1. Product and Company Identification

Trade Name: Iron Rhodium Alloy  
Chemical Formula: FeRh  
Recommended Use: Scientific research and development  
Manufacturer/Supplier: LTS Research Laboratories, Inc.  
Street: 37 Ramland Road  
City: Orangeburg  
State: New York  
Zip Code: 10962  
Country: USA  
Tel #: 855-587-2436 / 855-lts-chem  

24-Hour Emergency Contact: 800-424-9300 (US & Canada)  
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Warning

Hazard Statements:  
H228: Flammable solid  
H319: Causes serious eye irritation  
H335: May cause respiratory irritation

Precautionary Statements:  
P261: Avoid breathing dust/fume/vapor  
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P240: Ground/bond container and receiving equipment  
P241: Use explosion-proof electrical/ventilating/lighting/equipment  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
P370+P378: In case of fire: Use CO2, powder or water spray for extinction  
P405: Store locked up  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):  
Health: 1  
Flammability: 2  
Physical: 1  

Powder  
Bulk  
0
3. Composition

Chemical Family: Alloy
Additional Names: N/A

Iron (Fe):
- Percentage: 0-100 wt%
- CAS #: 7439-89-6
- EC #: 231-096-4

Rhodium (Rh):
- Percentage: 0-100 wt%
- CAS #: 7440-16-6
- EC #: 231-125-0

4. First Aid Procedures

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion: Seek medical attention
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

5. Firefighting Measures

Flammability: Flammable as powder
Extinguishing Media: Do not use water for metal fires – use CO₂, sand, extinguishing powder.
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions: Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions: Wash thoroughly after handling.
Storage Conditions: Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.
8. Exposure Controls and Personal Protection

Permissible Exposure Limits: 0.1 mg/m³ as Rh, long-term value
Threshold Limit Value: 1.0 mg/m³ as Rh, long-term value

Special Equipment: None
Respiratory Protection: Dust Respirator
Protective Gloves: Rubber gloves
Eye Protection: Safety glasses or goggles
Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Metallic</td>
</tr>
<tr>
<td>Form</td>
<td>Powder, Granules, Pellets, Sputtering target, Custom parts</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>N/A</td>
</tr>
</tbody>
</table>

10. Reactivity

Stability: Stable under recommended storage conditions
Reacts With: Oxidizing agents
Incompatible Conditions: None
Hazardous Decomposition Products: Metal oxide fume

11. Toxicological Information

Potential Health Effects:
- Eyes: Causes serious eye damage
- Skin: May cause irritation
- Ingestion: May cause irritation
- Inhalation: May cause irritation
- Chronic: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Signs & Symptoms: N/A
Aggravated Medical Conditions: N/A

Median Lethal Dose: 30000 mg/kg for rat by mouth (Iron)

Carcinogen: The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance. (Iron)

12. Ecological Information

Aquatic Toxicity: Low
Persistent Bioaccumulation Toxicity: No
Very Persistent, Very Bioaccumulative: No
Notes: N/A
13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous as powder only.

Hazard Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives

Packing Group: III

UN Number: UN3089

Proper Shipping Name: Metal powders, flammable, n.o.s. (Iron Rhodium)

15. Regulatory Information

Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

Document Last Revised: 07/05/17