

Industeel Superplast[®] 400 High Hardness Mold Steel

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

Material Notes:

SUPERPLAST[®] 400 is an injection plastic mold steel pre-hardened to a high level of hardness. It is delivered at a typical hardness of 125 kg/mm². This steel is specially adapted for heavy-duty molds used for production of long series, for compression molds or when an improved wear resistance is expected. SUPERPLAST[®] 400 will be ideal where a high resistance of the mating plan surface is required and when the conventional 300 HB or even conventional high hard material cannot ensure adapted properties. SUPERPLAST[®] 400 exhibits processing aptitudes strongly improved compared to conventional steel W1.2711 or equivalent, heat treated to same hardness. This improvement mainly results from a new chemical balance. SUPERPLAST[®] 400, delivered at 350 to 380 HB, has excellent weldability, a better micro structural homogeneity and a much better machinability than conventional grades heat treated to the same level or even lower hardness. All injection molds demanding high mechanical properties: long series; high injection series; injection of reinforced plastics (glass fibers); wear problems; compression molds

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-Superplast-400-High-Hardness-Mold-Steel.php

Physical Properties	Metric	English	Comments
Density	7.80 g/cc	0.282 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	360	360	
Tensile Strength, Ultimate	1250 MPa	181000 psi	
Tensile Strength, Yield	1075 MPa	155900 psi	
Elongation at Break	>= 10 %	>= 10 %	
Modulus of Elasticity	210 GPa	30500 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	10.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	6.00 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 100 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 212 $\text{Å}^\circ\text{F}$	
	11.2 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	6.22 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 200 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 392 $\text{Å}^\circ\text{F}$	
	12.9 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	7.17 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 300 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 572 $\text{Å}^\circ\text{F}$	
Specific Heat Capacity	0.460 J/g $\cdot\text{Å}^\circ\text{C}$	0.110 BTU/lb $\cdot\text{Å}^\circ\text{F}$	

Thermal Properties	Metric	English	Comments
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Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.30 %	<= 0.30 %	
Chromium, Cr	2.0 %	2.0 %	
Iron, Fe	>= 94.9 %	>= 94.9 %	
Manganese, Mn	1.15 %	1.15 %	
Molybdenum, Mo	0.65 %	0.65 %	
Nickel, Ni	1.0 %	1.0 %	
Sulfur, S	<= 0.020 %	<= 0.020 %	

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