

## Hogen Duralloy H3W 68 Tungsten/32 Copper PM Metal Composite

Category : Metal , Metal Matrix Composite , Nonferrous Metal , Refractory Metal , Tungsten Alloy

### Material Notes:

RWMA Class 10.Hogen Duralloy refractory alloys are manufactured by pressing, sintering, and infiltrating tungsten with copper or silver. Typical Resistance Welding Applications: Class 10 material is recommended as facings or inserts for projection welding electrodes and for flash and butt welding dies where high electrical conductivity is desirable and relatively high malleability is necessary. HW1 and HW3 are most commonly used for flash and butt welding die inserts. Data provided by Hogen Industries.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hogen-Duralloy-H3W-68-Tungsten32-Copper-PM-Metal-Composite.php](http://www.lookpolymers.com/polymer_Hogen-Duralloy-H3W-68-Tungsten32-Copper-PM-Metal-Composite.php)

Physical Properties	Metric	English	Comments
Density	>= 13.8 g/cc	>= 0.499 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	83	83	
Tensile Strength, Ultimate	517 MPa	75000 psi	

Thermal Properties	Metric	English	Comments
CTE, linear	10.9 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	6.06 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
Specific Heat Capacity	0.219 J/g- $\text{Å}^\circ\text{C}$	0.0523 BTU/lb- $\text{Å}^\circ\text{F}$	
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	210 W/m-K	1460 BTU-in/hr-ft $\text{Å}^2$ - $\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 400 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 752 $\text{Å}^\circ\text{F}$	

Component Elements Properties	Metric	English	Comments
Copper, Cu	32 %	32 %	
Tungsten, W	68 %	68 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000340 ohm-cm	0.00000340 ohm-cm	

## **Contact Songhan Plastic Technology Co.,Ltd.**

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