

## Weartech International WT-190 Cobalt Hardfacing & Wear Resistant Alloy

Category : Metal , Nonferrous Metal , Cobalt Alloy

### Material Notes:

Applications: tri-cone rock bits for oil drilling Information provided by Weartech International

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Weartech-International-WT-190-Cobalt-Hardfacing-Wear-Resistant-Alloy.php](http://www.lookpolymers.com/polymer_Weartech-International-WT-190-Cobalt-Hardfacing-Wear-Resistant-Alloy.php)

Physical Properties	Metric	English	Comments
Density	8.67 g/cc	0.313 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	50 - 62	50 - 62	
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 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	7.60 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
Specific Heat Capacity	0.389 J/g- $^{\circ}\text{C}$	0.0930 BTU/lb- $^{\circ}\text{F}$	
Melting Point	<= 1235 $^{\circ}\text{C}$	<= 2255 $^{\circ}\text{F}$	
Liquidus	1235 $^{\circ}\text{C}$	2255 $^{\circ}\text{F}$	

Component Elements Properties	Metric	English	Comments
Carbon, C	3.2 %	3.2 %	
Chromium, Cr	26 %	26 %	
Cobalt, Co	50.8 - 56.8 %	50.8 - 56.8 %	
Iron, Fe	<= 3.0 %	<= 3.0 %	
Nickel, Ni	<= 3.0 %	<= 3.0 %	
Tungsten, W	14 %	14 %	

Descriptive Properties	Value	Comments
Corrosion Resistance, Hydrochloric Acid Conc. 5.65%	>20 mils/year	RT
	>400 mils/year	Boiling

<b>Corrosion Resistance Nitric Acid Conc. 25-65%</b> <b>Descriptive Properties</b>	<b>&gt;20 mils/year</b> <b>Value</b>	<b>RT</b> <b>Comments</b>
	>400 mils/year	Boiling
Corrosion Resistance, Sulfuric Acid Conc. 5-10%	>50 mils/year	RT
Relative Wear Performance	Cold Abrasion	Excellent
	Corrosion	Excellent
	Erosion	Excellent
	Hot Abrasion	Excellent
	Impact	Not Recommended
	Metal to Metal	Excellent

## Contact Songhan Plastic Technology Co.,Ltd.

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