

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:	Bis(pentamethylcyclopentadienyl)manganese, min. 98% (Decamethylmanganocene)
Product Number:	25-0235
CAS Registry Number:	67506-86-9
Formula:	[(CH ₃) ₅ C ₅] ₂ Mn
EINECS Number:	none
Chemical Family:	metallocene
Synonym:	1,1', 2,2',3,3',4,4', 5,5'-Decamethylmanganocene; Permethylmanganocene

Section 2: Composition and Information on Ingredients				
Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
Title compound	67506-86-9	100%	0.2mg/m ³ (as Mn)	5mg/m ³ (as Mn -

Section 3: Hazards Identification	
Emergency Overview:	May be irritating to eyes, skin and respiratory tract. May be harmful if swallowed.
Primary Routes of Exposure:	Inhalation, ingestion.
Eye Contact:	May cause slight to mild irritation of the eyes.
Skin Contact:	May cause slight to mild irritation of the skin.
Inhalation:	Dust may be irritating to the nose, mucous membranes and respiratory tract and cause chronic health problems.
Ingestion:	No information available on the physiological effects of ingestion.
Acute Health Affects:	May be irritating to skin, eyes and respiratory tract.
Chronic Health Affects:	Prolonged exposure to manganese containing dust may produce manganese pneumonitis and manganese poisoning. Symptoms include sleepiness, weakness and emotional disturbances. Equivocal studies have shown manganese may decrease fertility in men.
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:	no data
Autoignition Temperature:	no data
Explosion Limits:	none
Extinguishing Medium:	carbon dioxide, foam or dry powder.
Special Fire Fighting Procedures:	If this product is involved in a fire, firefighters should be equipped with 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 toxic manganese oxide fumes.
Unusual Fire or Explosion Hazards:	Combustible material. No unusual fire or explosion hazards.

SECTION 6: Accidental Release Measures	
Spill and Leak Procedures:	Small spills can be mixed with vermiculite or sodium carbonate and swept up.

SECTION 7: Handling and Storage	
Handling and Storage:	Handle and store the material under an inert atmosphere of nitrogen or argon. Keep away fro heat.

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:	The material will react with air and moisture. Handle and store the material under an inert atmosphere of nitrogen or argon.
Respirator:	If ventilation is not available a respirator should be worn. The use of respirators requires a Respiratory Protection Program to be in compliance with 29 CFR 1910.134.
Ventilation:	The material will react with air and moisture. Handle and store the material under an inert atmosphere of nitrogen or argon.
Additional Protection:	No additional protection required.

SECTION 9: Physical and Chemical Properties	
Color and Form:	orange xtl.
Molecular Weight:	325.38
Melting Point:	292°
Boiling Point:	no data
Vapor Pressure:	no data
Specific Gravity:	no data
Odor:	not determined
Solubility in Water:	insoluble

SECTION 10: Stability and Reactivity	
Stability:	air and moisture sensitive
Hazardous Polymerization:	no hazardous polymerization.
Conditions to Avoid:	Exposure to air and moisture.
Incompatibility:	oxidizing agents and halogens.
Decomposition Products:	carbon dioxide, carbon monoxide, organic fumes and manganese oxide.

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SECTION 11: Toxicological Information

RTECS Data: No information available in RTECS.
Carcinogenic Effects: No data available
Mutagenic Effects: No data available
Tetratogenic Effects: No data available

SECTION 12: Ecological Information

Ecological Information: No information available.

SECTION 13: Disposal Considerations

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

SECTION 14: Transportation

Shipping Name (CFR): Non-hazardous
Hazard Class (CFR): NA
Additional Hazard Class (CFR): NA
Packaging Group (CFR): NA
UN ID Number (CFR): NA
Shipping Name (IATA): Non-hazardous
Hazard Class (IATA): NA
Additional Hazard Class (IATA): NA
Packaging Group (IATA): NA
UN ID Number (IATA): NA

SECTION 15: Regulatory Information

TSCA: Not listed in the TSCA inventory.
SARA (Title 313): Title compound: See category code N450 for reporting
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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