

## The NanoSteel® Company SHS 9700E Steel Alloy, Stick Electrode

Category : Metal , Ferrous Metal , Alloy Steel

### Material Notes:

Coating Description: SHS 9700E Stick Electrode is an iron based steel alloy with a near nanoscale (submicron) microstructure that features exceptional abrasive wear resistance with superior toughness and no high-cost nickel, tungsten and molybdenum in chemistry. SHS 9700E has been designed to be deposited on mild and low alloy steels. Key Performance Characteristics  
 67 - 70 HRc single and double pass weld deposits  
 Cost effective alternative to complex carbides: iron-based chemistry contains no tungsten, no molybdenum and no nickel  
 Provides exceptional wear resistance lasting significantly longer than most chrome carbide and complex carbide alloys  
 High resistance to abrasion while maintaining high toughness  
 Crystalline microstructure is engineered to submicron (400 nm) size  
 Maintains high hardness after exposure to elevated temperatures  
 Application Process: SMAW Weld Overlay for Hardfacing  
 Information Provided by The NanoSteel Company, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_The-NanoSteel-Company-SHS-9700E-Steel-Alloy-Stick-Electrode.php](http://www.lookpolymers.com/polymer_The-NanoSteel-Company-SHS-9700E-Steel-Alloy-Stick-Electrode.php)

Physical Properties	Metric	English	Comments
Density	7.36 g/cc	0.266 lb/in <sup>3</sup>	Weld Deposit Property

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	67 - 70	67 - 70	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	<= 5.0 %	<= 5.0 %	
Boron, B	<= 6.0 %	<= 6.0 %	
Carbon, C	<= 3.0 %	<= 3.0 %	
Chromium, Cr	<= 18 %	<= 18 %	
Iron, Fe	>= 49 %	>= 49 %	
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Niobium, Nb (Columbium, Cb)	<= 10 %	<= 10 %	
Silicon, Si	<= 2.0 %	<= 2.0 %	

Descriptive Properties	Value	Comments
Impact Resistance	Passed multiple impacts at 165 ft-lbs	Drop Impact Testing
Potassium Silicate (%)	< 5	
Wear Resistance Mass Loss (g)	0.09-0.17	6000 cycles; ASTM G65-04 Procedure A

Descriptive Properties	Value	Comments
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## Contact Songhan Plastic Technology Co.,Ltd.

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