SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier
· Trade name: Bis(dibenzylideneacetone)palladium(0) [Pd(dba)2]
· Item number: 46-0210
· CAS Number: 32005-36-0

· 1.2 Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.

· 1.3 Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
  Strem Chemicals, Inc.
  7 Mulliken Way
  NEWBURYPORT, MA 01950
  USA
  info@strem.com

· Further information obtainable from: Technical Department
· 1.4 Emergency telephone number:
  EMERGENCY: CHEMTREC: + 1 (800) 424-9300
  During normal opening times: +1 (978) 499-1600

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008

GHS07

Skin Irrit. 2  H315  Causes skin irritation.
Eye Irrit. 2  H319  Causes serious eye irritation.
STOT SE 3  H335  May cause respiratory irritation.

· 2.2 Label elements
· Labelling according to Regulation (EC) No 1272/2008
  The substance is classified and labelled according to the CLP regulation.
· Hazard pictograms

GHS07

· Signal word Warning
· Hazard-determining components of labelling:
  Bis(dibenzylideneacetone)palladium(0)
· Hazard statements
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H335 May cause respiratory irritation.
· Precautionary statements
  P101  If medical advice is needed, have product container or label at hand.
  P102  Keep out of reach of children.
  P103  Read label before use.
Trade name: Bis(dibenzylideneacetone)palladium(0) [Pd(dba)2]

- **P231** Handle under inert gas.
- **P222** Do not allow contact with air.
- **P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **P403+P233** Store in a well-ventilated place. Keep container tightly closed.
- **P422** Store contents under inert gas.
- **P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3 Other hazards

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

### SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
  - **CAS No. Description**
    - 32005-36-0 Bis(dibenzylideneacetone)palladium(0)

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact:
    - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing:
    - If symptoms persist consult doctor.

- **4.2 Most important symptoms and effects, both acute and delayed**
  - No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**
  - No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
  - Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

- **5.2 Special hazards arising from the substance or mixture**
  - No further relevant information available.

- **5.3 Advice for firefighters**
  - Protective equipment: No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
  - Not required.

- **6.2 Environmental precautions**
  - No special measures required.

- **6.3 Methods and material for containment and cleaning up:**
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.

- **6.4 Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**: Open and handle receptacle with care.
- **Handling**: Handle under inert gas.
- **Information about fire - and explosion protection**: No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**: Store contents under inert gas.
- **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**:
  - Keep container tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)**
  - No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities**: No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace**: Not required.
- **Additional information**: The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
- **Respiratory protection**:
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **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 preparation/ the chemical mixture.

Selection of the 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.
Trade name: Bis(dibenzylideneacetone)palladium(0) [Pd(dba)2]

- **Eye protection:**
  - Tightly sealed goggles

- **9.1 Information on basic physical and chemical properties**
- **General Information**
  - **Form:** Powder
  - **Appearance:**
    - **Colour:** Violet
  - **Odour:** Odourless
  - **Odour threshold:** Not determined.
  - **pH-value:** Not applicable.

- **Change in condition**
  - **Melting point/freezing point:** 153 °C
  - **Initial boiling point and boiling range:** Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gas):** Not determined.

- **Ignition temperature:**
  - **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Not determined.

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Vapour pressure:** Not applicable.

- **Density:** Not determined.
  - **Relative density** Not determined.
  - **Vapour 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 (EC):** 0.00 %

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

---

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity**
  - No further relevant information available.
10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions: No dangerous reactions known.
- 10.4 Conditions to avoid: No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: Based on available data, the classification criteria are not met.
- Primary irritant effect:
  - Skin corrosion/irritation: Causes skin irritation.
  - Serious eye damage/irritation: Causes serious eye irritation.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure: May cause respiratory irritation.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- Aspiration hazard: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability: No further relevant information available.
- 12.3 Bioaccumulative potential: No further relevant information available.
- 12.4 Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes: Not known to be hazardous to water.
  - 12.5 Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
- 12.6 Other adverse effects: No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.
SECTION 14: Transport information

14.1 UN-Number
- ADR, ADN, IMDG, IATA: not regulated

14.2 UN proper shipping name
- ADR, ADN, IMDG, IATA: not regulated

14.3 Transport hazard class(es)
- ADR, ADN, IMDG, IATA: not regulated

14.4 Packing group
- ADR, IMDG, IATA: not regulated

14.5 Environmental hazards:
- Marine pollutant: No

14.6 Special precautions for user: Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

UN "Model Regulation": not regulated

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.

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

SECTION 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 a legally valid contractual relationship.

Department issuing SDS: Technical Department.
Contact: Technical Director

Abbreviations and acronyms:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Skin Irrit.: 2. Skin corrosion/irritation – Category 2
- Eye Irrit.: 2. Serious eye damage/eye irritation – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3