

38HMJ (1.8509) ~41CrAlMo7

stock sizes [mm]

round bars

from Φ 16 mm to Φ 400 mm diameter; also toughened to 30 HRC

Description:

Chromium molybdenum nitriding steel with aluminium

Application:

for components with high surface hardness > 900 HV and core strength ~1000 MPa

Chemical composition [%]

C	Mn	Si	P	S	Cr	Ni	Mo	W	V	Co	Al
0,35-0,42	0,3-0,6	0,17-0,37	max 0,025	max 0,025	1,35-1,65	max 0,25	0,15-0,25	max 0,2	max 0,05	-	0,7-1,1

Equivalents

PN	W. nr	EN	AISI	Russia (GOST)	Other
38HMJ	1.8509	41CrAlMo7	6431	38Ch2MJuA	A290

Processes

welding	NO	
forging	YES	
rolling	YES	
nitriding	YES	
hardening	YES	temp. 880 – 940 [°C]
tempering	YES	temp. 570 – 650 [°C]

Hardness

after toughening	67 HRC
after softening	205 HB
Rm	980 MPa
Re	830 MPa