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**TECHNO PHARMCHEM**

An ISO 9001 : 2008 Certified Company

Registered Off. : 101-A, Deep Enclave, Pocket 'D', Ashok Vihar, Phase-III, Delhi-110 052 (India)  
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)  
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)  
Telephone : 0091 - 11 - 23646422 E-mail : tecpharm@gmail.com  
Website : www.technopharmchem.com

## RUTHENIUM RED

### 1. Product Identification

Synonyms: Ruthenium red

CAS No.: 11103-72-3

Molecular Weight: 858.42

Chemical Formula:  $\text{Cl}_6\text{H}_{42}\text{N}_{14}\text{O}_2\text{Ru}_3 \cdot 4\text{H}_2\text{O}$

Product Codes: 33023

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Ruthenium Red	11103-72-3	100%

### 3. Hazards Identification

Potential Health Effects

Eye: No information regarding eye irritation and other potential effects was found.

Skin: No information regarding skin irritation and other potential effects was found.

Ingestion: The toxicological properties of this substance have not been fully investigated.

Inhalation: Inhalation of dust may cause respiratory tract irritation.

Chronic: No information found.

### 4. First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

### 5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be a explosion hazard

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide.

Water spray may be used to keep fire exposed containers cool.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.



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## 6. Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

## 7. Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances

## 8. Exposure Controls/Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ruthenium Red	none listed	none listed	none listed

OSHA Vacated PELs: Ruthenium Red: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

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

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## 9. Physical and Chemical Properties

Physical State: Solid

Appearance: red-brown

Odor: None reported.

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Decomposition Temperature: Not available.

Solubility: soluble

Specific Gravity/Density: Not available.

Molecular Formula:  $\text{Cl}_6\text{H}_{42}\text{N}_{14}\text{O}_2\text{Ru}_3 \cdot 4\text{H}_2\text{O}$

Molecular Weight: 858.42

The information contained herein is in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. We do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.



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## 10. Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation.

Incompatibilities with Other Materials: Oxidizing agents

Hazardous Decomposition Products: Hydrogen chloride, ammonia and/or derivatives.

Hazardous Polymerization: Has not been reported.

## 11. Toxicological Information

LD50/LC50: Not available.

Carcinogenicity: CAS# 11103-72-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

## 12. Ecological Information

Toxicity information: Not established.

Persistence - degradability: Biodegradable.

Bioaccumulative potential: Not established.

Mobility in soil: Not established.

Results of PBT and vPvB assessment: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

Environmental precautions: Avoid release to the environment.

## 13. Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

Not regulated.

## 15. Regulatory Information

Safety, health and environmental : Ensure all national/local regulations are observed.  
regulations/legislation specific for the substance or mixture

REACH Restrictions : The components of this product are not subject to restrictions.

REACH Authorisation : The components of this product are not subject to authorization.

Chemical Safety Assessment : It has not been carried out.

## 16. Other Information

Product Use:

Laboratory Reagent.