

# NAK 80

Trade Name	Technical Delivery Condition	P-H Hardness	Typical Chemical Composition							
			C	Si	Mn	Cr	Ni	Cu	Al	
NAK80	Precipitation Hardened	38 - 42 HRC	0.13	0.30	2.0	0.35	3.5	1.2	1.2	+ Special additions

Werkstoff	DIN standard	AISI	BS	JIS	SIS	UNI
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## Advantages

- No heat treatment required in the precipitation hardened condition of supply
- high hardness of up to 44 HRC after precipitation hardened
- isotropic mechanical properties
- good machinability in the precipitation hardened condition of supply
- excellent electrical discharge machinability
- excellent polishability
- excellent weldability
- suited for gas and bath nitriding treatments serving to improve surface wear resistance; no hardness decrease during bath nitriding thanks to high retention of hardness at temperatures up to 570°C (low over ageing tendency); in the solution annealed condition, nitriding and precipitation hardening can be carried out in one step
- suited for chromium plating and for any other type of surface coating
- simple heat treatment in the solution annealed condition of supply (for order please inquire)
- minimum dimensional changes during precipitation hardening

## Type of steel and characteristics:

NAK80 is a precipitation hardening steel grade for plastic moulds, featuring good machinability in the as supplied, precipitation hardened condition.

## Applications:

- High-precision plastic injection moulds e.g. for the production of camera parts and electronic parts,
- Compression moulds for all types, e.g. for plastic container,
- Moulds for the processing of elastomers,
- Moulds for the production of packing rings (O-ring seals)
- Moulds for the production of tire segments (rubber materials) and
- High-precision components for mechanical engineering.

## Heat Treatment:

Solution Annealed 900°C

Age hardening (Soaking time 4 hours)	Harness Obtainable
450°C	41 HRC
500°C	44 HRC
550°C	41.5 HRC
600°C	34 HRC