



ATT 2738 MOD TS ATT 2738 MOD TS HH

CHEMICAL ANALYSIS (PERCENTAGE BY MASS)

	C	Si	Mn	P	S	Cr	Ni	Mo	V
Guide analysis	0.26	0.10	1.45	0.015	0.002	1.25	1.05	0.50	0.10

CHARACTERISTICS

Newly developed plastic mould steel, which compared with grades ATT 2311 and ATT 2738, ATT 2738 MOD TS offers:

- higher hardness and better through-hardening
- polishability to grain size 600 (high-gloss polishing characteristics on request)
- grain reliability even with delicate grain designs, improved weldability, higher thermal conductivity.

Nitridable, hard-chrome platable, surface hardenable as supplied; thanks to the higher basic hardness, better supporting effect for surface-finishing processes (e.g. PVD coating).

APPLICATION

With no dimension restrictions for compression and injection moulds, for example for bumpers, instrument panels, chairs, garbage containers, bottle crates, TV cabinets, etc.

DELIVERED CONDITION

ATT 2738 MOD TS:

- hardened and tempered to 280–325 HB (approx. 950–1,100 MPa)*

ATT 2738 MOD TS HH:

- hardened and tempered to 310–355 HB (approx. 1,050–1,200 MPa)*

PHYSICAL PROPERTIES

Thermal Conductivity (W/m.K) at	20°C	250°C	500°C
	37.4	41.3	39.8
Thermal Expansion (µm/m) from 20°C to	100°C	250°C	500°C
	10.8	12.2	13.9
Young's modulus (GPa)	20°C	250°C	500°C
	204	188	160

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

SEL

~26MnCrNiMo6-5-4

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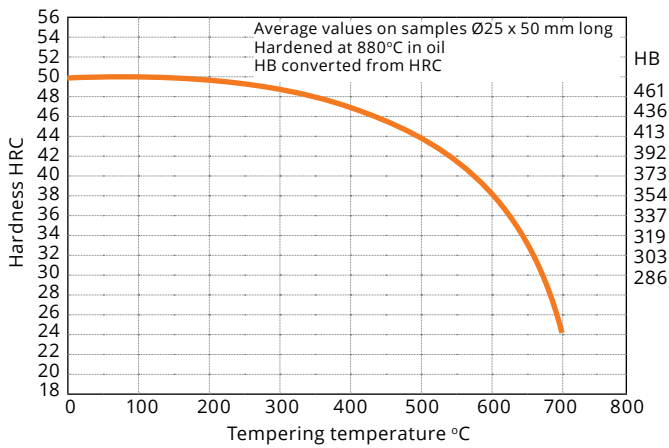


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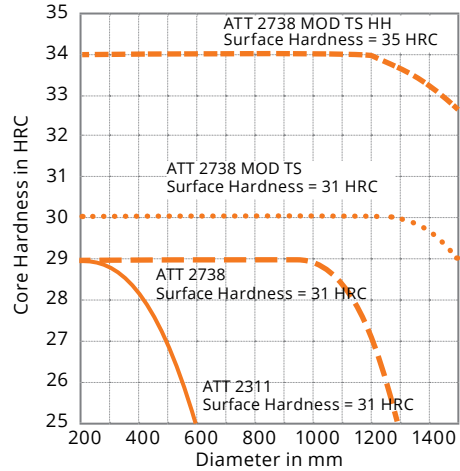
HEAT TREATMENT

Stress relieving	Temperature	Approx. 600°C in the annealed state Approx. 560°C in the quenched and tempered state
	Duration	1 hour per 50 mm wall thickness
	Cooling	Furnace
Soft annealing	Temperature	720°C
	Duration	1 hour per 25mm wall thickness
	Cooling	Furnace
Hardening	Temperature	880°C
	Duration	1 min per mm wall thickness
Quenching hardness	Max. 50 HRC	in oil, hot bath or vacuum
	Temperature	See tempering curve
Tempering	Duration	1 hour per 25 mm wall thickness
	Cooling	Air
Working hardness	280-325 HB	ATT 2738
	310-355 HB	ATT 2738 HH

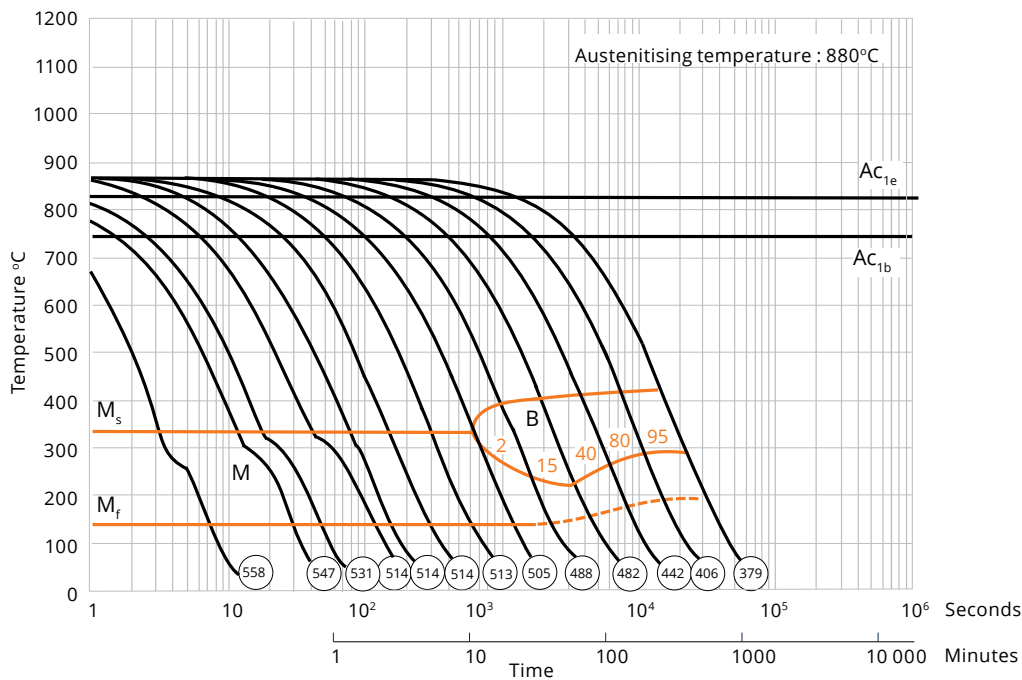
Tempering curve



Through-hardenability (schematic)



TTT curve (continuous)



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