

Schmolz + Bickenbach Formadur® 2083 Superclean Plastic Mold Steel

Category : Metal , Ferrous Metal , Martensitic , Tool Steel , Mold Steel

Material Notes:

Description: Formadur 2083 Superclean is an electro slag remelted (ESR) martensitic stainless steel developed for corrosion resistant applications and Supplied in the annealed condition Characteristics: Good corrosion resistance; Good polishability; and High Hardness Applications: Molds for processing corrosive plastics and Extrusion dies for processing corrosive plastics Stress Relieving (Heat Treatment): 1200°F; Cooling: Furnace hold time 2 hours slowly cool in furnace to 920°F and them air cool; Hardness:

Order this product through the following link:

http://www.lookpolymers.com/polymer_Schmolz-Bickenbach-Formadur-2083-Superclean-Plastic-Mold-Steel.php

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

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	46	46	
	@Treatment Temp. 650.0 °C	@Treatment Temp. 1202 °F	
	49	49	
	@Treatment Temp. 600.0 °C	@Treatment Temp. 1112 °F	
	54	54	
	@Treatment Temp. 300 °C	@Treatment Temp. 572 °F	
Tensile Strength	54	54	
	@Treatment Temp. 400 °C	@Treatment Temp. 752 °F	
	55	55	
	@Treatment Temp. 500 °C	@Treatment Temp. 932 °F	
	56	56	
	@Treatment Temp. 550.0 °C	@Treatment Temp. 1022 °F	
Tensile Strength	1410 MPa	205000 psi	45 HRC
	@Temperature -5.56 °C	@Temperature 22.0 °F	
Tensile Strength	1720 MPa	250000 psi	50 HRC
	@Temperature -5.56 °C	@Temperature 22.0 °F	

Mechanical Properties	2000 MPa Metric	290000 psi English	Comments
	@Temperature -5.56 °C	@Temperature 22.0 °F	
Tensile Strength, Yield	1240 MPa	180000 psi	45 HRC
	@Temperature 22.0 °C	@Temperature 71.6 °F	
	1450 MPa	210000 psi	50 HRC
	@Temperature 22.0 °C	@Temperature 71.6 °F	
	1550 MPa	225000 psi	55 HRC
	@Temperature 22.0 °C	@Temperature 71.6 °F	
Elongation at Yield	8.0 %	8.0 %	55 HRC
	@Temperature 22.0 °C	@Temperature 71.6 °F	
	10 %	10 %	50 HRC
	@Temperature 22.0 °C	@Temperature 71.6 °F	
	12 %	12 %	45 HRC
	@Temperature 22.0 °C	@Temperature 71.6 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	11.2 µm/m-°C	6.20 µin/in-°F	
	@Temperature 21.1 - 93.3 °C	@Temperature 70.0 - 200 °F	
	11.5 µm/m-°C	6.40 µin/in-°F	
	@Temperature 21.1 - 204 °C	@Temperature 70.0 - 400 °F	
	11.5 µm/m-°C	6.40 µin/in-°F	
	@Temperature 21.1 - 288 °C	@Temperature 70.0 - 550 °F	
Thermal Conductivity	22.5 W/m-K	156 BTU-in/hr-ft²-°F	
	@Temperature 93.3 °C	@Temperature 200 °F	
	23.1 W/m-K	160 BTU-in/hr-ft²-°F	
	@Temperature 149 °C	@Temperature 300 °F	
	23.5 W/m-K	163 BTU-in/hr-ft²-°F	
	@Temperature 204 °C	@Temperature 400 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.42 %	0.42 %	

Component Elements Properties	Metric	English	Comments
Chromium, Cr	18 %	18 %	
Iron, Fe	86.58 %	86.58 %	

Processing Properties	Metric	English	Comments
Annealing Temperature	760 - 799 °C	1400 - 1470 °F	Soft; Cooling: Furnace 20°F/hour to 1200 °F/ Then air cooled; < 230 HB

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