

SICAK İŞ TAKIM ÇELİKLERİ

Mevcut Ürün Şekilleri

Uzun Ürünler

Ürün Tanımı

BÖHLER W722 VMR is not a classic hot work tool steel, but an ultra-high strength maraging steel. Compared to quenched and tempered steels, the material generates its high strength not through a hardened and tempered martensitic structure with a high carbon content and secondary hardening carbides, but through the precipitation of intermetallic phases from a tough nickel martensitic matrix. BÖHLER W722 VMR corresponds to material number 1.2709 (X3NiCoMoTi18-9-5) and has proven to be ideally suited for many tool steel applications in cold and hot work up to 450 °C. The Steel also is available as powder material for metal-3D-printing under the brand name BÖHLER W722 AMPO.

Erime rotası

VIM + VAR

Uygulamalar

- > Ekstrüzyon
- > Enjeksiyon kalıplama
- > Tespit Elemanları, Cıvatalar ve Somunlar
- > Makine Mühendisliği için Genel Parçalar
- > Yüksek Basıncılı Döküm

Teknik veriler

Malzeme Tanımı	
1.2709	SEL

Kimyasal Bileşim

C	Si	Mn	Mo	Ni	Co	Ti
≤ 0,03	≤ 0,10	≤ 0,15	4,90	18,00	9,30	1,10

Teslimat durumu

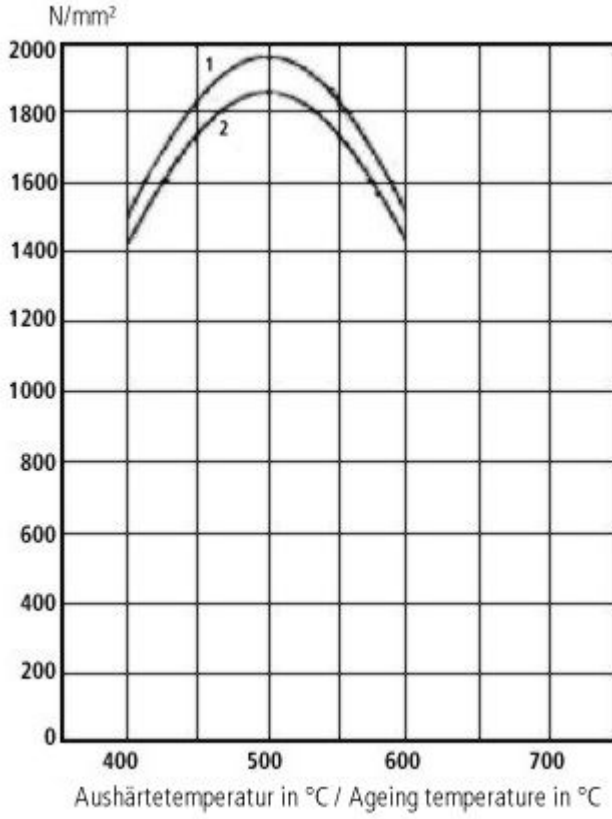
Solution annealed	
Sertlik (HB)	maks. 353

Isıl İşlem

Solution annealing		
Sıcaklık	820 °C	1 hour air, gas

Precipitation hardening		
Sıcaklık	490 °C	6 hours air

Ageing chart



Solution annealed 820°C / 1 hour / air
 Age hardening: 3h
 For maximum hardness there is also the possibility to
 age 6h at 490°C

Fiziksel özellikler

Sıcaklık (°C)	20
Yoğunluk (kg/dm ³)	8,1
Termal iletkenlik (W/(m.K))	21
Özgül ısı kapasitesi (kJ/kg K)	0,42
Spes. elektrik direnci (Ohm.mm ² /m)	0,42
Elastikiyet modülü (10 ³ N/mm ²)	200

Termal genleşmeler

Sıcaklık (°C)	100	200	300	400	500
Termal genleşme (10 ⁻⁶ m/(m.K))	10,3	10,7	11	11,3	11,6

For additional specifications and technical requirements, please contact our regional voestalpine BÖHLER sales companies.

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