

PASARGAD ALLOY STEEL

MATERIAL SPECIFICATION SHEET



PASCO-16MnCr5

Material no: 1.7131	Material group Case hardening steels	International steel grades SAE: 5115 AFNOR: 16MC5 BS: 527M17
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Chemical composition is according to the DIN EN 10084

Chemical composition: (Typical analysis in wt %)	Steel grade	C	Mn	Si	P	S	Cr
	16Mn-Cr5	0.17%	1.25%	0.25%	0.01%	0.005%	0.95%

Application: Small cog wheels, arbors, cardan joints, parts of control

Hot forming and heat treatment temperature	Hot working	850-1150 °C
	Soft annealing	650-700 °C/furnace
	Normalising	840-870 °C/air
	Carburizing	880-980 °C
	Surface hardening	780-820 °C
	Quenching media	Oil/water/polymer
	Tempering	150-200 °C

Delivery condition	As rolled
Dimensional tolerance	According to the EN 10060
ASTM grain size number	5-10
Cleanliness test K4 DIN 50602	<10
Bulk hardness test (HBW)	130-190
Surface quality	Class D according to the EN 10221

Hardenability (Jominy Test)

Standard	Austenitizing temperature	Distance (mm)	1.5	3	5	7	9	11	13
ISO 642/EN 10084	870°C	HRC	39	36	34	27	22	21	19
		Distance (mm)	15	20	25	30	35	40	45
		HRC	17	13	11	9	7	6	3