MATERIAL SAFETY DATA SHEET

SECTION 1: Product Information and Company Identification

1.1 Product Identification

Product Name: GRUBBS CATALYST 2ND GENERATION
CAS: 246047-72-3
REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3Company Information

Company: Elsa Biotechnology Co.,Ltd.
Address: NO.37,Tanglin,Tangshan Street,Jiangning District,Nanjing,China
Emergency Phone: 86-025-84106591
Email: contact@elsa-biotech.com; sales@elsa-biotech.com; elsa@elsa-biotech.com

SECTION 2:Hazards Summarizing

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008
Flammable solids, H228

Classification according to EU Directives 67/548/EEC or 1999/45/EC
F Highly flammable R11

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram 

Signal word Warning
Hazard statement(s)
H228 Flammable solid.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Supplemental Hazard Statements none

2.3 Other hazards – none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : (1,3-Bis(2,4,6-trimethylphenyl)-2-imidazolidinylidene)dichloro(phenylmethylene)(tricyclohexylphosphine)ruthenium
Benzylidene[1,3-bis(2,4,6-trimethylphenyl)-2-imidazolidinylidene]dichloro(tricyclohexylphosphine)ruthenium
[1,3-Bis(2,4,6-trimethylphenyl)-2-imidazolidinylidene]diidazolidinylidene)(dichlorophenylmethylene)(tricyclo

hexylphosphine)ruthenium

Formula : C46H65Cl2N2PRu
Molecular Weight : 848,97 g/mol
CAS-No. : 246047-72-3
Purity:97%+

No components need to be disclosed according to the applicable regulations.

Section 4:First Aid Measures

4.1 Description of first aid measures

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin contact:

Immediately wash with water and soap; and rinse thoroughly.
Seek immediate medical advice.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Seek immediate medical advice.

4.2 Indication of any immediate medical attention and special treatment needed

no data available

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, nitrogen oxides (NOx), Oxides of phosphorus, Hydrogen chloride gas, Ruthenium oxide

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6:Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Keep unprotected person away.
Ensure adequate ventilation.

6.2 Environmental precautions:

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

6.3Methods for cleaning up:

Ensure adequate ventilation.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition

- No smoking. Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

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

Recommended storage temperature: 2 - 8 °C
Handle and store under inert gas. Air sensitive. Light sensitive.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8:Exposure Controls / Personal Protections

8.1 Respiratory protection
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.2 Hand protection
Compatible chemical-resistant gloves.

8.3 Eye protection
Chemical safety glasses.

8.4 Body protection
Protective work clothing.

SECTION 9:Physical Chemical Properties

9.1 Appearance

Form	Powder
Color	Dark-purple

9.2 Safety data

Melting point	no data available
Boiling point	no data available
Flash point	no data available
Moisture	<0.5%

SECTION 10:Stability and Reactivity

10.1 Stability: Stable under recommended storage conditions.

10.2 Reactivity: no data available

10.3 Incompatible materials

Strong oxidizing agents

10.4 Possibility of hazardous reactions: no data available

10.5 Conditions to avoid: Air Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.6 Hazardous decomposition products

Other decomposition products - no data available

SECTION 11:Toxicological Information

11.1 Acute toxicity

No effects known

11.2 Irritation and corrosion

No effects known

11.3 Sensitization

No effects known

11.4 Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

11.5 Signs and Symptoms of Exposure:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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

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
no data available

SECTION 13:Disposal Considerations

13.1Waste treatment methods:
Recommendation: consult state, local or national regulations to ensure proper disposal.

13.2 Un-cleaned packages:
Recommendation: disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1325 IMDG: 1325 IATA: 1325

14.2 UN proper shipping name

ADR/RID: FLAMMABLE SOLID, ORGANIC, N.O.S. (Ruthenium, [1,3-bis(2,4,6-trimethylphenyl)-2-imidazolidinylidene]dichloro(phenylmethylene)(tricyclohexylphosphine)-, (SP-5-41)-)
IMDG: FLAMMABLE SOLID, ORGANIC, N.O.S. (Ruthenium, [1,3-bis(2,4,6-trimethylphenyl)-2-imidazolidinylidene]dichloro(phenylmethylene)(tricyclohexylphosphine)-, (SP-5-41)-)
IATA: Flammable solid, organic, n.o.s. (Ruthenium, [1,3-bis(2,4,6-trimethylphenyl)-2-imidazolidinylidene]dichloro(phenylmethylene)(tricyclohexylphosphine)-, (SP-5-41)-)

14.3 Transport hazard class(es)
ADR/RID: 4.1 IMDG: 4.1 IATA: 4.1

14.4 Packaging group
ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions
no data available

SECTION 15:Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out.

SECTION 16:Other Information

Elsa Biotechnology Co.,Ltd.
Website:www.elsa-biotech.com
Email:contact@elsa-biotech.com
Address:NO.37,Tanglin,Tangshan Street,Jiangning District,Nanjing,China

The information contained in this MSDS is believed to be correct to the best of our knowledge, but it does not purport to be all-inclusive and shall be used only as a guide. Elsa Biotechnology Co., Ltd. shall not be held liable for any loss, injury, or damage resulting from handing or from contact with the above product; since conditions of usage are beyond our control. All risks of use are assumed by end-users.

Date:5,JAN,2018

End of Safety Data Sheet

Elsa Biotechnology Co.,Ltd.
Website:www.elsa-biotech.com
Email:contact@elsa-biotech.com
Address:NO.37,Tanglin,Tangshan Street,Jiangning District,Nanjing,China