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# SAFETY DATA SHEET PC-4 Palladium

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

### 1. Identification

Product identifier

Product name PC-4 Palladium

Product number 35456A, 35457B

### Recommended use of the chemical and restrictions on use

Application Ceramic Glaze

Uses advised against No specific uses advised against are identified.

#### Details of the supplier of the safety data sheet

**Supplier** American Art Clay Co Inc

6060 Guion Road Indianapolis, IN 46254-1222

USA

Toll Free: 1-800-999-5456 CustomerCare@Amaco.com

#### Emergency telephone number

Emergency telephone Poison Control 1-800-222-1222

### 2. Hazard(s) identification

### Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Skin Sens. 1 - H317 Carc. 1A - H350 STOT RE 1 - H372

### Label elements

### Hazard symbols





Signal word Danger

**Hazard statements** H317 May cause an allergic skin reaction.

H350 May cause cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements** P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe vapor/ spray. P261 Avoid breathing vapor/ spray.

P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P302+P352 If on skin: Wash with plenty of water.

P308+P313 If exposed or concerned: Get medical advice/ attention.

P314 Get medical advice/ attention if you feel unwell. P321 Specific treatment (see medical advice on this label).

P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/ container in accordance with national regulations.

Contains Silicon dioxide, 2,2,2 Hexahydro-1,3.5-triazine-1,3,5 triyl triethanol

#### Other hazards

This product does not contain any substances classified as PBT or vPvB.

#### 3. Composition/information on ingredients

#### Mixtures

Silicon dioxide max 30%

CAS number: 14808-60-7

### Classification Carc. 1A - H350i STOT RE 1 - H372

Copper Oxide max 15%

CAS number: 1317-38-0

#### Classification

Not relevant.

Zinc Oxide max 15%

CAS number: 1314-13-2

#### Classification

Not relevant.

### Aluminum Silicate (Kaolin) max 15%

CAS number: 1332-58-7

### Classification

Not Classified

#### Blended Iron Oxide <1%

CAS number: 1309-37-1

#### Classification

Not Classified

Calcium Carbonate

CAS number: 1317-65-3

Classification
Not Classified

#### 2,2,2 Hexahydro-1,3.5-triazine-1,3,5 triyl triethanol

<1%

CAS number: 4719-04-4

#### Classification

Acute Tox. 4 - H302 Acute Tox. 2 - H330 Eye Irrit. 2A - H319 Skin Sens. 1 - H317 STOT RE 1 - H372

Rutile <1%

CAS number: 13463-67-7

#### Classification

Not Classified

The full text for all hazard statements is displayed in Section 16.

#### 4. First-aid measures

#### Description of first aid measures

General information

Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Inhalation

Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion

Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin Contact

It is important to remove the substance from the skin immediately. In the event of any sensitization symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognized skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.

Eye contact

Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart.

Continue to rinse for at least 10 minutes.

Protection of first aiders

First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

### Most important symptoms and effects, both acute and delayed

General information

See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion May cause sensitization or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including

upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as

inhalation.

Skin contact May cause skin sensitization or allergic reactions in sensitive individuals. Prolonged contact may cause

dryness of the skin.

Eye contact May cause temporary eye irritation.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.

#### 5. Fire-fighting measures

#### Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water

fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

#### Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or

vapors

#### Advice for firefighters

### Protective actions during

firefighting

Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

## Special protective equipment for

firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

#### 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid contact with skin and eyes.

### Environmental precautions

Environmental precautions

Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

### Methods and material for containment and cleaning up

#### Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with noncombustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

#### Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

#### 7. Handling and storage

#### Precautions for safe handling

#### Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty

### Advice on general occupational

hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

### Conditions for safe storage, including any incompatibilities

Storage precautions

Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class

Miscellaneous hazardous material storage.

Specific end uses(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.

#### 8. Exposure controls/Personal protection

#### Control parameters

#### Occupational exposure limits

#### Copper Oxide

Long-term exposure limit (8-hour TWA): OSHA 1 mg/m³ Long-term exposure limit (8-hour TWA): ACGIH 1 mg/m³

#### Aluminum Silicate (Kaolin)

Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³ respirable fraction

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust

#### Blended Iron Oxide

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³ respirable fraction

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction

Long-term exposure limit (8-hour TWA): OSHA 10 mg/m³ fume

### Calcium Carbonate

Item Numbers: 30446-1086, 30446-1089

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction

#### Rutile

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust

OSHA = Occupational Safety and Health Administration.

ACGIH = American Conference of Governmental Industrial Hygienists. A4 = Not Classifiable as a Human Carcinogen.

Copper Oxide (CAS: 1317-38-0)

Immediate danger to life and

health

100 mg/m<sup>3</sup>

Blended Iron Oxide (CAS: 1309-37-1)

Immediate danger to life and

health

2500 ma/m<sup>3</sup>

Rutile (CAS: 13463-67-7)

Immediate danger to life and

health

5000 mg/m<sup>3</sup>

#### Exposure controls

#### Protective equipment







#### Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

#### Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

#### Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

### Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

#### Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance Colored liquid.

Color Various colors.

Odor Slight.

Odor threshold

PH

No information available.

Melting point

No information available.

No information available.

No information available.

No information available.

Flash point Not applicable.

Evaporation rate No information available.

Evaporation factor No information available.

Flammability (solid, gas)
Upper/lower flammability or

explosive limits

Not applicable.

Other flammability Not applicable.

Vapor pressure No information available. Vapor density No information available. Relative density No information available. **Bulk density** No information available. Solubility(ies) No information available. Partition coefficient No information available. No information available. Auto-ignition temperature **Decomposition Temperature** No information available. No information available. Viscosity **Explosive properties** No information available.

Explosive under the influence of a No

flame

Oxidizing properties none

#### 10. Stability and reactivity

Reactivity See the other subsections of this section for further details.

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed

storage conditions.

Possibility of hazardous reactions No potentially hazardous reactions known.

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous

situation.

Hazardous decomposition

products

Does not decompose when used and stored as recommended. Thermal decomposition or combustion

products may include the following substances: Harmful gases or vapors.

### 11. Toxicological information

#### Information on toxicological effects

Acute toxicity - oral

Summary Based on available data the classification criteria are not met.

Acute toxicity - dermal

Summary Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Summary Based on available data the classification criteria are not met.

ATE inhalation (dusts/mists mg/l) 248.74

Skin corrosion/irritation

Summary Based on available data the classification criteria are not met.

Serious eye damage/irritation

Summary Based on available data the classification criteria are not met.

Respiratory sensitization

**Summary**Based on available data the classification criteria are not met.

Skin sensitization

**Summary** May cause an allergic skin reaction.

Germ cell mutagenicity

Summary Based on available data the classification criteria are not met.

Carcinogenicity

Summary May cause cancer.

IARC carcinogenicity Contains a substance/a group of substances which may cause cancer. IARC Group 1 Carcinogenic to

humans.

Reproductive toxicity

**Summary** Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

Summary Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

Summary Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

**Summary** Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the concentration and the length of

exposure.

**Inhalation** Prolonged inhalation of high concentrations may damage respiratory system.

**Ingestion** May cause sensitization or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including

upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as

inhalation.

Skin Contact May cause skin sensitization or allergic reactions in sensitive individuals. Prolonged contact may cause

dryness of the skin.

**Eye contact** May cause temporary eye irritation.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target Organs No specific target organs known.

Medical considerations Skin disorders and allergies.

#### 12. Ecological information

Acute aquatic toxicity

**Summary** Very toxic to aquatic life.

Chronic aquatic toxicity

**Summary** Toxic to aquatic life with long lasting effects.

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Bioaccumulative potential

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient No information available.

Mobility in soil

Mobility No data available.

Other adverse effects

Other adverse effects None known.

