

Crucible Steel KETOS® Tool Steel, AISI O1

Category : Metal , Ferrous Metal , Tool Steel , Oil-Hardening Steel

Material Notes:

Ketos is an oil-hardening tool steel which may be hardened from fairly low temperatures with little size change. This grade combines deep-hardening qualities with a fine-grained structure, affording good initial production runs, and good continued production after grinding. Information provided by Crucible Industries

Order this product through the following link:

http://www.lookpolymers.com/polymer_Crucible-Steel-KETOS-Tool-Steel-AISI-O1.php

Physical Properties	Metric	English	Comments
Density	7.83 g/cc	0.283 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	187 - 221	187 - 221	
Hardness, Rockwell C	63 - 65	63 - 65	hardened at 1475°F then quenched
	39 - 41	39 - 41	hardened at 1475F then tempered
	@Tempering Temp. 538 °C	@Tempering Temp. 1000 °F	
	43 - 45	43 - 45	hardened at 1475F then tempered
	@Tempering Temp. 482 °C	@Tempering Temp. 900 °F	
	48 - 50	48 - 50	hardened at 1475F then tempered
	@Tempering Temp. 427 °C	@Tempering Temp. 800 °F	
	51 - 53	51 - 53	hardened at 1475F then tempered
	@Tempering Temp. 371 °C	@Tempering Temp. 700 °F	
	55 - 57	55 - 57	hardened at 1475F then tempered
	@Tempering Temp. 316 °C	@Tempering Temp. 600 °F	
	58 - 60	58 - 60	hardened at 1475F then tempered
	@Tempering Temp. 260 °C	@Tempering Temp. 500 °F	
	60 - 62	60 - 62	hardened at 1475F then tempered
	@Tempering Temp. 232 °C	@Tempering Temp. 450 °F	
	61 - 63	61 - 63	

Mechanical Properties	Metric	English	Comments
	@ Tempering Temp. 204 °C	@ Tempering Temp. 400 °F	1475F then tempered
	62 - 64	62 - 64	
	@ Tempering Temp. 177 °C	@ Tempering Temp. 350 °F	hardened at 1475F then tempered
	63 - 65	63 - 65	
	@ Tempering Temp. 149 °C	@ Tempering Temp. 300 °F	hardened at 1475F then tempered
Modulus of Elasticity	207 GPa	30000 ksi	
Charpy Impact	19.0 J	14.0 ft-lb	hardened at 1475°F then tempered; C-notch
	@ Tempering Temp. 149 °C	@ Tempering Temp. 300 °F	
	38.0 J	28.0 ft-lb	hardened at 1475°F then tempered; C-notch
	@ Tempering Temp. 177 °C	@ Tempering Temp. 350 °F	
	40.7 J	30.0 ft-lb	hardened at 1475°F then tempered; C-notch
	@ Tempering Temp. 204 °C	@ Tempering Temp. 400 °F	
	40.7 J	30.0 ft-lb	hardened at 1475°F then tempered; C-notch
	@ Tempering Temp. 260 °C	@ Tempering Temp. 500 °F	
	43.4 J	32.0 ft-lb	hardened at 1475°F then tempered; C-notch
	@ Tempering Temp. 316 °C	@ Tempering Temp. 600 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	12.6 μm/m-°C	7.00 μin/in-°F	
	@ Temperature 21.1 - 204 °C	@ Temperature 70.0 - 400 °F	
	13.3 μm/m-°C	7.40 μin/in-°F	
	@ Temperature 21.1 - 427 °C	@ Temperature 70.0 - 800 °F	
	14.0 μm/m-°C	7.80 μin/in-°F	
	@ Temperature 21.1 - 538 °C	@ Temperature 70.0 - 1000 °F	
Thermal Conductivity	34.5 W/m-K	239 BTU-in/hr-ft ² -°F	
	@ Temperature 95.0 °C	@ Temperature 203 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.90 %	0.90 %	
Chromium, Cr	0.50 %	0.50 %	
Iron, Fe	96.55 %	96.55 %	as balance
Manganese, Mn	1.25 %	1.25 %	
Silicon, Si	0.30 %	0.30 %	
Tungsten, W	0.50 %	0.50 %	

Chemical Properties	Metric	English	Comments
Critical Temperature	743 °C	1370 °F	

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