

1.8509

41CrAlMo7 / 38HMJ

NITRIDING STEEL

APPLICATION

For construction parts with high surface hardness. For parts subject to friction such as cylinders, bushings, camshafts, extruders, straighteners.

CHEMICAL COMPOSITION

Chemical composition (in weight %)

Element	C	Si	Mn	P	S	Cr	Mo	Al
min	0.38	max.	0.40	max.	max.	1.50	0.20	0.80
max.	0.45	0.40	0.70	0.025	0.035	1.80	0.35	1.20

TREATMENT

Normalizing	890 -920°C / air
Soft annealing	650 -750°C / air
Hardening	870 -930°C / oil or water
Tempering	580 -700°C min. 1h
Nitriding	480 -570°C

MECHANICAL PROPERTIES

Condition	Quenched and tempered (+QT)	Soft annealed (+A)	Nitrided surface hardness (approx.)
Hardness [HB]	Depend on diameter and thickness	max. 248	-
Hardness [HV]	-	-	950

CONTINUOUS COOLING TRANSFORMATION (CCT) DIAGRAM

