

## Material Safety Data Sheet

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SECTION 1: Product Identification						
Product name	Tris(t-butoxy)methylcyclopentadienylhafnium, 98%					
CAS#		ailable	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>	,	
Catalog #	07223	00				
Chemical family	Cyclor	entadien	yl metal alkoxi	de		
SECTION 2: Composition, Information on Ingredients						
Component		%	CAS#	EINECS#	Hazard Symbol	R-Phrase
Tris(t-butoxy)methylcy	clo-	98	Not	none	F	10
pentadienylhafnium			available			36/37/38
SECTION 3: Hazard Identification						
Emergency overview	Flamm	Flammable. Irritating to the eyes, skin and respiratory tract.				
Eye contact	May cause slight to mild irritation of the eyes.					
Skin contact	May cause slight to mild irritation of the skin.					
Inhalation	May cause slight to mild irritation of the respiratory tract.					
Ingestion	No information available about toxicological effect of the ingestion.					
<b>Chronic health effects</b>	Not av	ailable.				
		SECT	ION 4: First	Aid Measures	S	
Eye exposure	Immed	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally				
	lifting the upper and lower eyelids. Get medical aid immediately.					
Skin exposure	Get medical aid immediately. Immediately flush skin with I			¥ •	of water for at	
		least 15 minutes while removing contaminated clothing and shoes.				
Inhalation	Remove from exposure to fresh air. Closely monitor the victim for signs of				_	
	respiratory problems, such as difficulty in breathing, pain, etc. In such cases					
Incestion	seek immediate medical assistance.					
Ingestion		Don't induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.				upruis of milk
	or wate	ci. Oct III	edicai aid iiiiiii	culatery.		
		ECTIO	N 5. Eiro Eio	hting Massu	ran	
General information			N 5: Fire Fig			tars should be
General information	Flammable liquid. If this material is involved in a fire, fire fighters should equipped with a NIOSH approved positive pressure self-contained breathing.					
					volved in a fire this	
			nic fumes.	ciouning. If in	vorved in a line time	material may
Extinguishing media				bon dioxide.		
8 8 11234	Extinguishing media  Use foam, dry chemical, or carbon dioxide.					
SECTION 6: Accidental Release Measures						
Spill and leak		Small spills can be mixed with vermiculite or sodium carbonate or other inert				
procedures		al and sw				
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	SECTION 7: Handling and Storage					
Uandlina	SECTION 7: Handling and Storage					
Handling	Don't breathe dust, vapor, mist, or gas. Don't get in eyes, on skin, or on clothing. Handle material under inert atmosphere of argon or nitrogen.					
Storage	Store in a cool, dry place. Store in a tightly closed container under inert					
	atmosphere of nitrogen or argon. Keep away from the sources of ignition, heat					
	and direct sunlight. Flammable area.					
SEC	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 gloves.					
Ventilation	Always handle material in an efficient fume hood.					
Respirator	If ventilation is not available a respirator should be worn. The use of respirators					
	requires Respirator Protection Program to be in compliance with 29CFR					
	1910.134.					
	SECTION 9: Physical and Chemical Properties					
Appearance	From colorless to light yellow liq.					
Odor	None					
Melting point	No data					
<b>Boiling point</b>	No data					
Flash point	No data					
Solubility in water	No data					
Density	No data					
Molecular formula	C18H34HfO3					
Molecular weight	476.95					
	SECTION 10: Stability and Reactivity					
Stability	Air and moisture sensitive liq.					
Hazardous	No hazardous polymerization					
polymerization						
Conditions to avoid	Avoid contact with incompatible materials, ignition sources.					
<b>Incompatibilities with</b>	Water, air, oxidizing agents.					
other materials						
Hazardous decompo-	Carbon monoxide, carbon dioxide, hafnium oxide, organic fumes.					
sition products						
	SECTION 11: Toxicological Information					
RTECS Data	No information available in the RTECS files.					
Carcinogenic effects	No data available.					
Mutagenic effects	No data available.					
Tetratogenic effects	No data available.					
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SECTION 12: Ecological Information						
Ecological	No information available.					
information						
SECTION 13: Disposal Considerations						
Dispose of in a manner consistent with federal, state, and local regulations.						
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SECTION 14: Transport Information					
Shipping name (CFR)	Flammable liquid, N.O.S.				
Hazard class (CFR)	3				
Additional hazard	NA				
class (CFR)					
Packing group (CFR)	II				
UN ID number (CFR)	1993				
Shipping name	Flammable liquid, N.O.S.				
(IATA)					
Hazard class (IATA)	3				
Additional hazard	NA				
class (IATA)					
Packing group					
(IATA)					
UN ID number	1993				
(IATA)					
SECTION 15: Regulatory Information					
TSCA	Not listed in the TSCA inventory				
SARA	Not reportable under SARA Title 313.				
SECTION 16: Other Information					
Preparation date	24.06.08				
Revision date	24.06.08				

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.