

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Dichloro(1,5-cyclooctadiene)ruthenium(II), polymer

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008
Chronic aquatic toxicity (Category 3)

According to European Directive 67/548/EEC as amended.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Label elements

Pictogram	none
Signal word	none
Hazard statement(s) H412	Harmful to aquatic life with long lasting effects.
Precautionary statement(s) P273	Avoid release to the environment.
Hazard symbol(s)	none
R-phrases(s) R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases(s) S61	Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : (1,5-Cyclooctadiene)ruthenium(II) chloride
Ruthenium(II) chloride 1,5-cyclooctadiene complex

Formula : C8H12Cl2Ru]n

Molecular Weight : 280,16 g/mol

CAS-No.	EC-No.	Classification	Concentration
Rutheniumdichlor[1,2,5,6-η]-1,5-cyclooctadien]-, homopolymer 50982-13-3	-	Aquatic Chronic 3; H412 R52/53	-

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

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathing 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. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

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.

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.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

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

hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection

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

Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form powder
Colour brown

Safety data

pH no data available
Melting point 205 °C
Boiling point no data available
Flash point no data available
Ignition temperature 75 °C -
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure 0,00033 hPa at 25 °C
Density 0,600 g/cm3
Water solubility insoluble
Partition coefficient: log Pow: 0,8 at 20 °C
n-octanol/water

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Exposure to moisture may affect product quality.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Ruthenium oxide

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - > 2.000 mg/kg

Skin corrosion/irritation

Skin - rabbit - No skin irritation

Serious eye damage/eye irritation

Eyes - rabbit - No eye irritation

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

Genotoxicity in vitro - This material has shown a positive Ames test, an in vitro test that indicates a possible potential to produce a carcinogenic effect.

Histidine reversion (Ames)

Carcinogenicity

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

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

Potential health effects

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

Signs and Symptoms of Exposure

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

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - 26 mg/l - 48 h

Persistence and degradability

Biodegradability Result: - Not readily biodegradable.

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

Harmful to aquatic life with long lasting effects.
no data available

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORT INFORMATION

ADR/RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

Text of H-code(s) and R-phrases) mentioned in Section 3

Aquatic Chronic H412 Chronic aquatic toxicity
Harmful to aquatic life with long lasting effects.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information

For R&D use only. Not for drug, household or other uses.



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WARRANTY:

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. Lookchem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.