

Crucible Steel AIRKOOL® (AISI A2) Tool Steel

Category: Metal, Ferrous Metal, Alloy Steel, Medium Alloy Steel, Tool Steel, Air-Hardening Steel

Material Notes:

Airkool (AISI A2) is an air-hardening medium alloy tool steel which is heat treatable to HRC 60-62. It has wear resistance intermediate between the oil hardening tool steels (O1) and the high carbon chromium tool steels (D2). Because it offers a combination of good toughness along with moderate wear resistance, it has been widely used for many years in variety of cold work applications which require fairly high abrasion resistance but where the higher carbon/ high chromium steels are prone to chipping and cracking. Airkool is quite easily machined in the annealed condition and, like other air-hardening tool steels, exhibits minimal distortion on hardening, making it an excellent choice for dies of complicated design. Information provided by Crucible Specialty Metals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Crucible-Steel-AIRKOOL-AISI-A2-Tool-Steel.php

Physical Properties	Metric	English	Comments
Density	7.86 g/cc	0.284 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	197 - 241	197 - 241	Annealed
Hardness, Rockwell C	60 - 62	60 - 62	
Modulus of Elasticity	207 GPa	30000 ksi	
Charpy Impact	53.0 J	39.1 ft-lb	Austenitizing Temperature- 955°C

Thermal Properties	Metric	English	Comments
CTE, linear	10.6 μm/m-°C	5.89 µin/in-°F	
	@Temperature 20.0 - 260 °C	@Temperature 68.0 - 500 °F	
	14.0 μm/m-°C	7.78 μin/in-°F	
	@Temperature 20.0 - 540 °C	@Temperature 68.0 - 1000 °F	
Thermal Conductivity	26.0 W/m-K	180 BTU-in/hr-ft ² -°F	
	@Temperature 95.0 °C	@Temperature 203 °F	
Shrinkage	-0.0600 %	-0.0600 %	
	@Temperature 540 - 620 °C	@Temperature 1000 - 1150 °F	Tempered at 540-620°C

Component Elements Properties	Metric	English	Comments
Carbon, C	1.0 %	1.0 %	



Component Elements Properties	Metric	English	Comments	
Iron, Fe	91.55 %	91.55 %	As Remainder	
Manganese, Mn	0.85 %	0.85 %		
Molybdenum, Mo	1.1 %	1.1 %		
Vanadium, V	0.25 %	0.25 %		

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