

Dura-Bar 201 Type 1 Continuously Cast Ni-Resist Iron Bar Stock ASTM A436

Category : Metal , Ferrous Metal , Cast Iron , Alloy Cast Iron , Gray Cast Iron

Material Notes:

Ni-Resist irons contain an austenitic matrix with about 10% alloy carbides. The austenitic structure is suitable for corrosive environments in sour well oils, salts, salt water acids and alkalis. The iron is relatively soft and chrome is added to produce carbides that help improve wear resistance. Ni-Resist is more dense than gray or ductile irons and will have a higher coefficient of thermal expansion. Dura-Bar 201 Ni-Resist is manufactured to produce a material conforming to ASTM A436, Type 1. The microstructure will consist of Type VII, type A, size 4-6, graphite as defined in ASTM A247. The matrix will be austenite with 5-10% alloy carbide. The rim will contain type D graphite, size 6-8. Chill carbides will be less than 5% in any field at 100x and will be well dispersed. Austenitic alloys cannot be hardened by heat treatment. They may be softened and homogenized by heating to 1800-1900F (980-1040C) for 3-5 hours and air cooling. This breaks down some of the carbides and most of those remaining will be spheroidized. Annealing softens the material without detrimental effect on the strength properties. Dura-Bar 201 Ni-Resist should not be used in applications involving service above 1300F (705C). Composition: Typical chemical composition and ranges, actual values depend on cross section size. Information provided by Dura-Bar.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Dura-Bar-201-Type-1-Continuously-Cast-Ni-Resist-Iron-Bar-Stock-ASTM-A436.php

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	131 - 183	131 - 183	Depends on cast section size and location of test
Tensile Strength, Ultimate	138 MPa	20000 psi	Bars longer than 3.0"
	172 MPa	25000 psi	Bars shorter than 3.0"

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 3.0 %	<= 3.0 %	
Chromium, Cr	1.5 - 2.5 %	1.5 - 2.5 %	
Copper, Cu	5.5 - 7.5 %	5.5 - 7.5 %	
Manganese, Mn	0.50 - 1.5 %	0.50 - 1.5 %	
Nickel, Ni	13.5 - 17.5 %	13.5 - 17.5 %	
Silicon, Si	1.0 - 2.8 %	1.0 - 2.8 %	
Sulfur, S	<= 0.1200 %	<= 0.1200 %	

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