Material Safety Data Sheet
acc. to OSHA and ANSI
Printing date 03/11/2002 Reviewed on 06/08/2000

1 Identification of substance:

- **Product details:**

- **Trade name:** Rhodium slug

- **Stock number:** 13381

- **Manufacturer/Supplier:**
  Alfa Aesar, A Johnson Matthey company
  Johnson Matthey Catalog Company, Inc.
  30 Bond Street
  Ward Hill, MA 01835-8099
  Emergency Phone: (978) 521-6300
  CHEMTREC: (800) 424-9300
  Web Site: www.alfa.com

- **Information department:** Health, Safety and Environmental Department

- **Emergency information:**
  During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

- **Chemical characterization:**
  Description: (CAS#)

  Rhodium (CAS# 7440-16-6), 100%

- **Identification number(s):**
- **EINECS Number:** 231-125-0

3 Hazards identification
4 First aid measures

- **General information** No special measures required.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Seek medical treatment.

5 Fire fighting measures

- **Suitable extinguishing agents** Product is not flammable. Use fire fighting measures that suit the surrounding fire.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Do not allow material to be released to the environment without proper governmental permits.
- **Measures for cleaning/collecting:** Pick up mechanically.
- **Additional information:**
  - See Section 7 for information on safe handling
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Information for safe handling:** Keep container tightly sealed. Store in cool, dry place in tightly closed containers. No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** The product is not flammable.
No special measures required.

- **Storage**
  - **Requirements to be met by storerooms and receptacles:**
    No special requirements.
  - **Information about storage in one common storage facility:**
    Store away from oxidizing agents.
    Store away from halogens.
  - **Further information about storage conditions:** None.

### 8 Exposure controls and personal protection

- **Additional information about design of technical systems:**
  No further data; see item 7.

#### Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>Belgium TWA</th>
<th>Denmark TWA</th>
<th>France TWA</th>
<th>Ireland TWA</th>
<th>Netherlands TWA</th>
<th>Switzerland TWA</th>
<th>United Kingdom TWA</th>
<th>USA PEL (respirable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhodium metal and compounds (as Rh)</td>
<td>mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1, A4 (metal)</td>
<td>1</td>
<td>0.1</td>
<td>1</td>
<td>0.1; 0.3-STEL (metal fume and dust)</td>
<td>0.1 (vapor and dust)</td>
<td>0.1 (metal)</td>
<td>0.001; 0.003-STEL (soluble salts)</td>
<td>0.001 (soluble compounds)</td>
</tr>
<tr>
<td></td>
<td>0.01, A4 (soluble salts)</td>
<td></td>
<td></td>
<td></td>
<td>0.01; 0.003-STEL (soluble salts)</td>
<td></td>
<td></td>
<td></td>
<td>0.1 (insoluble compounds)</td>
</tr>
<tr>
<td></td>
<td>1, A4 (insoluble compounds)</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

- **Additional information:** No data

- **Personal protective equipment**
  - **General protective and hygienic measures**
    The usual precautionary measures for handling chemicals should be followed.
  - **Breathing equipment:** Not required.
  - **Protection of hands:** Not required.
  - **Eye protection:** Safety glasses
  - **Body protection:** Protective work clothing.

### 9 Physical and chemical properties:
- **Form:** Slug  
- **Color:** Silver-colored  
- **Odor:** Odorless

<table>
<thead>
<tr>
<th>Method</th>
<th>Value/Range</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
<td>1966 °C</td>
<td></td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>3727 °C</td>
<td></td>
</tr>
<tr>
<td>Sublimation temperature / start:</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Product is not flammable</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Danger of explosion:</td>
<td>Product does not present an explosion hazard.</td>
<td></td>
</tr>
<tr>
<td>Explosion limits:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Upper:</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Density:</td>
<td>at 20 °C</td>
<td>12.41 g/cm³</td>
</tr>
<tr>
<td>Solubility in / Miscibility with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water:</td>
<td>Insoluble</td>
<td></td>
</tr>
</tbody>
</table>

10 **Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** Decomposition will not occur if used and stored according to specifications.
- **Materials to be avoided:**  
  - Oxidizing agents  
  - Halogens  
  - Interhalogens
- **Dangerous reactions** Reacts violently with interhalogens.
- **Dangerous products of decomposition:** Metal oxide fume

11 **Toxicological information**

- **Acute toxicity:**
Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:
Inhalation of rhodium compounds may cause respiratory irritation and respiratory sensitization.

Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of it's carcinogenicity in humans and/or animals.

12 Ecological information:

- General notes:
  Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

- Product:
- Recommendation
  Consult state, local or national regulations for proper disposal.

- Uncleaned packagings:
- Recommendation:
  Disposal must be made according to official regulations.

14 Transport information

Not a hazardous material for transportation.

- DOT regulations:
- Hazard class: None

- Land transport ADR/RID (cross-border)
- ADR/RID class: None

- Maritime transport IMDG:
- IMDG Class: None

- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: None
• **Transport/Additional information:**
  Not dangerous according to the above specifications.

### 15 Regulations

• **Product related hazard informations:**
  Observe the general safety regulations when handling chemicals

• **National regulations**
  All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory.

• **Information about limitation of use:**
  For use only by technically qualified individuals.

### 16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

• **Department issuing MSDS:** Health, Safety and Environmental Department.

• **Contact:** Darrell R. Sanders