

THERMODUR MBP

Premium Grade for Mandrel Bars



Chemical composition

in %

C	Si	Mn	Cr	Mo	V
0.35	0.30	0.30	5.00	1.85	0.70

Physical properties

Coefficient of thermal expansion	in 10^{-6} K^{-1}	Thermal conductivity	in W/(m K)
20 – 100 °C	11.5	20 °C	28.3
20 – 200 °C	12.0	100 °C	29.3
20 – 300 °C	12.3	200 °C	30.9
20 – 400 °C	12.6	300 °C	31.0
20 – 500 °C	12.9	400 °C	30.7
20 – 600 °C	13.2	500 °C	29.5
		600 °C	27.8

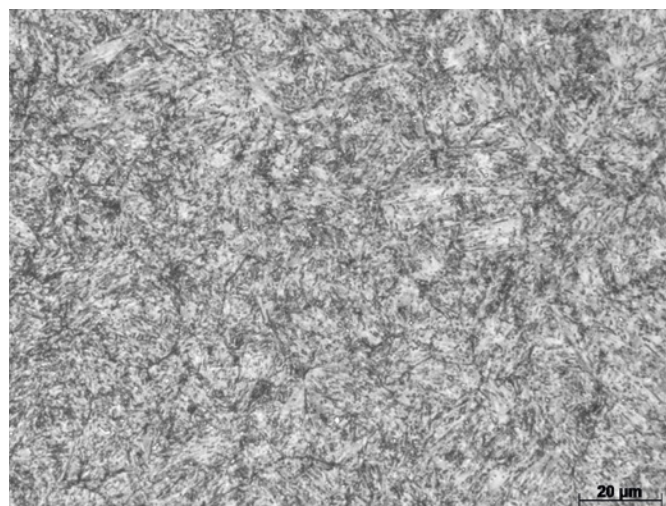
Material properties

- Improved insensibility to hot cracking
- Higher hot wear resistance
- High toughness
- Excellent high-temperature strength

Applications

- Special steel grade for mandrel bars

Microstructure



quenched and tempered state

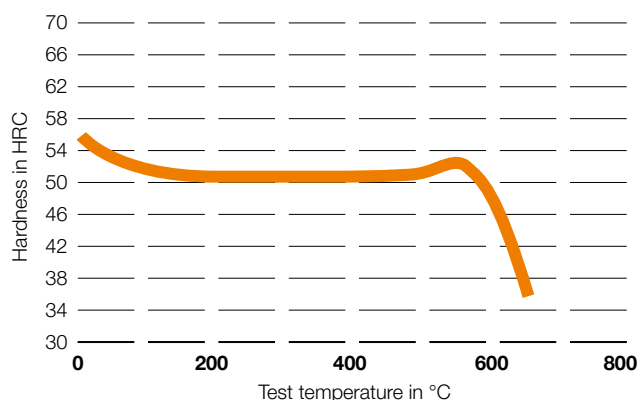


Heat treatment

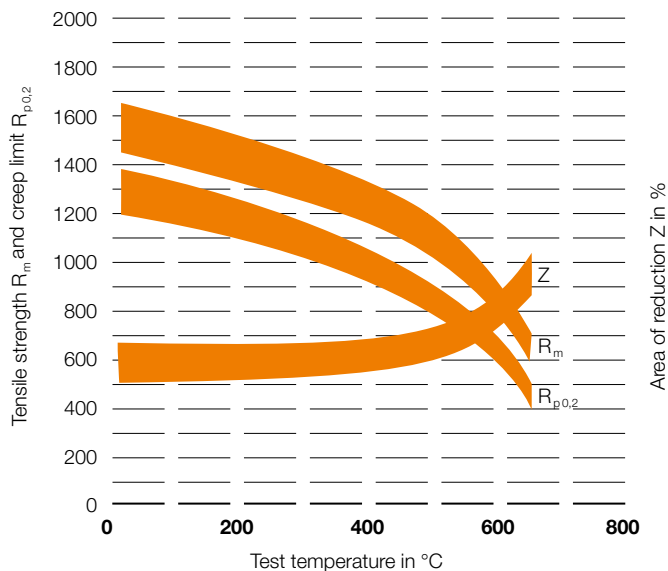
in %

Soft annealing (+A)	750 °C – 800 °C	Furnace	≤ 230 HB
Hardening	1020 °C – 1040 °C	air, oil, saltbath	55 HRC Hardness after quenching
Tempering	300 °C 400 °C 500 °C 550 °C 600 °C 650 °C	Air	51 51 52 51 48 36

Tempering diagram



High-Temperature strength diagram



General note (liability)

Not liable for printing errors, omissions and/or changes. All statements regarding the properties and/or utilization of the materials or products mentioned are for purpose of description only. Product specific data sheet have priority over the information provided in this brochure. The desired performance characteristics are binding only if exclusively agreed upon in writing at the conclusion of the contract.

Swiss Steel Group
info.tool@swisssteelgroup.com
www.swisssteel-group.com

Find your local contact:

