

# MATERIAL SAFETY DATA SHEET

Manufacturer: Strem Chemicals, Inc  
 7 Mulliken Way  
 Newburyport, MA 01950-4098 U.S.A.  
 www.strem.com

Strem Customer Service (978) 499-1600  
 CHEMTREC (Emergency Only) (800) 424-9300  
 Poison Center (800) 562-8236

Section 1: Product Identification	
Chemical Name:	(Trimethyl)methylcyclopentadienylplatinum(IV), 99%, 78-1350, contained in 50 ml Swagelok® cylinder (96-1070) for CVD/ALD
Product Number:	98-4024
CAS Registry Number:	94442-22-5
Formula:	(CH <sub>3</sub> ) <sub>3</sub> (CH <sub>3</sub> C <sub>5</sub> H <sub>4</sub> )Pt
EINECS Number:	none
Chemical Family:	metallocene
Synonym:	none

Section 2: Composition and Information on Ingredients				
Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
Title Compound	94442-22-5	100%	0.002mg/m3 (as Pt)	0.002mg/m3 (as Pt)

Section 3: Hazards Identification	
Emergency Overview:	Very toxic in contact with skin and if swallowed. May cause sensitization by skin contact.
Primary Routes of Exposure:	Ingestion, inhalation, skin
Eye Contact:	Causes slight to mild irritation of the eyes.
Skin Contact:	Toxic in contact with skin. May cause sensitization. Causes mild irritation to the skin.
Inhalation:	Irritating to the nose, mucous membranes and respiratory tract.
Ingestion:	Toxic if swallowed.
Acute Health Affects:	Very toxic in contact with skin and if swallowed. May cause sensitization through skin contact.
Chronic Health Affects:	No information available on long-term chronic effects. Platinum salts may cause hypersensitivity. Symptoms include contact dermatitis of the skin, shortness of breath, and cyanosis to severe asthma.
NTP:	No
IARC:	No
OSHA:	No

SECTION 4: First Aid Measures	
Eye Exposure:	Immediately flush the eyes with copious amounts of water for at least 10-15 minutes. A victim may need assistance in keeping their eye lids open. Get immediate medical attention.
Skin Exposure:	Wash the affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.
Inhalation:	Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.
Ingestion:	Seek medical attention immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

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### SECTION 5: Fire Fighting Measures

Flash Point: not applicable  
Autoignition Temperature: none  
Explosion Limits: none  
Extinguishing Medium: carbon dioxide, foam or dry powder  
Special Fire Fighting Procedures: If this product is involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.  
Hazardous Combustion and Decomposition Products: If involved in a fire, this material may emit irritating fumes.  
Unusual Fire or Explosion Hazards: No unusual fire or explosion hazards.

### SECTION 6: Accidental Release Measures

Spill and Leak Procedures: Small spills can be mixed with vermiculite, sodium carbonate or other suitable non-combustible adsorbent and swept up.

### SECTION 7: Handling and Storage

Handling and Storage: Store cold. Keep in a tightly sealed container under an inert atmosphere of argon. Keep away from heat and direct sunlight. Prolonged exposure to air may cause decomposition.

### SECTION 8: Exposure Controls and Personal Protection

Eye Protection: Always wear approved safety glasses when handling a chemical substance in the laboratory.  
Skin Protection: Wear protective clothing and gloves.  
Ventilation: Handle the material in an efficient fume hood.  
Respirator: If ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 1910.134.  
Ventilation: Handle the material in an efficient fume hood.  
Additional Protection: No additional protection required.

### SECTION 9: Physical and Chemical Properties

Color and Form: off-white powder  
Molecular Weight: 319.32  
Melting Point: 30-31°  
Boiling Point: (subl. 23° C/0.053mm)  
Vapor Pressure: no data  
Specific Gravity: 1.88  
Odor: metallic odor  
Solubility in Water: insoluble

### SECTION 10: Stability and Reactivity

Stability: air sensitive, store cold  
Hazardous Polymerization: no hazardous polymerization  
Conditions to Avoid: prolonged contact with air  
Incompatibility: oxidizing agents  
Decomposition Products: carbon dioxide, carbon monoxide, organic fumes, platinum compounds

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**SECTION 11: Toxicological Information**

RTECS Data: No information available from the RTECS files.  
Carcinogenic Effects: no data  
Mutagenic Effects: no data  
Tetratogenic Effects: no data

**SECTION 12: Ecological Information**

Ecological Information: Very toxic to aquatic organisms. Avoid release to the environment.

**SECTION 13: Disposal Considerations**

Disposal: Dispose of this material according to local, state and federal regulations.

**SECTION 14: Transportation**

Shipping Name (CFR): Organometallic compound, Toxic, Solid, N.O.S.  
Hazard Class (CFR): 6.1  
Additional Hazard Class (CFR): NA  
Packaging Group (CFR): III  
UN ID Number (CFR): UN# 3467  
Shipping Name (IATA): Organometallic compound, Toxic, Solid, N.O.S.  
Hazard Class (IATA): 6.1  
Additional Hazard Class (IATA): NA  
Packaging Group (IATA): III  
UN ID Number (IATA): UN# 3467

**SECTION 15: Regulatory Information**

TSCA: Listed in the TSCA inventory  
SARA (Title 313): Title compound not listed  
Second Ingredient: none  
Third Ingredient: none

**SECTION 16: Other Information**

Disclaimer: The information herein is believed to be accurate and reliable as of the date compiled. However, Strem Chemicals, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information.  
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