



## ATT 2711 (2711 ISO-B)

### CHEMICAL ANALYSIS (PERCENTAGE BY MASS)

	C	Si	Mn	P	S	Cr	Ni	Mo	V
Guide analysis	0.52	0.20	0.70	0.020	0.020	0.75	1.75	0.30	0.10
Standard	0.50-0.60	0.15-0.35	0.50-0.80	≤ 0.025	≤ 0.025	0.60-0.80	1.50 - 1.80	0.25 - 0.35	0.07 - 0.12

### CHARACTERISTICS

High toughness, high compressive strength, polishable. Nitridable, hard-chrome platable, flame hardenable and grain-reliable as supplied.

### APPLICATION

For large injection and compression molds subject to high levels of mechanical and thermal stress. Contour hardening is recommended. At higher working hardness, also suitable for processing SMC and GMT, combined with surface coating where applicable.

### DELIVERED CONDITION

Annealed to max. 248 HB

Hardened and tempered to 280-325 HB (approx. 950-1,100 MPa) or to 355-415 HB (approx. 1,200-1,400 MPa)\*.

Alternatively, according to customer specifications

SEL	54NiCrMoV6
DIN EN ISO 4957	54NiCrMoV6
AFNOR	55NCDV7
AISI	~6F2
BS	~BH224

### PHYSICAL PROPERTIES

Thermal Conductivity (W/m.K) at	20°C	250°C	500°C
	36.0	37.5	34.8
Thermal Expansion (µm/m) from 20°C to	100°C	250°C	500°C
	11.0	12.4	13.5
Young's modulus (GPa)	20°C	250°C	500°C
	212	197	175

\* Surface hardness in Brinell, converted to DIN EN ISO 18265 Table A.1.

The information contained herein is intended to provide general knowledge on our products and their uses. It should not be construed as a warranty of specific properties of the products described, or a warranty of fitness for a particular purpose. Each user of products from Advanced Tooling Tek (Shanghai) Co Ltd ("ATT") is responsible for making its own determination as to the suitability of ATT's products and services.



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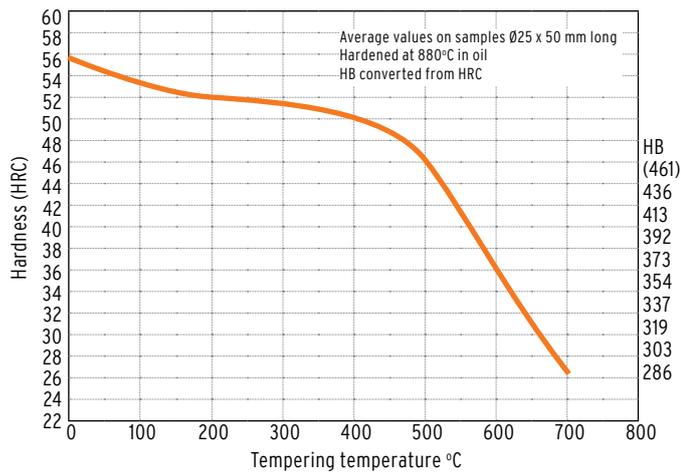


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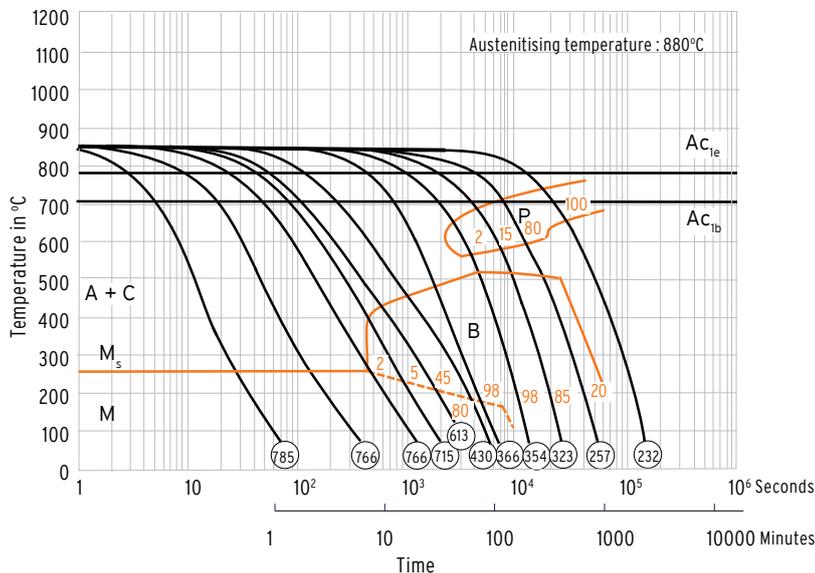
**HEAT TREATMENT**

	Temperature	Approx. 600°C in the annealed state Approx. 540°C in the hardened and tempered state
Stress relieving	400 - 450°C	1 hour per 50 mm wall thickness
	Cooling	Furnace
Soft annealing	Temperature	700°C
	Duration	1 hour per 25mm wall thickness
	Cooling	Furnace
Hardening	Temperature	880°C
	Duration	1 min per mm wall thickness
Quenching hardness	Max. 56 HRC	in water/oil, protective atmosphere/oil, oil, hot bath or vacuum
Tempering	Temperature	See tempering curve
	Duration	1 hour per 25 mm wall thickness
	Cooling	Air
Working hardness	280-415 HB	

**Tempering curve**



**TTT curve (continuous)**



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