

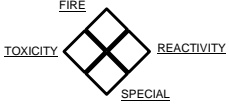
MATERIAL SAFETY DATA SHEET

ISSUED DATE 11-22-85 REVISED DATE 9-30-09

I. IDENTIFICATION

MANUFACTURER'S NAME		Hogen Industries, Inc.		EMERGENCY TELEPHONE NO.		(317) 591-5070	
ADDRESS		4655 Massachusetts Avenue - Indianapolis, IN 46218					
CHEMICAL NAME AND SYNONYMS		Tungsten, Silver		TRADE NAME AND SYNONYMS		H2OS	
C.A.S. NO.	NIF	T.S.C.A. NO.	NIF	FORMULA	W-Ag		
DEPARTMENT OF	HAZARD CLASSIFICATION	NIF	U.N. NO.	NIF			
TRANSPORTATION	SHIPPING NAME	H2OS Silver Tungsten					

II. INGREDIENTS

MATERIAL	%	TLV (Units)	C.A.S. NO.	NFPA RATING  4 = EXTREME 3 = HIGH 2 = MODERATE 1 = SLIGHT 0 = INSIGNIFICANT
Tungsten	74	5 MG/M ³	7440-33-7	
Silver	26	0.1 MG/M ³	7440-22-4	

REPORT ALL INGREDIENTS ≥3%; IF HAZARDOUS, REPORT ≥1%; SPECIAL HAZARDOUS SUBSTANCES ≥0.01%

III. PHYSICAL DATA

BOILING POINT, 760mm Hg 101.325 kPa	Tungsten - 5660°C Silver - 1955°C	FREEZING POINT	N/A
SPECIFIC GRAVITY (H ₂ O=1)	15.5 g/cc	VAPOR PRESSURE AT 20°C	N/A
VAPOR DENSITY (AIR=1)	N/A	SOLUBILITY IN WATER, % BY WT.	Insoluble
APPEARANCE AND ODOR	Silver - No odor		

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used)	Non-combustible	FLAMMABLE LIMITS LEL	N/A	UEL	N/A
EXTINGUISHING MEDIA					
SPECIAL FIRE FIGHTING PROCEDURES					
UNUSUAL FIRE AND EXPLOSION HAZARDS	Will oxidize at or about 1300°F				

V. REACTIVITY DATA

STABILITY			
UNSTABLE	STABLE	CONDITIONS TO AVOID	Keep away from strong acids.
	X		
INCOMPATIBILITY (Materials to Avoid)			

HAZARDOUS DECOMPOSITION PRODUCTS	
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VI. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	OSHA Tungsten 5 MG/M ³ Silver 0.1 MG/M ³	ACGIH Tungsten 5 MG/M ³ Silver 0.1 MG/M ³	
ROUTES OF EXPOSURE (Check Those Which Apply)	EYE CONTACT No SKIN CONTACT X	INHALATION No INGESTION No	SKIN ABSORPTION No
SIGNS AND SYPTOMS OF OVEREXPOSURE	Silver can cause argyria or permanent pigmentation of the skin, from repeated exposures over a considerable period of time where alloy is in the form of finely divided dust particles.		
EFFECTS OF OVEREXPOSURE	ACCUTE		
	CHRONIC NIF (No information found)		
HAS IOSHA FOUND THIS MATERIAL TO BE A POTENTIAL CARCINOGEN?	YES	NO	X
EMERGENCY FIRST AID PROCEDURES			

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELATED OR SPILLED	
WASTE DISPOSAL METHOD	Recycle all scrap and machine turnings.
	DISPOSER MUCH COMPLY WITH FEDERAL, STATE AND LOCAL DISPOSAL OR DISCHARGE LAWS.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify Type)	Use NIOSHA/MSHA approved type respirator for dusting conditions		
VENTILATION	LOCAL EXHAUST	Recommended	SPECIAL NIF
	MECHANICAL (General)	NIF	OTHER NIF
PROTECTIVE GLOVES	None		EYE PROTECTION Use safety eyewear
OTHER PROTECTIVE EQUIPMENT	None		

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store in cool, dry, well ventilated area. Separate from acids and alkalis.
OTHER PRECAUTIONS	

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