



# PALLADIUM TRIFLUOROACETATE

Safety Data Sheet CXP080

Date of issue: 08/16/2017

Version: 1.0

## SECTION 1: Identification

### 1.1. Product identifier

|                 |                                                                                                                                                      |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name    | : PALLADIUM TRIFLUOROACETATE                                                                                                                         |
| Product code    | : CXP080                                                                                                                                             |
| Product form    | : Substance                                                                                                                                          |
| Physical state  | : Solid                                                                                                                                              |
| Formula         | : C <sub>4</sub> F <sub>6</sub> O <sub>4</sub> Pd                                                                                                    |
| Synonyms        | : PALLADEOUS TRIFLUOROACETATE<br>PALLADIUM BIS(TRIFLUOROACETATE)<br>PALLADIUM BIS(2,2,2-TRIFLUOROACETATE)<br>TRIFLUOROACETIC ACID PALLADIUM(II) SALT |
| Chemical family | : METAL COMPOUND                                                                                                                                     |

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

|                 |                                                  |
|-----------------|--------------------------------------------------|
| Recommended use | : Chemical intermediate<br>For research use only |
|-----------------|--------------------------------------------------|

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

#### GELEST, INC.

11 East Steel Road

Morrisville, PA 19067

USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

### 1.4. Emergency telephone number

|                  |                                                                   |
|------------------|-------------------------------------------------------------------|
| Emergency number | : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International) |
|------------------|-------------------------------------------------------------------|

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

|                                                             |      |
|-------------------------------------------------------------|------|
| Skin corrosion/irritation Category 2                        | H315 |
| Serious eye damage/eye irritation Category 2A               | H319 |
| Specific target organ toxicity (single exposure) Category 3 | H335 |
| Full text of H statements : see section 16                  |      |

### 2.2. Label elements

#### GHS-US labeling

Hazard pictograms (GHS-US)



GHS07

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Signal word (GHS-US)              | : Warning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Hazard statements (GHS-US)        | : H315 - Causes skin irritation<br>H319 - Causes serious eye irritation<br>H335 - May cause respiratory irritation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Precautionary statements (GHS-US) | : P280 - Wear protective gloves/protective clothing/eye protection/face protection<br>P261 - Avoid breathing dust<br>P264 - Wash hands thoroughly after handling<br>P271 - Use only outdoors or in a well-ventilated area<br>P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing<br>P302+P352 - If on skin: Wash with plenty of soap and water<br>P332+P313 - If skin irritation occurs: Get medical advice/attention<br>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing<br>P337+P313 - If eye irritation persists: Get medical advice/attention<br>P312 - Call a doctor if you feel unwell<br>P321 - Specific treatment (see first aid instructions on this label)<br>P362+P364 - Take off contaminated clothing and wash it before reuse<br>P403+P233 - Store in a well-ventilated place. Keep container tightly closed<br>P405 - Store locked up |

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P501 - Dispose of contents/container to licensed waste disposal facility.

### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : PALLADIUM TRIFLUOROACETATE  
CAS No : 42196-31-6

| Name                       | Product identifier  | %        | GHS-US classification                                         |
|----------------------------|---------------------|----------|---------------------------------------------------------------|
| Palladium trifluoroacetate | (CAS No) 42196-31-6 | 95 - 100 | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335 |

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

### 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : No information available.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : None known.

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

Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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### 6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container tightly closed. Store locked up.
- Storage area : Store in a well-ventilated place. Store away from heat.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

- Appropriate engineering controls : Provide local exhaust or general room ventilation.
- Personal protective equipment : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Hand protection : Neoprene or nitrile rubber gloves.
- Eye protection : Chemical goggles. Contact lenses should not be worn.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (teal cartridge) respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Solid.
- Molecular mass : 332.43 g/mol
- Color : Orange-brown.
- Odor : No data available
- Odor threshold : No data available
- Refractive index : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : > 250 °C
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : No data available
- Relative vapor density at 20 °C : No data available
- Relative density : No data available
- VOC content : < 3 %
- Solubility : Slightly. Soluble in water.
- Log Pow : No data available
- Log Kow : No data available
- Viscosity, kinematic : No data available

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|                      |                     |
|----------------------|---------------------|
| Viscosity, dynamic   | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosion limits     | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Material decomposes slowly in contact with air by reaction with water and carbon dioxide.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Organic acid vapors. Palladium and palladium oxide fumes.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                                                    |                                                                                                                                            |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Acute toxicity                                     | : Not classified                                                                                                                           |
| Skin corrosion/irritation                          | : Causes skin irritation.                                                                                                                  |
| Serious eye damage/irritation                      | : Causes serious eye irritation.                                                                                                           |
| Respiratory or skin sensitization                  | : Not classified                                                                                                                           |
| Germ cell mutagenicity                             | : Not classified                                                                                                                           |
| Carcinogenicity                                    | : Not classified<br>None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen. |
| Reproductive toxicity                              | : Not classified<br>Possible teratogen                                                                                                     |
| Specific target organ toxicity – single exposure   | : May cause respiratory irritation.                                                                                                        |
| Specific target organ toxicity – repeated exposure | : Not classified                                                                                                                           |
| Aspiration hazard                                  | : Not classified                                                                                                                           |
| Symptoms/effects after inhalation                  | : May cause respiratory irritation.                                                                                                        |
| Symptoms/effects after skin contact                | : Causes skin irritation.                                                                                                                  |
| Symptoms/effects after eye contact                 | : Causes serious eye irritation.                                                                                                           |
| Symptoms/effects after ingestion                   | : No information available.                                                                                                                |
| Reason for classification                          | : Expert judgment                                                                                                                          |

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

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|                              |                                       |
|------------------------------|---------------------------------------|
| Effect on ozone layer        | : No additional information available |
| Effect on the global warming | : No known effects from this product. |
| GWPmix comment               | : No known effects from this product. |

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

|                                            |                                                                                                                                              |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Sewage disposal recommendations            | : Do not dispose of waste into sewer.                                                                                                        |
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. |
| Ecology - waste materials                  | : Avoid release to the environment.                                                                                                          |

### SECTION 14: Transport information

#### 14.1. UN number

Not regulated for transport.

#### 14.2. UN proper shipping name

Not applicable

#### 14.3. Additional information

|                   |                                           |
|-------------------|-------------------------------------------|
| Other information | : No supplementary information available. |
|-------------------|-------------------------------------------|

#### Transport by sea

No additional information available

#### Air transport

No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### PALLADIUM TRIFLUOROACETATE (42196-31-6)

TSCA Exemption/Exclusion

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

##### Palladium trifluoroacetate (42196-31-6)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

No additional information available

##### National regulations

##### Palladium trifluoroacetate (42196-31-6)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

Full text of H-phrases::

|      |                                  |
|------|----------------------------------|
| H315 | Causes skin irritation           |
| H319 | Causes serious eye irritation    |
| H335 | May cause respiratory irritation |

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### Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

### HMIS III Rating

|              |                                                                                                                                                                                     |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Health       | : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given                                                                               |
| Flammability | : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)            |
| Physical     | : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives. |

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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