

Scoperta Inc.

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PRODUCT OVERVIEW

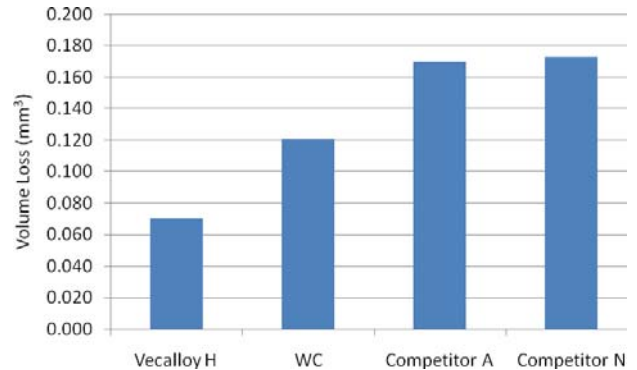
Vecalloy H Amorphous TWAS wire is a revolutionary material available in .045, 1/16, 1/8 inch diameter wires. The coating is iron-based, >20% amorphous, and provides exceptional bond strength and resistance to abrasive wear.

Vecalloy H is suited for applications in which the need for both sliding wear resistance and high bond strength combine to create conditions that challenge conventional solutions. Examples of such environments include:

- Materials handling
- Industrial rollers
- Shafts and plate

Vecalloy H has physical properties that offer superior performance in terms of bond strength, hardness, and wear resistance that drive value to its end users. This provides Vecalloy H with a lower cost relative to traditional alloy solutions.

Theoretical Density:	8 g/cc
Particle Hardness:	>1000 Hv
Adhesion Bond Strength:	8,000 psi ASTM C633
% Amorphous:	>20%
Melting Temperature, °F(°C):	2012 (1100)
Porosity:	<2.0%
Corrosion Resistance:	Good
Sliding Wear Resistance:	Excellent ASTMG77
Chemical Composition (wt. %):	
C <5%	B <5%
Cr <15%	W <15%
Nb <15%	Other <2%
Fe Bal.	
Particle CTE:	5.7×10^{-6}



Sliding Wear Comparison for TWAS Coating

Deposition Parameters*

Vecalloy TWAS	TAFA 8830/8835
Atomizing Air Pressure	50-75 psi
Nozzle Cap	Blue
Nozzle Positioner	Long +
Arc load Volts	29-32
Current, Amps	175-250
Standoff Inches	4
Recommended Coating Thickness per pass, mil	1.2-1.3
Coating Texture, u-inch	<300
Spray Rate, lbs/hr	16
Spray Rate, lbs/hr/100 Amps	8
Deposit Efficiency	>75%
Wire Size, inch	1/16
Coverage	0.7 oz/ft ² /.001"

Parameters available upon request for other TWAS systems.

*These parameters are a starting point. Always observe industry standard safety procedures and equipment with approved eye, ear, and respiratory protection in place. Read and understand the MSDS. Do not operate equipment in a manner not approved by manufacturer.