

### Section 1: Product and Company Identification

**Middlesex Gases & Technologies**

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Product Code: Tungsten Hexafluoride WF6

### Section 2: Hazards Identification



**Danger**

**Hazard Classification:**

Flammable (Category 1)  
Gases Under Pressure

**Hazard Statements:**

Contains gas under pressure; may explode if heated  
Extremely flammable gas

**Precautionary Statements**

**Prevention:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

**Response:**

Eliminate all ignition sources if safe to do so.  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

**Storage:**

Protect from sunlight.  
Store in well-ventilated place.

## Section 3: Composition/Information on Ingredients

**CAS #**

7783-82-6

Chemical Substance	Chemical Family	Trade Names
Tungsten Hexafluoride WF6	fluoride, inorganic, metal	Tungsten Hexafluoride, F6W,

## Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Wash skin with soap and water for at least 15 minutes.	FLush with water. Get immediate medical attention.	If swallowed, drink plenty of water. Do not induce vomiting. Get immediate medical attention.	Move to fresh air. Give artificial respiration if not breathing.	For inhalation, consider oxygen. Avoid gastric lavage or emesis.

## Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Carbon dioxide, regular dry chemical.	Thermal decomposition or combustion products: hydrogen fluoride	<ul style="list-style-type: none"><li>▪ Not available</li><li>▪ Not available</li><li>▪ Not available</li><li>▪ Not available</li></ul>

## Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
Keep people away. Stay upwind and keep out of low areas. Evacuation radius 150 feet.	Stop leak if possible without personal risk. Reduce vapors with water spray.	Not available

Methods for Cleanup	Other Information
Small spills: flood with water Large spills: dike for later disposal	Not available

## Section 7: Handling and Storage

Handling	Storage
Store and handle in accordance with all current regulations and standards.	Store and handle in accordance with all current regulations and standards.

## Section 8: Exposure Controls/Personal Protection

**Exposure Guidelines**2.5 mg/m<sup>3</sup> OSHA TWA**Engineering Controls**

No specific controls are needed.

Eye Protection	Skin Protection	Respiratory Protection
Wear splash resistant safety goggles with a faceshield.	Wear appropriate chemical resistant clothing	Not available

## General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

## Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas	Colorless or yellow gas	Colorless or yellow	Deliquescent, hygroscopic	Gas, liquid	Odorless	Not available

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Not available	Not available	Not available	Not available	Not available	Not available

Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
64-68 deg F	36-37 deg F	863 mmHg at 21 deg C	10.6 (Air=1)	Not available	Decomposes/reacts	Not available	Not available	Not available	0.01754 cP at 25 deg C

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
297.84	F6-W	12.9 g/L	Not available	Not available	Not available	Soluble: alkali, carbon disulfide, hydrogen fluoride

## Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials
Reacts violently with water to generate toxic and/or flammable gases	Reacts violently with water to generate toxic and/or flammable gases	Combustible materials, reducing agents, acids, metals.

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Decomposition products on contact with water or moisture: hydrogen fluoride, tungsten compounds	Will not polymerize

## Section 11: Toxicology Information

### Acute Effects

Oral LD50	Dermal LD50	Inhalation
Not available	Not available	Asthma, dizziness, lung, congestion

Eye Irritation	Skin Irritation	Sensitization
Burns, tearing	Absorption may occur	Respiratory tract burns, skin burns, eye burns, mucous membrane burns, tears

### Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not available	Not available	Not available	No data

## Section 12: Ecological Information

### Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: not available Invertebrate toxicity: not available Algal toxicity: not available Phyto toxicity: not available Other toxicity: not available	Not available	Not available	Not available

## Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations

## Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Tungsten hexafluoride	UN2196	2.3	Not available	2.3, 8	Forbidden	Forbidden	Toxic-Inhalation Hazard Zone B

### Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Tungsten hexafluoride	UN2196	2.3, 8	2.3, 8

## Section 15: Regulatory Information

### U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
Not available	Not available	Not available

### SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Yes	Chronic	Yes	Yes	Yes

### SARA 372.65

Not available

### OSHA Process Safety

Not available

### State Regulations

#### CA Proposition 65

Not regulated

### Canadian Regulations

#### WHMIS Classification

AD1E

### National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed on inventory	Not listed	Not determined

## Section 16: Other Information

### NFPA Rating

Health=3, Fire=0, Reactivity=2

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard