

SUPRA 4

PM High Speed Steel

Chemical composition

	C	Cr	Mo	W	Co	V
SUPRA4	1.28	4.2	5.0	6.4	8.5	3.1
SUPRA1	1.50	4.0	2.5	2.5	-	4.0
SUPRA3	1.28	4.1	5.0	6.4	-	3.1
SUPRA5	2.48	4.2	3.1	4.2	-	8.0
SUPRA6	2.30	4.2	7.0	6.5	10.5	6.5

Properties

	Hardness HRC
SUPRA4	≤ 67
SUPRA1	≤ 64
SUPRA3	≤ 66
SUPRA5	≤ 65
SUPRA6	≤ 68

	Density g/cm ³	Young's modulus GPa	Thermal conductivity W/m°C
SUPRA4	8.1	240	24

Comparative properties

	Wear resistance	Toughness	Grindability
SUPRA 4	—	—	—
SUPRA 1	—	—	—
SUPRA 3	—	—	—
SUPRA 5	—	—	—
SUPRA 6	—	—	—

Description

Forged high speed steel produced by utilizing powder metallurgy technique. Manufactured according to Union Electric Åkers specification.

The powder metallurgy technique allows design of high wear resistance grades as high alloy levels can be reached without uncontrolled growth of carbides.

SUPRA4 is supplied in through hardened condition.

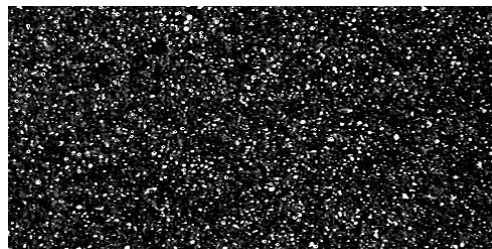
Applications

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

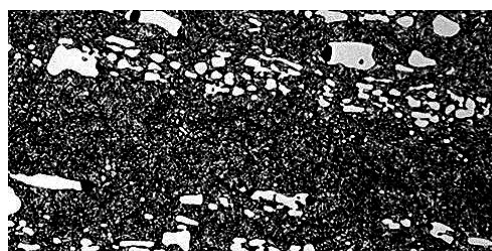
Work rolls in Z-high mills for cold rolling of ferrous and non ferrous products.

Features & Benefits

- High wear resistance.
- Good polishing ability.
- High toughness.
- High resistance to propagation of micro cracks.
- Even wear across entire roll barrel due to homogenous carbide distribution.
- Powder metallurgy steels maintain the surface finish longer before redressing will be necessary.



Microstructure PM Steel SUPRA



Microstructure Tool Steel AISI D2, 12% Cr

Union Electric Åkers
www.uniones.com

These data are indicative and can be changed at any time without prior notice