Product Data



ALPHA 4 (ESR)

Forged High Speed Steel

Chemical composition

ALPHA1 0.8 4.0 8.5 1.7 - 1.2 ALPHA2 0.9 4.2 5.0 6.5 - 1.8 ALPHA2 0.9 4.2 5.0 6.5 - 1.8 ALPHA2 0.9 4.2 5.0 6.2 - 3.0							
ALPHA1 0.8 4.0 8.5 1.7 - 1.2 ALPHA2 0.9 4.2 5.0 6.5 - 1.8 ALPHA2 1.2 4.1 5.0 6.2 - 3.0		С	Cr	Мо	W	Со	V
ALPHA2 0.9 4.2 5.0 6.5 - 1.5 ALPHA3 1.2 4.1 5.0 6.2 - 3.0	ALPHA4	1.3	4.2	4.5	5.5	-	4.0
ALPHA3 1.2 4.1 5.0 6.2 - 3.0	ALPHA1	0.8	4.0	8.5	1.7	-	1.2
	ALPHA2	0.9	4.2	5.0	6.5	-	1.9
ALPHA7 10 40 86 18 - 19	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	5
ALPHA4	≤ 66	
ALPHA1	≤ 65	
ALPHA2	≤ 64	
ALPHA3	≤ 66	
ALPHA7	≤ 66	
	Density g/cm ³	Young's modulus

ALPHA4	8.0	225
	g/cm ³	modulus GPa

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.

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