

Safety Data Sheet
acc. To OSHA HCS

Reviewed on 09/28/2018

1 Identification

• **Product identifier**

• **Trade name: Palladox (AN3146)**

• **Application of the substance / the mixture**

The disposable catalyst is intended for use only with the Anoxomat® System to aid in the removal of oxygen for the jar to maintain an anaerobic environment.

• **Details of the supplier of the safety data sheet**

• **Manufacturer/Supplier:**

Advanced Instruments
2 Technology Way
USA-NORWOOD, MA 02062
USA
info@aicompanies.com
+1 (781) 320-9000

• **Information department:** Regulatory Affairs

• **Emergency telephone number:** +1 (877) 740-5015 – Rocky Mountain Poison & Drug Center (24 hours)

2 Hazard(s) identification

• **Classification of the substance or mixture**



STOT SE H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

• **Label elements**

• **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

• **Hazard pictograms**



• **Signal word** Warning

• **Hazard-determining components of labeling:**

aluminum oxide

• **Hazard statements**

H335-H336 May cause respiratory irritation. May cause drowsiness of dizziness.

• **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Call poison center/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Classification system:**

• **NFPA ratings (scale 0-4)**



- **HMIS-ratings (scale 0-4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
1344-28-1 aluminum oxide
7440-05-3 Palladium
- **Description:** Void

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam
- **Special hazards arising from substance mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Dispose of contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

• PAC-1:		
1344-28-1	aluminum oxide	15 mg/m ³
7440-05-3	palladium	6 mg/m ³
• PAC-2:		
1344-28-1	aluminum oxide	170 mg/m ³
7440-05-3	palladium	66 mg/m ³
• PAC-3:		
1344-28-1	aluminum oxide	990 mg/m ³
7440-05-3	palladium	400 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **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.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

• Components with limit values that require monitoring at the workplace:	
1344-28-1 aluminum oxide	
PEL	Long-term value: 15*; 5** mg/m ³ *Total dust; **respirable fraction
REL	Long-term value: 10*; 5** mg/m ³ as Al; *Total dust; **Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m ³ as Al; * respirable fraction

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
- **Breathing equipment:**
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product / the substance / the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product / the substance / the preparation / the chemical mixture.
 Selection of glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General information**

- **Appearance:**

Form: Solid

Color: Grey

- **Odor:** Odorless

- **Odor threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

Melting point/Melting range: 2050 °C (3,722 °F)

Boiling point/Boiling range: 2980±60 °C (140 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Product is not flammable.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Not determined.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapor pressure:** Not applicable.

- **Density at 20 °C (68 °F):** 3.97 g/cm³ (33.12965 lbs/gal)

- **Bulk density at 20 °C (68 °F):** 920 kg/m³

- **Relative density:** Not determined.

- **Vapor density:** Not applicable.

- **Evaporation rate:** Not applicable.

- **Solubility in / Miscibility with**

Water: Insoluble.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

Dynamic: Not applicable.

Kinematic: Not applicable.

- **Solvent content:**

Organic solvents: 0.0 %

VOC content: 0.0 g/l / 0.00 lb/gl

Solids content: 100.0 %

- **Other information:** No further relevant information available.

10 Stability and reactivity

- **Reactivity:** No further relevant information available.

- **Chemical stability**

- **Thermal decomposition / conditions to be avoided:** No decomposition is used according to specifications.

- **Possibility of hazardous reactions:** No dangerous reactions known.

- **Conditions to avoid:** No further relevant information available.

- **Incompatible materials:** No further relevant information available.

- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritant effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

<ul style="list-style-type: none"> • NTP (National Toxicology Program)
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<p><i>None of the ingredients is listed.</i></p>
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<ul style="list-style-type: none"> • OSHA-Ca (Occupational Safety & Health Administration)
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<p><i>None of the ingredients is listed.</i></p>
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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability:** *No further relevant information available.*
- **Behavior in environmental systems:**
- **Bioaccumulation potential:** *No further relevant information available.*
- **Mobility in soil:** *No further relevant information available.*
- **Additional ecological changes:**
- **General notes:** *Generally not hazardous for water.*
- **Results of PBT and vPvB assessment:**
- **PBY:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **Other adverse effects:** *No further relevant information available.*

13 Disposal considerations

- **Waste treatment methods:**
- **Recommendation:**
Must not be disposed of together with the household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

<ul style="list-style-type: none"> • UN-Number • DOT, ADN, IMDG, IATA 	<i>not regulated</i>
<ul style="list-style-type: none"> • UN proper shipping name • DOT, ADN, IMDG, IATA 	<i>not regulated</i>
<ul style="list-style-type: none"> • Transport hazard class(es) • DOT, ADN, IMDG, IATA • Class 	<i>not regulated</i>
<ul style="list-style-type: none"> • Packing group • DOT, IMDG, IATA 	<i>not regulated</i>
<ul style="list-style-type: none"> • Environmental hazards: 	<i>Not applicable.</i>
<ul style="list-style-type: none"> • Special precautions for user 	<i>Not applicable.</i>
<ul style="list-style-type: none"> • Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<i>Not applicable.</i>
<ul style="list-style-type: none"> • UN "Model Regulation": 	<i>not regulated</i>

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

<ul style="list-style-type: none"> • Section 355 (extremely hazardous substances):
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<p><i>None of the ingredients is listed.</i></p>
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<ul style="list-style-type: none"> • Section 313 (Specific toxic chemical listings):
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<p>1344-28-1 aluminum oxide</p>

<ul style="list-style-type: none"> • TSCA (Toxic Substances Control Act):

<p><i>All ingredients are listed.</i></p>

<ul style="list-style-type: none"> • Proposition 65

<ul style="list-style-type: none"> • Chemicals known to cause cancer:

None of the ingredients is listed.

• Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

• Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

• Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

• Carcinogenic categories

• EPA (Environmental Protection Agency)

None of the ingredients is listed.

• TLV (Threshold Limit Value established by ACGIH)

1344-28-1 | aluminum oxide

• NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

• GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS)

• Hazard pictograms



GHS07

• Signal word: Warning

• Hazard-determining components of labeling:

aluminum oxide

• Hazard Statements:

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

• Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Call poison center/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish legally valid contractual relationship.

• Department issuing SDS: Regulatory Affairs

• Contact: Regulatory Affairs

• Date of preparation / last revision: 10/05/2018 / -

• Abbreviation and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

SDS066 Rev 0

USA

PCN 00683

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1