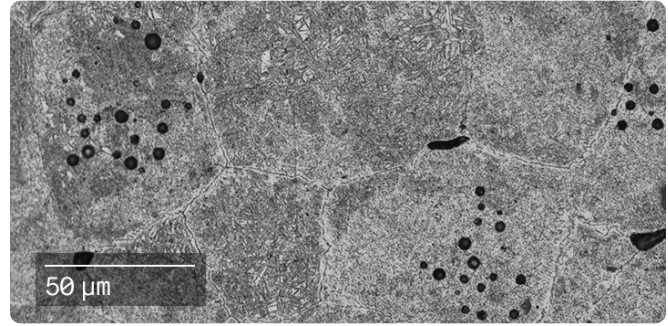


[Material Data Sheet]

A2 Tool Steel



COMPOSITION %

Fe	Balance
Cr	4.75 - 5.50
Mo	0.90 - 1.40
Mn	0.40 - 1.00
Si	0.10 - 0.50
V	0.15 - 0.50
C	0.95 - 1.05
P	0.03 (max)

OTHER STANDARD DESIGNATIONS ³

ASTM A681
UNS T30102
DIN 1.2363

MECHANICAL PROPERTIES ¹

	Standard	Studio System 2 ² After quench and temper
Compressive Yield strength (MPa)	ASTM E9	1820
Young's modulus (GPa)	ASTM E9	180
Transverse Rupture Strength (MPa)	ASTM B528	1255
Hardness (HRC)	ASTM E18	52
Density (g/cc)	ASTM B311	7.45

ATTRIBUTES & APPLICATIONS

Heat-treatable with high hardenability
High dimensional stability after heat treatment
Good toughness and wear resistance
Blanking and forming punches and dies
Tooling for plastic injection molding

1. Density, Hardness, TRS and Compressive Yield Strength data reported are mean values minus 1 sigma.

2. Heat treated samples were solutionized at 980°C for 30 minutes, air quenched, then double tempered at 204°C (400°F) for 2 hours per temper.

3. Listed designations are for reference purposes only. Composition and mechanical properties may vary.

End-use material performance is impacted (+/-) by certain factors including but not limited to part geometry and design, application and evaluation conditions, etc.