

Material Safety Data Sheet

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

ACC# 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 N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7440-05-3	Palladium	0.5	231-115-6
1314-08-5	Palladiummonoxide		215-218-3
1344-28-1	Aluminum oxide	Balance	215-691-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: grey pellets.

Warning! Powdered material may form explosive dust-air mixtures. Causes respiratory tract irritation. May cause skin sensitization by skin contact. Causes eye and skin irritation. Questionable carcinogen. May cause digestive tract irritation. Hygroscopic (absorbs moisture from the air). The toxicological properties of this material have not been fully investigated.

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.

Flash Point: Not applicable.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) 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, vapor, mist, or gas. 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

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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Palladium	none listed	none listed	none listed
Palladiummonoxide	none listed	none listed	none listed
Aluminum oxide	10 mg/m ³ TWA (particulate matter containing no asbestos and < 1% crystalline silica)	none listed	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)

OSHA Vacated PELs: Palladium: No OSHA Vacated PELs are listed for this chemical. Palladiummonoxide: No OSHA Vacated PELs are listed for this chemical. Aluminum oxide: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

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

Appearance: 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: 2000 deg C

Solubility: insoluble

Specific Gravity/Density: Not available.

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 peroxides, sodium tetrahydroborate, arsenic, isopropyl alcohol, heat, moisture, hydrogen bromide gas, formic acid.

Hazardous Decomposition Products: Hydrogen chloride, phosgene, oxides of sulfur, oxides of phosphorus, irritating and toxic fumes and gases, hydrogen gas, aluminum fumes.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 7440-05-3: RT3480500; RT3593400

CAS# 1314-08-5 unlisted.

CAS# 1344-28-1: BD1200000

LD50/LC50:

Not available.

Not available.

Not available.

Carcinogenicity:

CAS# 7440-05-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 1314-08-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 1344-28-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: CAS# 1344-05-3: Intrapleural, rat: TDLo = 90 mg/kg (lung, thorax, and respiration -- tumors).; Implant, rat: TDLo = 200 mg/kg (tumors at the site of application).; Implant, rat: TD = 200 mg/kg (tumors at the site of application).

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

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

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

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

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 7440-05-3: fire.

Section 313

This material contains Aluminum oxide (CAS# 1344-28-1, Balance%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7440-05-3 can be found on the following state right to know lists: California.

CAS# 1314-08-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 1344-28-1 can be found on the following state right to know lists: New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

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# 7440-05-3: 0

CAS# 1314-08-5: 1

CAS# 1344-28-1: 0

Canada - DSL/NDSL

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

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

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

Canada - WHMIS

This product has a WHMIS classification of 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.

Canadian Ingredient Disclosure List

CAS# 1344-28-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 8/12/1998

Revision #4 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 Fisher 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 Fisher has been advised of the possibility of such damages.