



catapowerinc.com

# Safety Data Sheet

Version 1.2

Revision date: 12 July 2023

## Section 1: Identification

### 1.1 Product identifier

Product name: Hoveyda-Grubbs catalyst, 1<sup>st</sup> generation  
Other names: Dichloro(2-isopropoxyphenylmethylene)(tricyclohexylphosphine)ruthenium(II);  
Dichloro(o-isopropoxymethylene)(tricyclohexylphosphine)ruthenium(II)  
Product code: 02-01-1001  
CAS number: 203714-71-0

### 1.2 Relevant uses

Recommended use: Chemicals for laboratory evaluation

### 1.3 Supplier details

Manufacturer: Catapower, Inc.  
2265 E. Foothill Blvd.  
Pasadena, CA 91107  
info@catapowerinc.com  
Phone: (626) 657-0386

### 1.4 Emergency telephone number

Emergency phone: (800) 424-9300  
CHEMTREC is available at the number above 24 hours/day, 7 days/week.

## Section 2: Hazard(s) identification

### 2.1 Classification of the substance or mixture

**GHS Classification: 29 CFR 1910 (OSHA HCS)**

Flammable solids [Category 2], H228

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 Warning

Hazard statement(s)

H228 Flammable solid.

Precautionary statement(s)

P210 Keep away from heat, hot surface, open flames, and sparks. No smoking

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof equipment

P280 Wear protective gloves/ eye protection/ face protection.

P370 + P378 In case of fire, use dry sand, dry chemical, or alcohol-resistant foam to extinguish.

### 2.3 Hazards not otherwise classified

None.

## Section 3: Composition/information on ingredients

### 3.2 Mixtures

<b>Components:</b>	Hoveyda-Grubbs catalyst, 1 <sup>st</sup> generation
Molecular weight:	600.61 g/mol
Chemical formula:	C <sub>28</sub> H <sub>45</sub> Cl <sub>2</sub> OPRu
Concentration:	>= 97%
CAS number:	203714-71-0

## Section 4: First aid measures

### 4.1 Description of necessary first-aid instructions

General guidance: Move out of contaminated area.

If inhaled: Remove person to fresh air. Give artificial respiration if not breathing. Get medical advice/attention.

In case of skin contact: Remove contaminated clothing. Wash off with plenty of soap and water. Get medical advice/attention.

In case of eye contact: Rinse with water for at least 15 minutes. Remove contact lenses, if present, and continue rinsing. Get medical advice/attention.

If swallowed: Do not induce vomiting. If conscious, rinse mouth with water. Get medical advice/attention.

### 4.2 Most important symptoms/effects

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 immediate medical attention and special treatment needed

No data available.

## Section 5: Firefighting measures

### 5.1 Suitable extinguishing media

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

### 5.2 Specific hazards arising from the chemical

Carbon oxides, Hydrogen chloride gas, Phosphorus oxides, Ruthenium oxide.

### 5.3 Recommendations for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Cool unopened containers with water spray.

## Section 6: Accidental release measures

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

Use personal protective equipment as recommended in Section 8. Avoid dust formation. Avoid breathing aerosol. Ensure adequate ventilation.

**6.2 Environmental precautions**

Do not let product enter drains.

**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

**Section 7: Handling and storage****7.1 Precautions for safe handling**

Use personal protective equipment as recommended in Section 8. Avoid breathing dust and aerosol. Avoid contact with skin, eyes, and clothing. Avoid ingestion. Use in appropriately ventilated area.

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

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

Recommended storage temperature 2 – 8 °C

Handle and store under inert gas. Light sensitive. Air sensitive.

Storage class (TRGS 510): 13: Flammable solid hazardous materials.

**Section 8: Exposure controls / personal protection****8.1 Control parameters****Components with workplace control parameters**

Contains no substance with occupational exposure limit values.

**8.2 Exposure controls****Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and at the end of workday.

**8.3 Individual protection measures, such as personal protective equipment (PPE)****Eye/face protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin protection**

For full or incidental contact, nitrile gloves with a minimum layer thickness of 0.11 mm are recommended.

**Body protection**

Impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

When a risk assessment indicates respiratory protection is required, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Form: solid
	Color: brown
Odor:	No data available
Odor threshold:	No data available
pH:	No data available
Melting/freezing point:	Melting point/range: 195 - 197 °C (383 - 387 °F) - lit.
Initial boiling point and range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	The substance or mixture is a flammable solid with the category 2
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	No data available
Solubility:	No data available
Partition coefficient, n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive Properties:	No data available

## Section 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under proper storage conditions

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Oxidizing agents, bases, acids.

#### **10.6 Hazardous decomposition products.**

Carbon oxides, Hydrogen chloride gas, Phosphorus oxides, Ruthenium oxide.

### **Section 11: Toxicological information**

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

##### **Acute toxicity**

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 data available

ACGIH: No data available

NTP: No data available

OSHA: No data available

##### **Reproductive toxicity**

No data available

##### **Specific target organ toxicity - single exposure**

No data available

##### **Specific target organ toxicity - repeated exposure**

No data available

##### **Aspiration hazard**

No data available

### **Section 12: Ecological information**

#### **12.1 Toxicity**

No data available

#### **12.2 Persistence and degradability**

No data available

#### **12.3 Bioaccumulation potential**

No data available

#### 12.4 Mobility in soil

No data available

#### 12.6 Other adverse effects

No data available

### Section 13: Disposal considerations

#### 13.1 Waste disposal methods

Must not be disposed in household garbage or in sewer. Dispose of excess product in appropriate containers with a licensed disposal company in accordance with all relevant regulations.

#### 13.2 Contaminated packaging

Contaminated packaging should be discarded in the same manner as excess product.

### Section 14: Transport information

#### DOT (US)

UN number: 1325                      Class: 4.1                      Packing group: II

Proper shipping name: Flammable solids, organic, n.o.s. (Dichloro(o-isopropoxyphenylmethylene)(tricyclohexylphosphine)ruthenium(II))

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

#### IMDG

UN number: 1325                      Class: 4.1                      Packing group: II                      EMS-No: F-A, S-G

Proper shipping name: Flammable solids, organic, n.o.s. (Dichloro(o-isopropoxyphenylmethylene)(tricyclohexylphosphine)ruthenium(II))

#### IATA

UN number: 1325                      Class: 4.1                      Packing group: II

Proper shipping name: Flammable solids, organic, n.o.s. (Dichloro(o-isopropoxyphenylmethylene)(tricyclohexylphosphine)ruthenium(II))

### Section 15: Regulatory information

#### 15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture

##### SARA 302 components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### 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

Fire hazard.

**Massachusetts Right To Know components**

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

**Pennsylvania Right To Know components**

Dichloro(o-isopropoxyphenylmethylene)(tricyclohexylphosphine)ruthenium(II) CAS-No. 203714-71-0

**Section 16: Other information**

**16.1 Disclaimer**

This information supplied in this document is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Users should make their own investigation to determine the suitability of this information for their particular purposes.