

Bohler-Uddeholm P20 PREMIUM MODIFIED Pre-hardened Mold Steel

Category : Metal , Ferrous Metal , Alloy Steel , Chrome-moly Steel , Tool Steel , Mold Steel

Material Notes:

Cr-Mo alloyed steel P20 Modified offers the following benefits: No hardening risks, No hardening costs, Time saving, e.g. no waiting for heat treatment, Lower tool cost (e.g. no distortion to rectify), Modifications easily carried out, Can be subsequently nitrided to increase surface wear resistance or locally flame hardened to reduce surface damage. Manufactured to consistently high quality standards, P20 modified has good polishing and texturing properties, good machinability and uniformed hardness. Heavier sections are supplied premachined which offers the following advantages compared with unmachined material: Saving of weight, Non-decarburized surface, Exact nominal size (plus tolerance), Less machining, Absence of scale minimizes machine and tool wear. Applications: For large injection and compression molds, Extrusion dies for thermoplastics, Blow mold, High strength holders, plates and bolsters, Forming tools, press-brake dies (possibly flame hardened or nitrided), Aluminum die casting prototype dies, Zinc die casting dies, Long run die shoes, Structural components, shafts.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Bohler-Uddeholm-P20-PREMIUM-MODIFIED-Pre-hardened-Mold-Steel.php

Physical Properties	Metric	English	Comments
Density	7.81 g/cc	0.282 lb/in ³	hardened to 310 HB
	7.75 g/cc	0.280 lb/in ³	hardened to 310 HB
	@Temperature 199 °C	@Temperature 390 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	285 - 340	285 - 340	Hardened and tempered (Delivery condition)
Tensile Strength, Ultimate	951 - 1100 MPa	138000 - 160000 psi	hardened to 300 HB
Tensile Strength, Yield	>= 696 MPa	>= 101000 psi	hardened to 300 HB
Elongation at Break	>= 12 %	>= 12 %	hardened to 300 HB
Modulus of Elasticity	205 GPa	29700 ksi	(hardened to 310 HB)
	200 GPa	29000 ksi	hardened to 310 HB
	@Temperature 199 °C	@Temperature 390 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	12.6 µm/m-°C	7.00 µin/in-°F	hardened to 310 HB
	@Temperature 199 °C	@Temperature 390 °F	
Specific Heat Capacity	0.460 J/g-°C	0.110 BTU/lb-°F	hardened to 310 HB
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	29.0 W/m-K	201 BTU-in/hr-ft ² -°F	

Thermal Properties	Metric @ Temperature 20.0 °C	English @ Temperature 68.0 °F	Comments hardened to 310 HB
	29.5 W/m-K	205 BTU-in/hr-ft ² -°F	hardened to 310 HB
	@Temperature 199 °C	@Temperature 390 °F	

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