#### 13. Disposal considerations

#### Waste treatment methods

General information

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

### 14. Transport information

General

For limited quantity packaging/limited load information, consult the relevant modal documentation using

the data shown in this section.

UN Number

 UN No. (TDG)
 3082

 UN No. (IMDG)
 3082

 UN No. (ICAO)
 3082

 UN No. (DOT)
 UN3082

UN proper shipping name

Proper shipping name (TDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Copper Oxide, Zinc

Oxide)

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Copper Oxide, Zinc

Oxide)

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Copper Oxide, Zinc

Oxide)

Proper shipping name (DOT) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Copper Oxide, Zinc

Oxide

Transport hazard class(es)

DOT hazard class 9
DOT hazard label 9
TDG class 9
TDG label(s) 9
IMDG Class 9
ICAO class/division 9

Transport labels



#### DOT transport labels



#### Packing group

TDG Packing Group III
IMDG packing group III
ICAO packing group III
DOT packing group III

#### Environmental hazards

### **Environmentally Hazardous Substance**



#### Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**EmS** F-A, S-F

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

### 15. Regulatory information

Regulatory References OSHA Hazard Communication Standard 29 CFR §1910.1200

### US Federal Regulations

### SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

### CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed.

#### SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed.

#### SARA 313 Emission Reporting

None of the ingredients are listed.

#### **CAA Accidental Release Prevention**

None of the ingredients are listed.

#### FDA - Essential Chemical

None of the ingredients are listed or exempt.

#### FDA - Precursor Chemical

None of the ingredients are listed or exempt.

#### SARA (311/312) Hazard Categories

Carcinogenicity
Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)

#### **OSHA Highly Hazardous Chemicals**

None of the ingredients are listed.

### **US State Regulations**

#### Massachusetts "Right To Know" List

The following ingredients are listed:

Silicon dioxide

max 30%

Aluminum Silicate (Kaolin)

max 15%

#### Rhode Island "Right To Know" List

The following ingredients are listed:

Silicon dioxide

max 30%

Aluminum Silicate (Kaolin)

max 15%

### Minnesota "Right To Know" List

The following ingredients are listed:

Silicon dioxide

max 30%

Aluminum Silicate (Kaolin)

max 15%

### New Jersey "Right To Know" List

The following ingredients are listed:

Silicon dioxide

max 30%

Aluminum Silicate (Kaolin)

max 15%

#### Pennsylvania "Right To Know" List

The following ingredients are listed:

Silicon dioxide

max 30%

Aluminum Silicate (Kaolin)

max 15%

#### Inventories

#### US - TSCA

The following ingredients are listed or exempt:

Silicon dioxide

Aluminum Silicate (Kaolin)

#### US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

#### 16. Other information

Abbreviations and acronyms used TDG: The transport of dangerous goods act

in the safety data sheet

IATA: International air transport association.

ICAO: Technical instructions for the safe transport of dangerous goods by air.

IMDG: International maritime dangerous goods.

CAS: Chemical abstracts service. ATE: Acute toxicity estimate.

LC₅o: Lethal concentration to 50 % of a test population.

LD<sub>50</sub>: Lethal dose to 50% of a test population (median lethal dose).

EC50: 50% of maximal effective concentration

PBT: Persistent, bioaccumulative and toxic substance. vPvB: Very persistent and very bioaccumulative.

Classification abbreviations and

acronvms

Skin Sens. = Skin sensitisation

STOT RE = Specific target organ toxicity-repeated exposure Aquatic Acute = Hazardous to the aquatic environment (acute) Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Training advice Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Revision date 4/25/2021

Revision 42

Supersedes date 11/1/2020 SDS No. 5442

Hazard statements in full H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H330 Fatal if inhaled. H350 May cause cancer.

H350i May cause cancer by inhalation.

H372 Causes damage to organs (Respiratory system) through prolonged or repeated exposure.

H372 Causes damage to organs through prolonged or repeated exposure.

H372 Causes damage to organs (Lungs) through prolonged or repeated exposure.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.