



钜研特殊钢



A-2

产品资料

苏州钜研精密模具钢材有限公司  
Suzhou PROMAX Precision mould steel co., LTD

<http://www.promaxs.com>

## AISI A2

## DCF

An air-hardening tool steel containing five percent chromium. Replaces the oil hardening (O1 type) when safer hardening, less distortion and increased wear-resistance are required. Provides an intermediate grade between the oil hardening and the high carbon, high chromium (D2) types.

### TYPICAL APPLICATIONS

Large Blanking Dies, Thread Roller Dies, Long Punches, Rolls, Master Hubs, Trimming Dies, Forming Dies, Precision Tools, Gauges, Coining Dies, Extrusion Dies, Mandrels, Shear Blades and Slitters.

TYPICAL ANALYSIS	TYPE A2 (UNS T30102)
Carbon (C)	.95/1.05
Manganese (Mn)	1.00 max
Silicon (Si)	.50 max
Tungsten (W)	
Molybdenum (Mo)	.90/1.40
Chromium (Cr)	4.75/5.50
Vanadium (V)	.15/.50
Nickel (Ni)	.30 max
FORGING (a) Start forging at	1850-2000°F (1010-1093°C)
Do not forge below	1650°F (899°C)
NORMALIZING (b)	Do not normalize
ANNEALING (c) Temperature	1550-1600°F (843-871°C)
Rate of cooling, max. per hour	40°F (22°C)
Typical annealed hardness, Brinell	201-235
HARDENING Rate of heating	Slowly
Preheat temperature	1450 °F (788°C)
Hardening temperature	1700-1800°F (927-962°C)
Time at temperature, minutes	20-45 (j)
Quenching medium	A (l)
TEMPERING Tempering temperature	350-1000°F (177-538°C)
Approx. tempered hardness, Rockwell C	57-62
WEAR RESISTANCE	High
TOUGHNESS	Medium
RESISTANCE TO SOFTENING EFFECT OF ELEVATED TEMPERATURE	Medium to High
DEPTH OF HARDENING	Deep
MACHINABILITY	Medium
GRINDABILITY	Medium
DISTORTION IN HEAT TREATING	Lowest
SAFETY IN HARDENING	Highest
RESISTANCE TO DECARBURIZATION	Medium

• Refer to pp. 14-24 thru 14-25 for notes (a) to (o) incl., explanation of letter O, A, S, B and W.



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