Material Safety Data Sheet

Palladium on 1/8" Alumina Pellets (0.5% Pd)

MSDS# 38452

Section 1 - Chemical Product and Company Identification

MSDS Name:	Palladium on 1/8" Alumina Pellets (0.5% Pd)
Catalog Numbers:	AC195080000, AC195080500, AC195082500
Synonyms:	None.
Company Identification:	Acros Organics BVBA Janssen Pharmaceuticalaan 3a 2440 Geel, Belgium
Company Identification: (USA)	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
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

Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 1314-08-5

Chemical Name: Palladiummonoxide

%:

EINECS#: 215-218-3

Hazard Symbols:

Risk Phrases:

CAS#: 1344-28-1

Chemical Name: Aluminum oxide

%: Balance

EINECS#: 215-691-6

Hazard Symbols:

Risk Phrases:

CAS#: 7440-05-3

Chemical Name: Palladium

%: 0.5

EINECS#: 231-115-6

Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: None listed

Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! May cause allergic skin reaction. Hygroscopic (absorbs moisture from the air). The toxicological properties of this material have not been fully investigated. Powdered material may form explosive dust-air mixtures. Questionable carcinogen. Causes eye, skin, and respiratory tract irritation. Target Organs: Lungs, bone marrow.

Potential Health Effects

Eye: Dust may cause mechanical irritation. Causes redness and pain.

Skin: Dust may cause mechanical irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause contact dermatitis.

Ingestion: Ingestion of large amounts may cause gastrointestinal irritation. May cause bone marrow damage. Aluminum may be readily absorbed from the gastrointestinal tract.

Inhalation: Dust is irritating to the respiratory tract. May cause chemical bronchitis with coughing and difficulty in breathing. May cause lung damage.

Chronic: Chronic inhalation of fine dusts may cause lung damage. Animal studies have reported the development of tumors. Chronic ingestion of aluminum oxide may produce loss of appetite, hemolysis, renal deposition and bone marrow damage

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid. Wash mouth out with water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Deferoxamine has been used to treat dialysis encephalopathy and osteomalacia and used to diagnose aluminum related osteodystrophy.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust can be an explosion hazard when exposed to heat or flame. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: Not available

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 1; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Reduce airborne dust and prevent scattering by moistening with water. Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid breathing dust, mist, or vapor. Avoid contact

with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Palladiummonoxide	none listed	none listed	none listed
Aluminum oxide	none listed	none listed	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Palladium	none listed	none listed	none listed

OSHA Vacated PELs: Palladiummonoxide: None listed Aluminum oxide: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) Palladium: None listed

Engineering Controls:

If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wet processing methods may be used to reduce dust generation.

Exposure Limits

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Pellets

Color: grey

Odor: None reported.

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: Not available

Decomposition Temperature:

Solubility in water: insoluble

Specific Gravity/Density:

Molecular Formula: Not applicable.

Molecular Weight: 106.42

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Volatile at high temperatures.

Conditions to Avoid: Incompatible materials, dust generation, excess heat, strong oxidants, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids, strong bases, alcohols, chlorine trifluoride, ethylene oxide, halocarbons, halogens, oxygen difluoride, phosphorus, sodium nitrate, sulfur, vinyl acetate, hydrogen peroxide, sodium tetrahydroborate, arsenic, isopropyl alcohol, heat, moisture, hydrogen bromide

	gas, formic acid.
Hazardous Decomposition Products	Hydrogen chloride, phosgene, oxides of sulfur, oxides of phosphorus, oxides of phosphorus, hydrogen gas, aluminum fumes.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 1314-08-5: None listed CAS# 1344-28-1: BD1200000 CAS# 7440-05-3: RT3480500 RT3593400
LD50/LC50:	RTECS: Not available. RTECS: Not available. RTECS: Not available.
Carcinogenicity:	Palladiummonoxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. Aluminum oxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. Palladium - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 1314-08-5: 1

CAS# 1344-28-1: 0

CAS# 7440-05-3: 0

Canada

CAS# 1314-08-5 is listed on Canada's DSL List

CAS# 1344-28-1 is listed on Canada's DSL List

CAS# 7440-05-3 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 1314-08-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 1344-28-1 is listed on Canada's Ingredient Disclosure List

CAS# 7440-05-3 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 1314-08-5 is listed on the TSCA Inventory.

CAS# 1344-28-1 is listed on the TSCA Inventory.

CAS# 7440-05-3 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 8/12/1998

Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
