

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Name: Palladium

Product Code: Solid Sputter Target

Relevant identified uses of the substance or mixture and uses advised against:

Catalyst, Intermediate, Precious metal alloy for technical purposes

Supplier:

Reliable Silver Corporation

302 Platts Mill Rd

Naugatuck, CT 06770

Current SOS Preparation Date: July 24, 2014

Original SOS Preparation Date: October 22, 2012

SECTION 2: HAZARD IDENTIFICATION

Classification:

Not a hazardous substance or mixture.

Label elements and precautionary statements:

Not a hazardous substance or mixture.

Other hazards

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical characterization

CAS No. Description: 7440-05-3 palladium

Identification number(s)

EINECS Number: 231-115-6

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice: In case of accident or if you feel unwell, seek medical advice immediately.

If inhaled: Supply fresh air; consult doctor in case of complaints.

In case of skin contact: Rinse with warm water.

In case of eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor

If swallowed: Rinse out mouth and then drink plenty of water.

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Most important symptoms and effects, both acute and delayed

None known.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use fire extinguishing methods suitable to surrounding conditions. CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture: The product is not combustible. Fine sized metal shows catalytic effects and can accelerate combustion processes. Keep away from combustible material.

Specific hazards during fire-fighting: Do not use water with full jet.

Protective equipment: Wear self-contained respiratory protective device. Wear fully protective suit.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Person-related safety precautions:

The usual precautionary measures are to be adhered to when handling chemicals.

Avoid formation of dust.

Measures for environmental protection: No special measures required.

Measures for cleaning/collecting: Send for recovery or disposal in suitable receptacles.

SECTION 7: HANDLING AND STORAGE

Handling:

Information for safe handling: Prevent formation of dust.

Information about fire - and explosion protection:

The product is not combustible. See section 5

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Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace: Not required.

Additional information: The lists valid during the making were used as basis.

Personal protective equipment:

General protective and hygienic measures: Wash hands before breaks and at the end of work.

Respiratory protection: If dust or spray is present use respiratory protection filter P3.

Protection of hands: No chemical-protective gloves required.

Eye protection: Goggles recommended during refilling

Body protection: Light weight protective clothing

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid

Color: Grey

Odor: Odorless

Melting point: 1552 °C

Initial boiling point: 2930°C

Flash point: Not applicable

Evaporation rate: Not applicable

Flammability (solid, gas): Not flammable

Upper/lower explosion limits: Non-explosive

Vapor pressure at 1400°C: 0.0013 hPa

Density at 20°C: 12.02 g/cm³

Solubility in / Miscibility with water: Insoluble

SECTION 10: STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

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Dangerous reactions: No dangerous reactions known.

Dangerous decomposition products: No dangerous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:

LD/LC50 values relevant for classification:

Oral LD50 >9000 mg/kg (rat)

Primary irritant effect:

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

Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

SECTION 12: ECOLOGICAL INFORMATION

General notes: Generally not hazardous for water

SECTION 13: DISPOSABLE CONSIDERATIONS

Product:

Recommendation

Product or residue of product should be recycled because of precious metal content (national regulations must be observed). Material can be returned to supplier or other recycling companies.

Uncleaned packaging:

Recommendation: Uncleaned or with product residues contaminated packing should be treated like the product itself. Packages, which do not contain product residues, should be recycled; if there does not exist a collecting system, packages can be treated as rubbish.

SECTION 14: TRANSPORT INFORMATION

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UN proper shipping name: Not regulated as a dangerous good

UN Number: Not regulated as a dangerous good

Transport hazard class: Not regulated as a dangerous good

Packing Group: Not regulated as a dangerous good

Environmental Group: Not regulated as a dangerous good

Special Precautions for User: Not classified as dangerous in the meaning of transport regulations

SECTION 15: REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59): Not applicable

REACH - List of substances subject to authorization (Annex XIV): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants:

Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII): Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances: Not applicable

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

SECTION 16: OTHER INFORMATION

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