uses of the substance or mixture and uses advised against:

No further relevant information available.

- Application of the substance / mixture:

Ingredient for pharmaceutical drugs or active pharmaceutical ingredient.

## 2 Hazards identification

- GHS-Labeling Elements:



- Signal word: Warning


- H-Phrases:

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

- P-Phrases:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P305 IF IN EYES:  
P351 Rinse cautiously with water for several minutes.

**Acute Tox. 4**  
**Skin Irrit. 2**  
**Eye Irrit. 2**  
**STOT SE 3**

Page 2 of 4  Print Date 21.11.2018	<b>Material Safety Data Sheet</b> according to Regulation (EC) No. 1907/2006 (REACH)  Methacholiniumchlorid, API	  Revision Date 21.11.2018
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### 3 Composition / information on ingredients

• **Chemical characterization:**

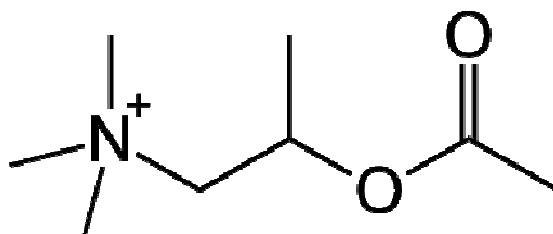
**CAS-No. Substance name:**

62-51-1 Methacholiniumchlorid

• **EINECS-No.:** 200-537-2

• **REACH Reg. No.:** (pre-registered)

• **INCI-Name:** -



### 4 First aid measures

- **after inhalation:** Fresh air. If feeling unwell seek medical advice.
- **after skin contact:** Take off contaminated clothes and shoes, wash immediately with plenty of water and soap. If irritation continues seek medical advice immediately.
- **after eye contact:** Rinse out with plenty of water with the eyelid wide open. Seek medical advice.
- **after swallowing:** Drink water. Induce vomiting. Seek medical advice.
- **The following symptoms might occur:** After contact with skin and eyes: Irritations. After inhalation or swallowing: Illness, dizziness, Headache, fatigue. In case of serious intoxication: respiratory insufficiency and coma.

### 5 Fire-fighting measures


- **Suitable extinguishing media:** All regular extinguishing media can be used. Select fire fighting measures suitable to surrounding environment.
- **Specific hazards during fire fighting:** Combustible but not flammable. In case of fire dangerous gases / vapours can be released: Smoke gases.
- **Special protective equipment for fire-fighters:** Suitable protective clothes and respiratory protection.

### 6 Accidental release measures

- **Personal protective measures:** Avoid dust formation and contact with substance.
- **Environmental protective measures:** Prevent from entering into drains.
- **Methods for cleaning:** Take up dry. Disposal according to Chapter 13 of this MSDS. Clean up with water.

### 7 Handling and storage

- **Information on fire or explosion protection:** No special requirements.

<p>Page 3 of 4</p> <p>Print Date 21.11.2018</p>	<p><b>Material Safety Data Sheet</b> according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Methacholiniumchlorid, API</p>	 <p>Revision Date 21.11.2018</p>
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- **Storage:**
- **Requirements for storage areas and containers:** Store in a cool place. Keep container tightly closed in a dry, well-ventilated place. Recommended storage temperature: 10 ° C. Very careful to store!
- **Advices on common storage:** no special requirements
- **Additional informations to storage conditions:** Keep container tightly closed.

## 8 Exposure controls / personal protective equipment

- **Personal protective equipment:**
- **General protective and hygiene measures:**  
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. If dust is appropriate exhaust ventilation.
- **Respiratory protection:** Dust protection mask
- **Hand protection:** Gloves of Latex or PVC
- **Eye protection:** Safety glasses.

## 9 Physical and chemical properties


- **Form:** crystals or white powder
- **Colour:** white
- **Odour:** odourless
- **Melting point / melting range:** 171 - 173 °C
- **Boiling point / boiling range:** not determined
- **Density:** not determined
- **Solubility in / Miscibility with**
- **Water:** readily soluble
- **Ethanol 96%:** readily soluble
- **Ether:** nearly not soluble
- **pH-range:** 3 - 5 (1%)

## 10 Stability and reactivity

- **Thermal decomposition / conditions to avoid:** avoid moisture
- **Materials to avoid:** Strong oxidizing agents
- **Hazardous reactions:** No dangerous reactions known.
- **Hazardous decomposition products:** None known

## 11 Toxicological information

- **Acute toxicity:**  
LD50 (oral, rat): 750 mg / kg
- **Primary irritant effect:**
- **on skin:** May be harmful if absorbed through the skin. Causes skin irritation
- **on eye:** causes severe eye irritation
- **on respiratory organs:** May be harmful if inhaled. Causes respiratory tract irritation.
- **if swallowed:** Harmful if swallowed.

<p>Page 4 of 4</p> <p>Print Date 21.11.2018</p>	<p><b>Material Safety Data Sheet</b> according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Methacholiniumchlorid, API</p>	 <p>Revision Date 21.11.2018</p>
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## 12 Ecological information

- **Information about elimination (persistence and degradability):**  
Quantitative data are not available.
- **Ecotoxic effects:** Quantitative ecotoxicological data are not available.
- **Water hazard class:** 1 (self classification): slightly hazardous for water.

## 13 Disposal considerations

- **Product:**
- **Recommendation:** Disposal according to local regulations as pharmaceutical waste.
- **Empty contaminated packaging:**
- **Recommendation:** Disposal according to the local regulations.

## 14 Transport informations

- **Land transport according to ADR:**  
Not classified as dangerous in the meaning of transport regulations.

## 15 Regulatory information

- **Labelling according to actual legislation (GHS, Globally Harmonized System of Classification and Labelling of Chemicals):**  
The product is classified and labelled according to GHS-regulations.
- **Hazard symbols:** GHS07
- **Signal word:** Warning
- **H-Phrases:**  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.
- **P-Phrases:**  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P305+P351 IF IN EYES: Rinse cautiously with water for several minutes.
- **National regulations (Germany):**
- **Water hazard class:** see chapter 12
- **Storage class TRGS 510:** 11

## 16 Other Information

The information provided in this MSDS is correct to the best of our knowledge at the date of edition.

- **Reason for last revision:** Adjustment to regulation (EC) 1907/2006 (REACH) and GHS-labelling system.