

AK Steel 15 Cr-Cb® ULTRA FORM® Ferritic Stainless steel

Category : Metal , Ferrous Metal , Ferritic , Stainless Steel

Material Notes:

AK Steel's 15 Cr-Cb ULTRA FORM® is a low-carbon, low-nitrogen ferritic grade of stainless steel with an intermediate, 14.5% chromium content. Alloying additions of Ti, Cb, Si and Mn provide excellent room temperature formability and impart superior hot strength and high temperature oxidation resistance when compared to Type 409, Type 439, Type 430, 11 Cr-Cb™ and Type 436. This grade's alloying additions, combined with AK Steel's proprietary ULTRA FORM® processing technology, yield a fine, equiaxed grain structure that enhances room temperature formability and minimizes ridging. Information provided by AK Steel

Order this product through the following link:

http://www.lookpolymers.com/polymer_AK-Steel-15-Cr-Cb-ULTRA-FORM-Ferritic-Stainless-steel.php

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	78 - 85	78 - 85	Annealed
Tensile Strength, Ultimate	469 - 538 MPa	68000 - 78000 psi	Annealed
	30.0 MPa	4350 psi	0.059" Coil
	@Temperature 899 °C	@Temperature 1650 °F	
	46.0 MPa	6670 psi	0.059" Coil
	@Temperature 816 °C	@Temperature 1500 °F	
	146 MPa	21200 psi	0.059" Coil
	@Temperature 704 °C	@Temperature 1300 °F	
	359 MPa	52100 psi	0.059" Coil
	@Temperature 593 °C	@Temperature 1100 °F	
Tensile Strength, Yield	310 - 379 MPa	45000 - 55000 psi	Annealed
	@Strain 0.200 %	@Strain 0.200 %	
	22.0 MPa	3190 psi	0.059" Coil
	@Strain 0.200 %, Temperature 899 °C	@Strain 0.200 %, Temperature 1650 °F	
	39.0 MPa	5660 psi	0.059" Coil
	@Strain 0.200 %, Temperature 816 °C	@Strain 0.200 %, Temperature 1500 °F	
	110 MPa	16000 psi	0.059" Coil
	@Strain 0.200 %, Temperature 704 °C	@Strain 0.200 %, Temperature 1300 °F	
	164 MPa	23800 psi	

Mechanical Properties	Metric @Strain 0.200 %, Temperature 593 °C	English @Strain 0.200 %, Temperature 1100 °F	0.059" Coil Comments
Elongation at Break	28 - 37 %	28 - 37 %	in 2 inches, Annealed

Component Elements Properties	Metric	English	Comments
Carbon, C	0.010 %	0.010 %	
Chromium, Cr	14.50 %	14.50 %	
Iron, Fe	82.251 %	82.251 %	Balance
Manganese, Mn	1.0 %	1.0 %	
Nickel, Ni	0.30 %	0.30 %	
Niobium, Nb (Columbium, Cb)	0.35 %	0.35 %	
Nitrogen, N	0.011 %	0.011 %	
Phosphorous, P	0.025 %	0.025 %	
Silicon, Si	1.3 %	1.3 %	
Sulfur, S	0.0030 %	0.0030 %	
Titanium, Ti	0.25 %	0.25 %	

Descriptive Properties	Value	Comments
delta r	0.5	Annealed
r-bar	1.3-1.6	Annealed

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