

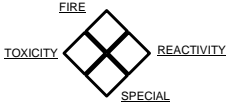
# MATERIAL SAFETY DATA SHEET

ISSUED DATE 5/24/99 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, Copper		TRADE NAME AND SYNONYMS		H1W	
C.A.S. NO.	NIF	T.S.C.A. NO.	NIF	FORMULA	W-Cu		
DEPARTMENT OF TRANSPORTATIO N	HAZARD CLASSIFICATION	NIF		U.N. NO.	NIF		
	SHIPPING NAME	H1W Copper Tungsten					

## II. INGREDIENTS

MATERIAL	%	TLV (Units)	C.A.S. NO.	NFPA RATING  4 = EXTREME 3 = HIGH 2 = MODERAGTE 1 = SLIGHT 0 = INSIGNIFICANT
Tungsten	55	5 MG/M <sup>3</sup>	7440-33-7	
Copper	45	1 MG/M <sup>3</sup>	7440-50-8	

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

## III. PHYSICAL DATA

BOILING POINT, 760mm Hg 101.325 kPa	Tungsten - 5660°C Copper - 2567°C	FREEZING POINT	N/A
SPECIFIC GRAVITY (H <sub>2</sub> O=1)	12.50 g/cc	VAPOR PRESSURE AT 20°C	N/A
VAPOR DENSITY (AIR=1)	N/A	SOLUBILITY IN WATER, % BY WT.	N/A
APPEARANCE AND ODOR	Copper Colored - No odor		

## IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used)	NIF	FLAMMABLE LIMITS LEL	NIF	UEL	NIF
EXTINGUISHING MEDIA	NIF (No Information Found)				
SPECIAL FIRE FIGHTING PROCEDURES	NIF				
UNUSUAL FIRE AND EXPLOSION HAZARDS	Will oxidize above 1300°F				

## V. REACTIVITY DATA

STABILITY		CONDITIONS
UNSTABLE	STABLE	

	X	TO AVOID	Nitric Acid will cause oxidation of the copper and form Nitrogen Oxide. Avoid other strong acids.
INCOMPATIBILITY (Materials to Avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS			

## VI. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	OSHA	Tungsten 5 MG/M <sup>3</sup> Copper 1 MG/M <sup>3</sup>	ACGIH	Tungsten 5 MG/M <sup>3</sup> Copper 1 MG/M <sup>3</sup>
ROUTES OF EXPOSURE (Check Those Which Apply)	EYE CONTACT	No	INHALATION	No
	SKIN CONTACT	No	INGESTION	No
SIGNS AND SYMPTOMS OF OVEREXPOSURE NIF (No Information Found)				
EFFECTS OF OVEREXPOSURE				
ACCUTE NIF				
CHRONIC NIF				
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	Re-cycle 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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