

AK Steel 201 Austenitic Stainless steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

Material Notes:

AK Steel 210 was developed originally to conserve nickel. It provides properties similar to Type 301 and can be used in most applications for Type 301. This alloy is non-magnetic in the annealed condition but slightly magnetic when cold worked. Excellent toughness at low temperatures. Typical uses include appliances, restaurant equipment, cooking utensils, sinks, automotive trim, architectural applications such as windows and doors, railway cars, trailers and hose clamps. Information provided by AK Steel

Order this product through the following link:

http://www.lookpolymers.com/polymer_AK-Steel-201-Austenitic-Stainless-steel.php

Physical Properties	Metric	English	Comments
Density	7.81 g/cc	0.282 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	87	87	Annealed
Hardness, Rockwell C	25	25	Cold Worked 1/4 hard
	32	32	Cold Worked 1/2 hard
	41	41	Cold-Worked Full hard
Tensile Strength, Ultimate	758 MPa	110000 psi	Annealed
	862 MPa	125000 psi	Cold-Worked 1/4 hard
	1034 MPa	150000 psi	Cold-Worked 1/2 hard
	1276 MPa	185100 psi	Cold-Worked Full hard
Tensile Strength, Yield	379 MPa	55000 psi	Annealed
	@Strain 0.200 %	@Strain 0.200 %	
	517 MPa	75000 psi	Cold-Worked 1/4 hard
	@Strain 0.200 %	@Strain 0.200 %	
	758 MPa	110000 psi	Cold-Worked 1/2 hard
	@Strain 0.200 %	@Strain 0.200 %	
	965 MPa	140000 psi	Cold-Worked Full hard
	@Strain 0.200 %	@Strain 0.200 %	
Elongation at Break	8.0 %	8.0 %	in 2 inches, Cold-Worked Full hard
	15 %	15 %	in 2 inches, Cold-Worked 1/2 hard

Mechanical Properties	Metric	English	Comments Cold-Worked 1/4 hard
	52 %	52 %	in 2 inches, Annealed
Modulus of Elasticity	197 GPa	28600 ksi	
Izod Impact	163 J	120 ft-lb	V-Notch (Annealed)

Thermal Properties	Metric	English	Comments
CTE, linear	15.7 $\mu\text{m}/\text{m}\cdot\text{°C}$	8.72 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	
	20.3 $\mu\text{m}/\text{m}\cdot\text{°C}$	11.3 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature <=871 °C	@Temperature <= 1600 °F	
Specific Heat Capacity	0.500 J/g-°C	0.120 BTU/lb-°F	
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	
Thermal Conductivity	16.2 W/m-K	112 BTU-in/hr-ft ² -°F	
	@Temperature 100 °C	@Temperature 212 °F	
	21.4 W/m-K	149 BTU-in/hr-ft ² -°F	
	@Temperature 500 °C	@Temperature 932 °F	
Melting Point	1399 - 1454 °C	2550 - 2649 °F	
Solidus	1399 °C	2550 °F	
Liquidus	1454 °C	2649 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.15 %	<= 0.15 %	
Chromium, Cr	16 - 18 %	16 - 18 %	
Iron, Fe	67.51 - 75 %	67.51 - 75 %	As Remainder
Manganese, Mn	5.5 - 7.5 %	5.5 - 7.5 %	
Nickel, Ni	3.5 - 5.5 %	3.5 - 5.5 %	
Nitrogen, N	<= 0.25 %	<= 0.25 %	
Phosphorous, P	<= 0.060 %	<= 0.060 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	

Component Elements Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000685 ohm-cm	0.0000685 ohm-cm	
Magnetic Permeability	1.02	1.02	H = 200 Oersted, Annealed

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China