

Key Features

- High Compression Strength
- Low Distortion
- High Abrasion
- Wear Resistance Heat Treatment
- Mild Corrosion Resistance

Common Applications

- Knives
- Punches & dies Thread rollers
- Coining
- Heavy duty press tools

Material Description

Die steel, also known as tool steel, is a type of high-carbon alloy steel designed specifically for making tools and dies used in manufacturing processes. It is characterized by its high hardness, wear resistance, and ability to retain a sharp edge at elevated temperatures. Die steels often contain elements such as tungsten, molybdenum, vanadium, and chromium to enhance their durability and performance under harsh conditions. Common types of die steel include D2, H13, and A2, each suited for different applications like cutting, stamping, and extrusion. Die steels are crucial in industries such as automotive, aerospace, and manufacturing for creating precise and durable molds and dies.

Chemical Composition (%)

	C	Cr	Co	Fe	Mn	Mo	P	Si	S	V
Min.	1.4	11		80.8		0.70				
Max.	1.6	13	1.0	86.9	0.60	1.2	0.030	0.60	0.030	1.1

Mechanical Properties

Flexural Modulus	1,850 MPa
Tensile Modulus	1,950 MPa
Hardness	Rockwell C38
Elongation at Break	5%

Physical Properties

Density	0.278 lb/in ³ (7.70 g/cm ³)
Modulus of Elasticity	180 GPa
Melting Point	2,540–2,650°F (1,393–1,454 °C)

Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

InstaVoxel™ - On-Demand Manufacturing Expert

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InstaVoxel's quality control system is ISO-9001 certified, and all our partners hold relevant certifications.



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