

Wr.Nr.	PN	EN	GOST	AISI
1.0503	45	C45	45	1045

CHEMICAL COMPOSITION

Chemical composition (in weight %)

Element	C	Si	Mn	P	S	Cr	Mo	Ni	Cu
min	0.42	0.10	0.50	max.	max.	max.	max.	max.	max.
max	0.50	0.40	0.80	0.045	0.045	0.40	0.10	0.40	0.30

APPLICATION

Unalloyed structural steel for components in general machine building and vehicle construction. For moderately loaded elements of machines and devices, such as: spindles, axles, shafts, non-hardened gears, electric motor shafts, discs, screws, levers, regular knives, corkscrews, wheel hubs, rods, rollers, pump impellers.

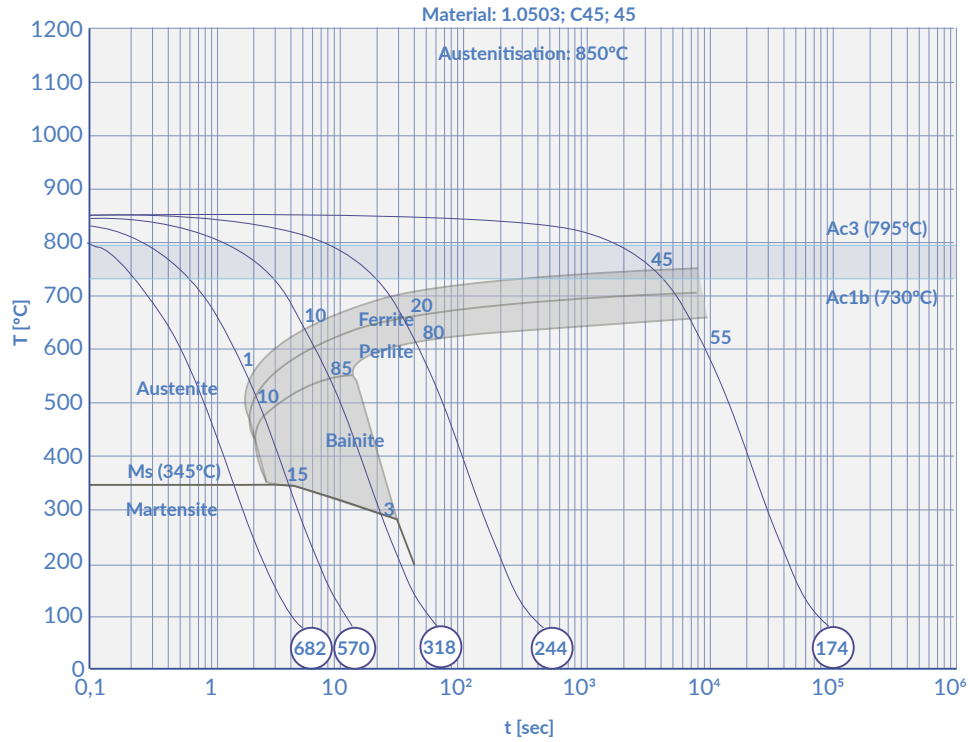
TREATMENT

Normalising	840 - 880 °C at least 30 min. austenitizing time (approx.)
Hardening	820 - 860 °C / water or oil, at least 30 min. austenitizing time (approx.)
Tempering	550 - 660 °C min. 60 min. (approx.)
Soft annealing	680 - 710 °C

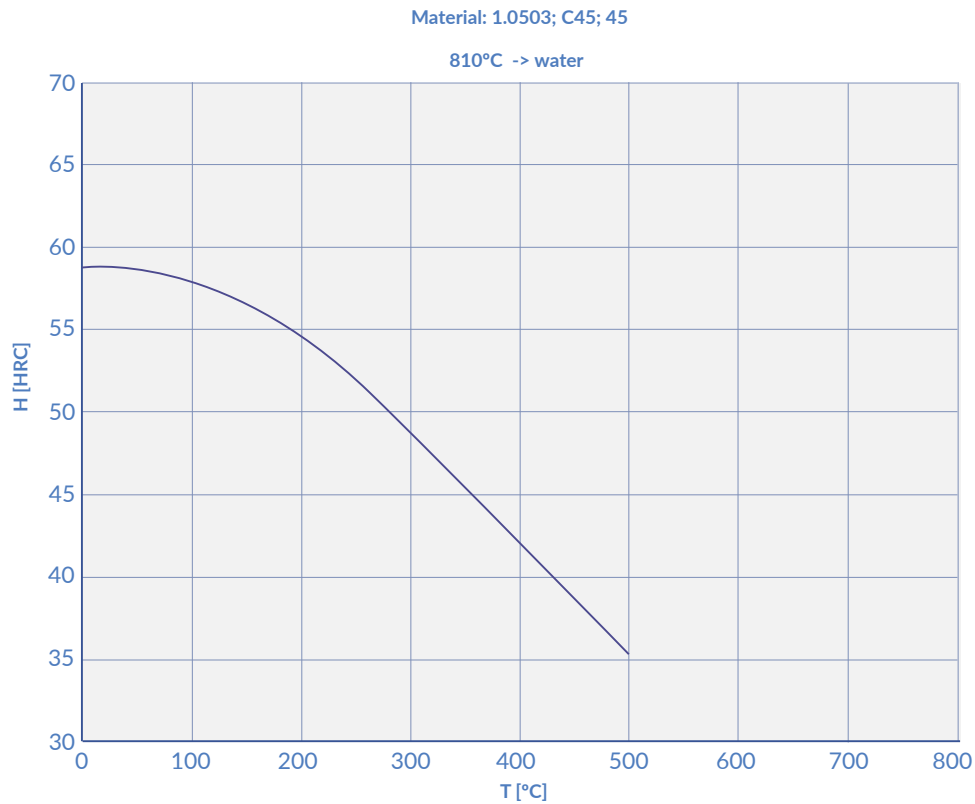
MECHANICAL PROPERTIES

Condition	Quenched and tempered (+QT)	Normalised (+N)	Treated to improve shearability (+S)	Soft annealed (+A)
Hardness [HB]	Depend on diameter and thickness		max. 255	-

CONTINUOUS COOLING TRANSFORMATION (CCT) DIAGRAM



TEMPERING DIAGRAM



NOTE: All technical information is for reference only.