

## Crucible Steel LABELLE® Silicon #2 Tool Steel

Category : Metal , Ferrous Metal , Tool Steel , Shock-Resisting Steel

### Material Notes:

LaBelle Silicon #2 is a shock resisting tool steel capable of maximum toughness at relatively high hardness. It has excellent resistance to impact and battering, with good edge retention. Information provided by Crucible Industries

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Crucible-Steel-LABELLE-Silicon-2-Tool-Steel.php](http://www.lookpolymers.com/polymer_Crucible-Steel-LABELLE-Silicon-2-Tool-Steel.php)

Physical Properties	Metric	English	Comments
Density	7.75 g/cc	0.280 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	187 - 235	187 - 235	
Hardness, Rockwell C	60 - 61	60 - 61	oil quenched from 1650°F
	64 - 65	64 - 65	water quenched from 1600°F
	44 - 45	44 - 45	hardened at 1650°F then tempered
	@Tempering Temp. 538 °C	@Tempering Temp. 1000 °F	
	47 - 48	47 - 48	hardened at 1650°F then tempered
	@Tempering Temp. 482 °C	@Tempering Temp. 900 °F	
	51 - 52	51 - 52	hardened at 1650°F then tempered
	@Tempering Temp. 427 °C	@Tempering Temp. 800 °F	
	56 - 57	56 - 57	hardened at 1650°F then tempered
	@Tempering Temp. 371 °C	@Tempering Temp. 700 °F	
	57 - 58	57 - 58	hardened at 1650°F then tempered
	@Tempering Temp. 316 °C	@Tempering Temp. 600 °F	
	58 - 59	58 - 59	hardened at 1650°F then tempered
	@Tempering Temp. 260 °C	@Tempering Temp. 500 °F	
	58 - 60	58 - 60	hardened at 1650°F then tempered
	@Tempering Temp. 204 °C	@Tempering Temp. 400 °F	

Mechanical Properties	60 - 61 Metric	60 - 61 English	Comments
	@Tempering Temp. 149 °C	@Tempering Temp. 300 °F	hardened at 1650°F then tempered
Modulus of Elasticity	207 GPa	30000 ksi	
Charpy Impact	66.4 J	49.0 ft-lb	hardened at 1650°F then tempered; C-notch
	@Tempering Temp. 149 °C	@Tempering Temp. 300 °F	
	187 J	138 ft-lb	hardened at 1650°F then tempered; C-notch
	@Tempering Temp. 204 °C	@Tempering Temp. 400 °F	
	193 J	142 ft-lb	hardened at 1650°F then tempered; C-notch
	@Tempering Temp. 316 °C	@Tempering Temp. 600 °F	
	198 J	146 ft-lb	hardened at 1650°F then tempered; C-notch
	@Tempering Temp. 260 °C	@Tempering Temp. 500 °F	
	212 J	156 ft-lb	hardened at 1650°F then tempered; C-notch
	@Tempering Temp. 371 °C	@Tempering Temp. 700 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	12.6 µm/m-°C	7.00 µin/in-°F	
	@Temperature 21.1 - 427 °C	@Temperature 70.0 - 800 °F	
	13.3 µm/m-°C	7.40 µin/in-°F	
	@Temperature 21.1 - 538 °C	@Temperature 70.0 - 1000 °F	
	13.7 µm/m-°C	7.60 µin/in-°F	
	@Temperature 21.1 - 649 °C	@Temperature 70.0 - 1200 °F	
Thermal Conductivity	33.0 W/m-K	229 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 95.0 °C	@Temperature 203 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.60 %	0.60 %	
Chromium, Cr	0.25 %	0.25 %	
Iron, Fe	95.9 %	95.9 %	as balance

Component Elements Properties	Metric	English	Comments
Manganese, Mn	0.30 %	0.30 %	
Molybdenum, Mo	0.30 %	0.30 %	
Silicon, Si	1.9 %	1.9 %	
Vanadium, V	0.20 %	0.20 %	

Chemical Properties	Metric	English	Comments
Critical Temperature	766 °C	1410 °F	

## Contact Songhan Plastic Technology Co.,Ltd.

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