



Material Safety Data Sheet

<p>NFPA</p> 	<p>HMIS</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="background-color: #00FFFF;">Health Hazard</td> <td style="text-align: center; font-weight: bold;">2</td> </tr> <tr> <td style="background-color: #FFCCCC;">Fire Hazard</td> <td style="text-align: center; font-weight: bold;">0</td> </tr> <tr> <td style="background-color: #FFFF00;">Reactivity</td> <td style="text-align: center; font-weight: bold;">0</td> </tr> </table>	Health Hazard	2	Fire Hazard	0	Reactivity	0	<p>Personal Protective Equipment</p>  <p style="text-align: center;">See Section 15.</p>
Health Hazard	2							
Fire Hazard	0							
Reactivity	0							

Section 1. Chemical Product and Company Identification		<i>Page Number: 1</i>										
Common Name/Trade Name	Palladium on Alumina - 5%	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Catalog Number(s).</td> <td>P1003</td> </tr> <tr> <td>CAS#</td> <td>Mixture.</td> </tr> <tr> <td>RTECS</td> <td>Not applicable.</td> </tr> <tr> <td>TSCA</td> <td>TSCA 8(b) inventory: Palladium; Aluminum oxide</td> </tr> <tr> <td>CI#</td> <td>Not applicable.</td> </tr> </table>	Catalog Number(s).	P1003	CAS#	Mixture.	RTECS	Not applicable.	TSCA	TSCA 8(b) inventory: Palladium; Aluminum oxide	CI#	Not applicable.
Catalog Number(s).	P1003											
CAS#	Mixture.											
RTECS	Not applicable.											
TSCA	TSCA 8(b) inventory: Palladium; Aluminum oxide											
CI#	Not applicable.											
Manufacturer	SPECTRUM CHEMICAL MFG. CORP. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	<p style="text-align: center; margin: 0;">IN CASE OF EMERGENCY</p> <p style="text-align: center; margin: 0;">CHEMTREC (24hr) 800-424-9300</p> <p style="text-align: center; margin: 0;">CALL (310) 516-8000</p>										
Commercial Name(s)	Not available.											
Synonym	Not available.											
Chemical Name	Not applicable.											
Chemical Family	Metal oxide. (Salt.)											
Chemical Formula	Not applicable.											
Supplier	SPECTRUM CHEMICAL MFG. CORP. 14422 S. SAN PEDRO STREET GARDENA, CA 90248											

Section 2. Composition and Information on Ingredients					
		<i>Exposure Limits</i>			
Name	CAS #	TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	% by Weight
1) Palladium	7440-05-3				5
2) Aluminum oxide	1344-28-1	10			95
Toxicological Data on Ingredients		<p>Palladium LD50: Not available. LC50: Not available.</p> <p>Aluminum oxide LD50: Not available. LC50: Not available.</p>			

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer).
Potential Chronic Health Effects	<p>CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH [Aluminum oxide].</p> <p>MUTAGENIC EFFECTS: Not available.</p> <p>TERATOGENIC EFFECTS: Classified None. for human [Aluminum oxide].</p> <p>DEVELOPMENTAL TOXICITY: Not available.</p> <p>Repeated or prolonged exposure is not known to aggravate medical condition.</p>

Continued on Next Page

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.
Skin Contact	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.
Serious Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
Serious Inhalation	Not available.
Ingestion	Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Not applicable.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions	Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents.
Storage	No specific storage is required. Use shelves or cabinets sturdy enough to bear the weight of the chemicals. Be sure that it is not necessary to strain to reach materials, and that shelves are not overloaded.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Aluminum oxide TWA: 10 (mg/m ³) from ACGIH Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid.	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1% soln/water)	Not applicable.	Color	Dark.
Boiling Point	Not available.		
Melting Point	2072°C (3761.6°F) based on data for: Aluminum oxide. Weighted average: 2046.17°C (3715.1°F)		
Critical Temperature	Not available.		
Specific Gravity	Weighted average: 4.14 (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	The product is more soluble in oil.		
Ionicity (in Water)	Not available.		
Dispersion Properties	Very slightly dispersed in methanol, diethyl ether, n-octanol. Is not dispersed in cold water, hot water.		
Solubility	Very slightly soluble in n-octanol. Insoluble in cold water, hot water, methanol, diethyl ether.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Not available.
Incompatibility with various substances	Reactive with oxidizing agents, reducing agents. Slightly reactive to reactive with acids, alkalis. Non-reactive with moisture.
Corrosivity	Not considered to be corrosive for metals and glass.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.
Polymerization	No.

Section 11. Toxicological Information

Routes of Entry	Eye contact. Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified A5 (Not suspected for human.) by ACGIH [Aluminum oxide]. TERATOGENIC EFFECTS: Classified None. for human [Aluminum oxide].
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (sensitizer).
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on other Toxic Effects on Humans	Material is irritating to mucous membranes and upper respiratory tract. (Aluminum oxide)

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal

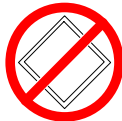
Section 14. Transport Information

DOT Classification Not a DOT controlled material (United States).

Identification Not applicable.

Special Provisions for Transport Not applicable.

DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations TSCA 8(b) inventory: Palladium; Aluminum oxide

California Proposition 65 Warnings California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations Not available. or of its ingredients

Other Classifications **WHMIS (Canada)** Not controlled under WHMIS (Canada).

DSCL (EEC) R36/38- Irritating to eyes and skin.

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	0
Reactivity	0
Personal Protection	E

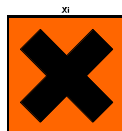
National Fire Protection Association (U.S.A.)

Health  Flammability
Reactivity
Specific hazard

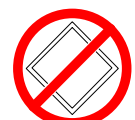
WHMIS (Canada) (Pictograms)



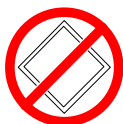
DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



**ADR (Europe)
(Pictograms)**



Protective Equipment



Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent.



Splash goggles.

Section 16. Other Information

MSDS Code P3010

References Not available.

Other Special Considerations Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

Printed 9/13/2006.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.