



ALPHA 4 (ESR)

Forged High Speed Steel

Chemical composition

	C	Cr	Mo	W	Co	V
ALPHA4	1.3	4.2	4.5	5.5	-	4.0
ALPHA1	0.8	4.0	8.5	1.7	-	1.2
ALPHA2	0.9	4.2	5.0	6.5	-	1.9
ALPHA3	1.2	4.1	5.0	6.2	-	3.0
ALPHA7	1.0	4.0	8.6	1.8	-	1.9

Standards; AISI M4. Werkstoff 1.3395. JIS SKH54

Properties

	Hardness HRC
ALPHA4	≤ 66
ALPHA1	≤ 65
ALPHA2	≤ 64
ALPHA3	≤ 66
ALPHA7	≤ 66

	Density g/cm ³	Young's modulus GPa
ALPHA4	8.0	225

Comparative properties

	Wear resistance	Toughness	Grindability
ALPHA4	—————	———	———
ALPHA1	———	—————	—————
ALPHA2	—————	—————	—————
ALPHA3	—————	—————	———
ALPHA7	—————	———	—————

Description

Conventional high speed steel manufactured according to Union Electric Åkers specification.

ALPHA4 is also available further refined by ESR (Electro Slag Remelting).

ALPHA4 is supplied in through hardened condition.

Applications

Work rolls in 20-high mills for cold rolling of ferrous and non ferrous products.

Features & Benefits

- Extremely high wear resistance.
- Suitable for rolling very thin gauges.
- ALPHA4 has a moderate grindability and CBN grinding wheels are recommended.