



AISI T1 T1 DIN 3355

HS-18-0-1

C 0.75 Si 0.30 Mn 0.35 Cr 4.10 V 1.25 W 17.85

Steel properties

Standard high-speed steel grade. Its well-balanced alloy composition forms the basis of its high toughness and good cutting edge retention, rendering it suitable for a large variety of applications.

Standards

AISI T1 AFNOR-Z80WCV18-04-01

Physical properties

Thermal conductivity at °C	20	350	700
W/(m•K)	32.8	23.5	25.5

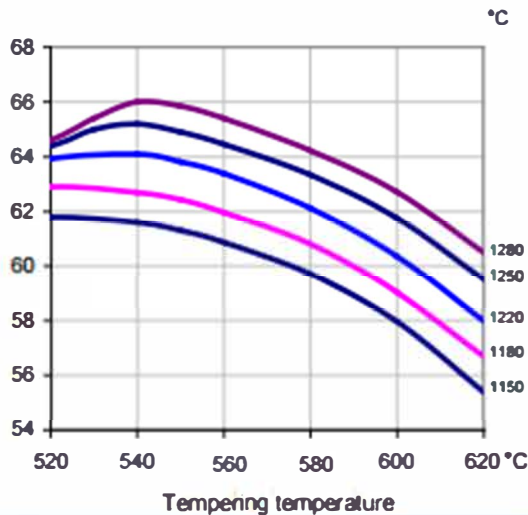
Applications

For all metal-cutting tools for roughing or finishing such as twist drills, diverse milling cutters, thread dies, broaches, reamers, countersinks, thread chasers, circular saw segments, shaping tools and woodworking tools. Also highly suitable for cold-forming tools such as cold extrusion rams and dies, as well as cutting and precision cutting tools, plastic moulds with elevated wear resistance and screws.

Heat treatment

Soft annealing °C	870-900	Cooling slowly	Hardness HB	max. 270	
Stress-relief annealing °C	610-700	Cooling Furnace			
1st pre-heating °C	2nd and 3rd pre-heating °C	Hardening °C	Quenching	Tempering °C	Hardness after tempering HRC
up to approx. 400 in an air-circulating furnace	a) 850 b) 850 and 1000	1190-1230	a) Saltbath, 550 °C b) Oil c) Air	at least twice 530-560	64-66

### Tempering Graph



Hardness after hardening, quenching and tempering

Tool	Hardening	Tempering
Single-edge cutting tools	1280°C	550-570°C
Multi-edge cutting tools	1180-1280°C	550-570°C
Cold work tools	1150-1200°C	550-570°C