

Weartech International WT-1 Cobalt Hardfacing & Wear Resistant Alloy

Category : Metal , Nonferrous Metal , Cobalt Alloy

Material Notes:

Applications: seaming rolls, valve seats, wear pads, pump sleeves, seals, bearings, bushings, saw blades, cutters
Information provided by
Weartech International

Order this product through the following link:

http://www.lookpolymers.com/polymer_Weartech-International-WT-1-Cobalt-Hardfacing-Wear-Resistant-Alloy.php

Physical Properties	Metric	English	Comments
Density	8.73 g/cc	0.315 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	48 - 59	48 - 59	
Hardness, Vickers	100	100	
	@Treatment Temp. 760 °C	@Treatment Temp. 1400 °F	
	250	250	
	@Treatment Temp. 649 °C	@Treatment Temp. 1200 °F	
	400	400	
	@Treatment Temp. 538 °C	@Treatment Temp. 1000 °F	
	475	475	
	@Treatment Temp. 427 °C	@Treatment Temp. 800 °F	
	545	545	
	@Treatment Temp. 25.0 °C	@Treatment Temp. 77.0 °F	
Tensile Strength	483 MPa	70000 psi	As Cast
Elongation at Yield	0.00 - 1.0 %	0.00 - 1.0 %	
Charpy Impact	5.42 J	4.00 ft-lb	As Cast

Thermal Properties	Metric	English	Comments
CTE, linear	13.7 µm/m-°C	7.60 µin/in-°F	
Specific Heat Capacity	0.397 J/g-°C	0.0950 BTU/lb-°F	

Melting Point Thermal Properties	≤ 1260 °C Metric	≤ 2300 °F English	Comments
Liquidus	1260 °C	2300 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	2.3 %	2.3 %	
Chromium, Cr	30 %	30 %	
Cobalt, Co	47.9 - 53.9 %	47.9 - 53.9 %	
Iron, Fe	≤ 3.0 %	≤ 3.0 %	
Nickel, Ni	≤ 3.0 %	≤ 3.0 %	
Silicon, Si	0.80 %	0.80 %	
Tungsten, W	13 %	13 %	

Descriptive Properties	Value	Comments
Corrosion Resistance, Hydrochloric Acid Conc. 5.65%	>20 mils/year	RT
	>400 mils/year	Boiling
Corrosion Resistance, Nitric Acid Conc. 25-65%	>20 mils/year	RT
	>400 mils/year	Boiling
Corrosion Resistance, Sulfuric Acid Conc. 5-10%	>20 mils/year	RT
	>400 mils/year	150 °F
Relative Wear Performance	Cold Abrasion	Excellent
	Corrosion	Excellent
	Erosion	Excellent
	Hot Abrasion	Excellent
	Impact	Not Recommended
	Metal to Metal	Excellent

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