

# D2

## TOOL STEEL

D2 is an air-hardening tool steel that offers outstanding hardness and abrasion resistance while still maintaining moderate toughness.

It's primarily used for cutting and forming tools, such as shear cutters, punches, dies, and stamping tools. This material remains stable throughout heat treatments, making it possible to fine-tune the final properties after sintering.

| Composition | Weight% |
|-------------|---------|
| Iron        | Balance |
| Carbon      | 1.5     |
| Silicon     | 0.3     |
| Manganese   | 0.5     |
| Vanadium    | 0.9     |
| Molybdenum  | 1       |
| Chromium    | 12      |

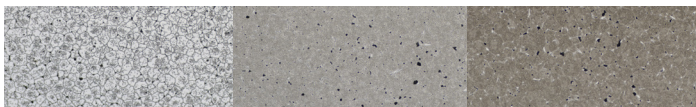
| Features & Benefits                   |
|---------------------------------------|
| High abrasion resistance & toughness  |
| Extremely hardenable                  |
| Excellent for cutting & forming metal |

\*Related standards: UNS T30402, ASTM A681, 1.2379 and SKD11

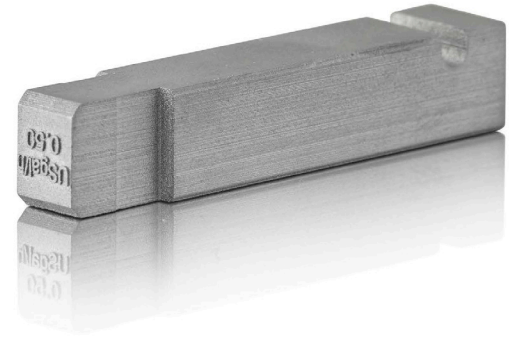
| Density             | Hardness (HRC) |
|---------------------|----------------|
| Relative            | 98%            |
| As Sintered         | 35             |
| Hardened            | 62             |
| Hardened + Tempered | 58             |

\*Hardening consists of a solution treatment with subsequent air quenching. Single tempering provides the results displayed.

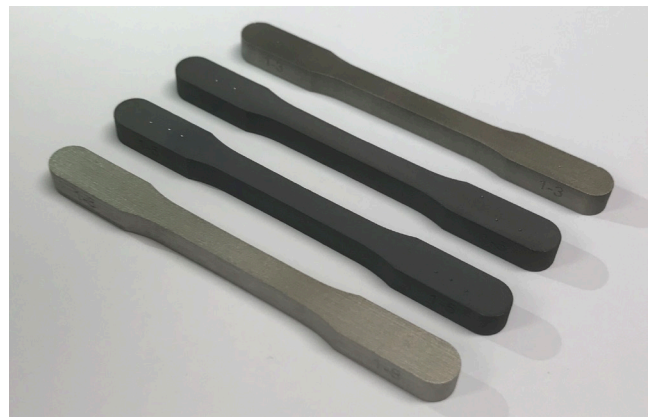
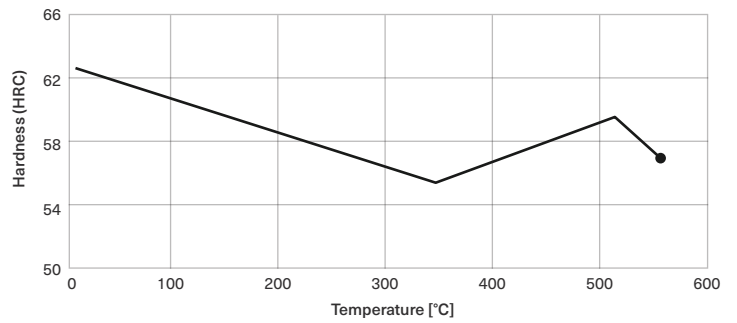
### Metallographic Structure



As Sintered      Hardened      Hardened + Tempered



HARDNESS CURVE FOR TEMPERING OF D2 TOOL STEEL



Specimens with subsequent process steps, bottom to top: as sintered, after hardening, after tempering and after blasting.

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