

## SAFETY DATA SHEET

Version 8.2  
Revision Date 09/26/2020  
Print Date 02/05/2022

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : CHLORO(1,5-CYCLOOCTADIENE)METHYLPALLADIUM(II)

Product Number : 717533  
Brand : Aldrich  
CAS-No. : 63936-85-6

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Synthesis of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 4), H332  
Acute toxicity, Dermal (Category 2), H310  
Skin irritation (Category 2), H315  
Eye irritation (Category 2A), H319  
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335  
Short-term (acute) aquatic hazard (Category 2), H401  
Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal word

Danger

Hazard statement(s)

H301 Toxic if swallowed.  
H310 Fatal in contact with skin.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P262 Do not get in eyes, on skin, or on clothing.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear eye protection/ face protection.  
P280 Wear protective gloves/ protective clothing.  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.  
P302 + P350 + P310 IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/ physician.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P361 Remove/ Take off immediately all contaminated clothing.  
P391 Collect spillage.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Formula :  $C_9H_{15}ClPd$   
Molecular weight : 265.09 g/mol

| Component                                            | Classification                | Concentration |
|------------------------------------------------------|-------------------------------|---------------|
| <b>Chloro(1,5-cyclooctadiene)methylpalladium(II)</b> |                               |               |
| CAS-No. 63936-85-6                                   | Skin Irrit. 2; Eye Irrit. 2A; | <= 100 %      |

|                              |              |                                                                                              |              |
|------------------------------|--------------|----------------------------------------------------------------------------------------------|--------------|
|                              |              | STOT SE 3; H315, H319, H335                                                                  |              |
| <b>trimethyltin chloride</b> |              |                                                                                              |              |
| CAS-No.                      | 1066-45-1    | Acute Tox. 2; Acute Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H400, H410 | >= 1 - < 5 % |
| EC-No.                       | 213-917-8    | M-Factor - Aquatic Acute: 1                                                                  |              |
| Index-No.                    | 050-005-00-7 |                                                                                              |              |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Hydrogen chloride gas, Tin/tin oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

No data available

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Keep tightly closed, frozen, refrigerated or freeze-dried.

Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

| Component             | CAS-No.   | Value                  | Control parameters    | Basis                                                                            |
|-----------------------|-----------|------------------------|-----------------------|----------------------------------------------------------------------------------|
| trimethyltin chloride | 1066-45-1 | TWA                    | 0.1 mg/m <sup>3</sup> | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
|                       |           | TWA                    | 0.1 mg/m <sup>3</sup> | USA. ACGIH Threshold Limit Values (TLV)                                          |
|                       | Remarks   | Central nervous system |                       |                                                                                  |

|  |  |                                                                                                                                                                                                           |           |                                                                                         |
|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------|
|  |  | Immune effects<br>Upper Respiratory Tract irritation<br>Headache<br>Eye irritation<br>Nausea<br>Not classifiable as a human carcinogen<br>Danger of cutaneous absorption varies                           |           |                                                                                         |
|  |  | STEL                                                                                                                                                                                                      | 0.2 mg/m3 | USA. ACGIH Threshold Limit Values (TLV)                                                 |
|  |  | Central nervous system<br>Immune effects<br>Upper Respiratory Tract irritation<br>Headache<br>Eye irritation<br>Nausea<br>Not classifiable as a human carcinogen<br>Danger of cutaneous absorption varies |           |                                                                                         |
|  |  | TWA                                                                                                                                                                                                       | 0.1 mg/m3 | USA. NIOSH Recommended Exposure Limits                                                  |
|  |  | Also see specific listing for Cyhexatin.<br>Potential for dermal absorption                                                                                                                               |           |                                                                                         |
|  |  | PEL                                                                                                                                                                                                       | 0.1 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|  |  | Skin                                                                                                                                                                                                      |           |                                                                                         |
|  |  | STEL                                                                                                                                                                                                      | 0.2 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|  |  | Skin                                                                                                                                                                                                      |           |                                                                                         |

Hazardous components without workplace control parameters

## 8.2 Exposure controls

### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min  
Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Splash contact  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### **Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- |                                            |                                                  |
|--------------------------------------------|--------------------------------------------------|
| a) Appearance                              | Form: solid                                      |
| b) Odor                                    | No data available                                |
| c) Odor Threshold                          | No data available                                |
| d) pH                                      | No data available                                |
| e) Melting point/freezing point            | Melting point/range: 124 - 129 °C (255 - 264 °F) |
| f) Initial boiling point and boiling range | No data available                                |
| g) Flash point                             | 97 °C (207 °F) - closed cup                      |
| h) Evaporation rate                        | No data available                                |
| i) Flammability (solid, gas)               | No data available                                |
| j) Upper/lower flammability or             | No data available                                |

explosive limits

- |                                              |                   |
|----------------------------------------------|-------------------|
| k) Vapor pressure                            | No data available |
| l) Vapor density                             | No data available |
| m) Relative density                          | No data available |
| n) Water solubility                          | No data available |
| o) Partition coefficient:<br>n-octanol/water | No data available |
| p) Autoignition<br>temperature               | No data available |
| q) Decomposition<br>temperature              | No data available |
| r) Viscosity                                 | No data available |
| s) Explosive properties                      | No data available |
| t) Oxidizing properties                      | No data available |

## **9.2 Other safety information**

No data available

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## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No data available

### **10.2 Chemical stability**

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

No data available

### **10.5 Incompatible materials**

Strong oxidizing agents

### **10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Tin/tin oxides

Other decomposition products - No data available

In the event of fire: see section 5

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## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

No data available

Inhalation: No data available

Dermal: No data available

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation. (Chloro(1,5-cyclooctadiene)methylpalladium(II))

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available (Chloro(1,5-cyclooctadiene)methylpalladium(II))

**Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Chloro(1,5-cyclooctadiene)methylpalladium(II))

Stomach - Irregularities - Based on Human Evidence

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**SECTION 12: Ecological information****12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available (Chloro(1,5-cyclooctadiene)methylpalladium(II))

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

### DOT (US)

UN number: 2811    Class: 6.1    Packing group: III  
Proper shipping name: Toxic solids, organic, n.o.s. (trimethyltin chloride)  
Reportable Quantity (RQ):  
Poison Inhalation Hazard: No

### IMDG

UN number: 2811    Class: 6.1    Packing group: III    EMS-No: F-A, S-A  
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (trimethyltin chloride)  
Marine pollutant : yes

### IATA

UN number: 2811    Class: 6.1    Packing group: III  
Proper shipping name: Toxic solid, organic, n.o.s. (trimethyltin chloride)

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## SECTION 15: Regulatory information

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

|                       |                      |                             |
|-----------------------|----------------------|-----------------------------|
| trimethyltin chloride | CAS-No.<br>1066-45-1 | Revision Date<br>2007-07-01 |
|-----------------------|----------------------|-----------------------------|

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

Chloro(1,5-cyclooctadiene)methylpalladium(II)

CAS-No.  
63936-85-6

Revision Date

trimethyltin chloride

1066-45-1

2007-07-01

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## SECTION 16: Other information

### Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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