International Mold Steel PX5 Pre-Hardened Mold Steel (P20 Type)

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

Material Notes:

PX5 is a modified P20, high performance, high precision, mold steel. Unique Characteristics: Exceptionally clean steel with uniform microstructure â€“ no pin holes, inclusions or hard spots. 30-33 HRc hardness.Uniform hardness throughout, even in heavy sections.75% tougher than typical chrome-moly steels.Patented chemistry suppresses weld cracking and hardness elevation in the heat affected zone, eliminating the need for pre-heating and post-heating in most welding situations.Machines 30-50% faster than any other P20-type steel.Never needs stress relieving, even after heavy machining.Applications:plastic moldsrubber moldspress platensdiesInformation provided by International Mold Steel.

Order this product through the following link:
http://www.lookpolymers.com/polymer_International-Mold-Steel-PX5-Pre-Hardened-Mold-Steel-P20-Type.php

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	30 - 33	30 - 33	
Tensile Strength, Ultimate	961 MPa	139000 psi	at Center, Transverse
	961 MPa	139000 psi	at Center, Longitudinal
	981 MPa	142000 psi	at Surface, Longitudinal
	981 MPa	142000 psi	at Surface, Transverse
Tensile Strength, Yield	843 MPa	122000 psi	at Center, Longitudinal
	843 MPa	122000 psi	at Center, Transverse
	863 MPa	125000 psi	at Surface, Transverse
	863 MPa	125000 psi	at Surface, Longitudinal
Impact	4.6	4.6	(kgf m/cm²), Impact Toughness at Center, Transverse
	4.8	4.8	(kgf m/cm²), Impact Toughness at Surface, Transverse
	6.7	6.7	(kgf m/cm²), Impact Toughness at Center, Longitudinal
	8.2	8.2	(kgf m/cm²), Impact Toughness at Surface, Longitudinal

Thermal Properties	Metric	English	Comments
CTE, linear	11.9 Âµm/m-Â°C @Temperature 30.0 - 100 Â°C	6.60 Âµin/in-Â°F @Temperature 86.0 - 212 Â°F	

Thermal Properties	Metric	English	Comments
	12.8 Âµm/m-Â°C @Temperature 30.0 - 200 Â°C	7.10 Âµin/in-Â°F @Temperature 86.0 - 392 Â°F	
	13.1 Âµm/m-Â°C @Temperature 30.0 - 300 Â°C	7.30 Âµin/in-Â°F @Temperature 86.0 - 572 Â°F	
	13.5 Âµm/m-Â°C @Temperature 30.0 - 400 Â°C	7.50 Âµin/in-Â°F @Temperature 86.0 - 752 Â°F	
	14.0 Âµm/m-Â°C @Temperature 30.0 - 600.0 Â°C	7.80 Âµin/in-Â°F @Temperature 86.0 - 1112 Â°F	
Specific Heat Capacity	0.473 J/g-Â°C @Temperature 20.0 Â°C	0.113 BTU/lb-Â°F @Temperature 68.0 Â°F	
	0.490 J/g-Â°C @Temperature 100 Â°C	0.117 BTU/lb-Â°F @Temperature 212 Â°F	
	0.544 J/g-Â°C @Temperature 200 Â°C	0.130 BTU/lb-Â°F @Temperature 392 Â°F	
	0.561 J/g-Â°C @Temperature 300 Â°C	0.134 BTU/lb-Â°F @Temperature 572 Â°F	
	0.628 J/g-Â°C @Temperature 400 Â°C	0.150 BTU/lb-Â°F @Temperature 752 Â°F	
Thermal Conductivity	38.76 W/m-K @Temperature 400 Â°C	269.0 BTU-in/hr-ftÂ²-Â°F @Temperature 752 Â°F	
	39.20 W/m-K @Temperature 300 Â°C	272.0 BTU-in/hr-ftÂ²-Â°F @Temperature 572 Â°F	
	42.03 W/m-K @Temperature 200 Â°C	291.7 BTU-in/hr-ftÂ²-Â°F @Temperature 392 Â°F	
	42.34 W/m-K @Temperature 100 Â°C	293.8 BTU-in/hr-ftÂ²-Â°F @Temperature 212 Â°F	
	42.42 W/m-K	294.4 BTU-in/hr-ftÂ²-Â°F	

Thermal Properties	Metric	English	Comments
	@Temperature 20.0 Â°C	@Temperature 68.0 Â°F	

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