

International Mold Steel DC53 General-Purpose Cold Work Die and Mold Steel

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

Material Notes:

Description: DC53 is a general-purpose cold work die and mold steel whose strength and toughness approach those of high-speed steels. **Unique Characteristics:** Higher hardness (62-63 HRC) than D2 after heat treatment. Twice the toughness of D2 with superior wear resistance. 20% higher fatigue strength than D2. Smaller primary carbides than D2 protect the die from chipping and cracking. Secondary refining process (DLF) reduces impurities. Machines and grinds up to 40% faster than D2. Less residual stress after wire EDMing. **Applications:** Plastic Molds, Stepped punch and press-punching dies, Concrete sprayer parts, rotor plates, Swaging dies and backers, Dies for cold forging, Thread-rolling circular dies, Piercing punch, Thread-rolling dies for heat-treated bolts, Forming dies, Stripper plates for lead frame blanking, Gauges, Screws for injection molding machines. Information provided by International Mold Steel.

Order this product through the following link:

http://www.lookpolymers.com/polymer_International-Mold-Steel-DC53-General-Purpose-Cold-Work-Die-and-Mold-Steel.php

Physical Properties	Metric	English	Comments
Specific Gravity	7.76 g/cc	7.76 g/cc	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	210 - 225	210 - 225	Annealed
Hardness, Rockwell C	62 - 63	62 - 63	
Modulus of Elasticity	150 GPa	21700 ksi	
Poissons Ratio	0.28	0.28	
Fatigue Strength	833 MPa @# of Cycles 1.00e+6	121000 psi @# of Cycles 1.00e+6	Heat treatment: 1030Â°C, 520Â°C (x2), HRC63
Shear Modulus	58.5 GPa	8480 ksi	Modulus of Rigidity

Component Elements Properties	Metric	English	Comments
Carbon, C	0.95 %	0.95 %	
Chromium, Cr	8.0 %	8.0 %	
Manganese, Mn	0.40 %	0.40 %	
Molybdenum, Mo	2.0 %	2.0 %	
Silicon, Si	1.0 %	1.0 %	
Vanadium, V	0.30 %	0.30 %	

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