1. PRODUCT AND COMPANY IDENTIFICATION

Product Name
Tris(triphenylphosphine)rhodium(I) chloride

Cat No.
AC194570000; AC194570010; AC194570050; AC194572500

Synonyms
Tris(triphenylphosphine)chlororhodium; Wilkinson’s catalyst

Recommended Use
Laboratory chemicals

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number, US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview
Causes burns by all exposure routes.

Appearance Dark red
Physical State Powder Solid
odor odorless

Target Organs
Respiratory system, Eyes, Skin, Gastrointestinal tract (GI)

Potential Health Effects

Acute Effects

Principle Routes of Exposure
Thermo Fisher Scientific -
Tris(triphenylphosphine)rhodium(I) chloride

Revision Date 17-Nov-2010

Eyes
Causes burns.

Skin
Causes burns. May be harmful in contact with skin.

Inhalation
Causes burns. May be harmful if inhaled.

Ingestion
Causes burns. May be harmful if swallowed.

Chronic Effects
None known

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Haz/Non-haz</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rhodium, chlorotris(triphenylphosphine)-, (SP-4-2)-</td>
<td>14694-95-2</td>
<td>98-99.99</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Ingestion
Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point
No information available.

Method
No information available.

Autoignition Temperature
No information available.

Explosion Limits
Upper
No data available

Lower
No data available

Suitable Extinguishing Media
CO₂, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable Extinguishing Media
No information available.

Hazardous Combustion Products
No information available.

Sensitivity to mechanical impact
No information available.

Sensitivity to static discharge
No information available.

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA: Health 3 Flammability 1 Instability 0 Physical hazards N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. HANDLING AND STORAGE

Handling
Use only under a chemical fume hood. Wear personal protective equipment. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures
Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection
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 and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
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
Powder Solid

Appearance
Dark red

odor
odorless

Odor Threshold
No information available.

pH
No information available.

Vapor Pressure
No information available.

Vapor Density
31.9

Viscosity
No information available.
9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point/Range  
No information available.

Melting Point/Range  
245 - 250°C / 473 - 482°F

Decomposition temperature  
No information available.

Flash Point  
No information available.

Evaporation Rate  
No information available.

Specific Gravity  
No information available.

Solubility  
No information available.

log Pow  
No data available

Molecular Weight  
925.23

Molecular Formula  
C54 H45 Cl P3 Rh

10. STABILITY AND REACTIVITY

Stability  
Stable under normal conditions.

Conditions to Avoid  

Incompatible Materials  
Strong oxidizing agents

Hazardous Decomposition Products  
Hydrogen chloride gas, Carbon monoxide (CO), Carbon dioxide (CO₂), Oxides of phosphorus, Phosphorus trihydride (phosphine)

Hazardous Polymerization  
Hazardous polymerization does not occur.

Hazardous Reactions .  
None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information  
No acute toxicity information is available for this product

Component Information

Irritation  
Causes burns by all exposure routes

Toxicologically Synergistic Products  
No information available.

Chronic Toxicity

Carcinogenicity  
There are no known carcinogenic chemicals in this product

Sensitization  
No information available.

Mutagenic Effects  
No information available.

Reproductive Effects  
No information available.
Developmental Effects: No information available.
Teratogenicity: No information available.
Other Adverse Effects: The toxicological properties have not been fully investigated.
Endocrine Disruptor Information: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Do not empty into drains.
Persistence and Degradability: No information available.
Bioaccumulation/ Accumulation: No information available.
Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT
- UN-No: UN1759
- Proper Shipping Name: CORROSIVE SOLID, N.O.S.
- Proper technical name: (TRIS(TRIPHENYLPHOSPHINE)RHODIUM(I) CHLORIDE)
- Hazard Class: 8
- Packing Group: III

TDG
- UN-No: UN1759
- Proper Shipping Name: CORROSIVE SOLID, N.O.S.
- Hazard Class: 8
- Packing Group: III

IATA
- UN-No: UN1759
- Proper Shipping Name: CORROSIVE SOLID, N.O.S.*
- Hazard Class: 8
- Packing Group: III
14. TRANSPORT INFORMATION

IMDG/IMO

<table>
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<th>UN-No</th>
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<td>Proper Shipping Name</td>
<td>CORROSIVE SOLID, N.O.S.</td>
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<td>Hazard Class</td>
<td>8</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
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15. REGULATORY INFORMATION

International Inventories

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<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
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<tr>
<td>Rhodium, chlorotris(triphenylphosphine)-, (SP-4-2)-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>238-744-5</td>
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<td>X</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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</tr>
</tbody>
</table>

Legend:
- **X** - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

**TSCA 12(b)** Not applicable

**SARA 313**
Not applicable

**SARA 311/312 Hazardous Categorization**

<table>
<thead>
<tr>
<th>Hazard Category</th>
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<tbody>
<tr>
<td>Acute Health Hazard</td>
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<tr>
<td>Chronic Health Hazard</td>
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<td>Fire Hazard</td>
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<tr>
<td>Sudden Release of Pressure Hazard</td>
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</tr>
<tr>
<td>Reactive Hazard</td>
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</table>

**Clean Water Act**
Not applicable
Clean Air Act  
Not applicable

OSHA  
Not applicable

CERCLA  
Not Applicable

California Proposition 65  
This product does not contain any Proposition 65 chemicals.

State Right-to-Know  
Not applicable

U.S. Department of Transportation  
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant  N

U.S. Department of Homeland Security  
This product does not contain any DHS chemicals.

Other International Regulations  
Mexico - Grade  No information available

Canada  
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class  
E  Corrosive material

16. OTHER INFORMATION

Prepared By  
Regulatory Affairs  
Thermo Fisher Scientific  
Tel: (412) 490-8929

Creation Date  
17-Nov-2010
Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS