

#### General product description

The boron-alloyed steel 32CrB4 can be used for applications in fastening and fixing technology.

#### Individual bar hardening - homogeneity makes the difference

Compared to conventionally hardened products, the microstructure, strength, toughness, straightness, and residual stress state are significantly improved after individual bar hardening. Additionally, this process works with low decarburization and scale formation and drastically reduces hardness distortions. The dimension range for individual bar hardening is Ø 15-80 mm.

#### International designation

Steel number	EU/DE	ASTM	UNI	AFNOR	B.S.
1.7076	32CrB4	A29	7845-78	NF A 35-552-86	970

#### Chemical composition (cast analysis by mass-%)

Element	C	Si	Mn	P	S	Cr	B
min.	0,30	-	0,60	-	-	0,90	0,0008
max.	0,34	0,30	0,90	0,025	0,025	1,20	0,0050

Deviation of unit analysis from melt analysis acc. to DIN EN 10263-4 : 2018 Table 5.  
Customer-specific analyses are possible after consultation.

#### Mechanical-technological properties

Characteristic	Dimension	R <sub>p0,2</sub> [N/mm <sup>2</sup> ]	R <sub>m</sub> [N/mm <sup>2</sup> ]	A <sub>5</sub> [%]	Z [%]	KV [J]
In accordance to EN	ISO 898-1 : 2013 - 8.8					
min.	>16 mm	660	830	12,0	52,0	27 bei -20 °C
Reference value	Ø 44,25	845	940	16,0	64,0	40 bei -40 °C
In accordance to EN	ISO 898-1 : 2013 - 10.9					
min.	16 < d ≤ 40	750	1000 – 1200	11,0	-	35 bei -20 °C
Reference value	Ø 27,55	1000	1060	12,5	58,0	50 bei -40 °C

- Customer-specific mechanical properties and other dimensions are possible after consultation.
- The material is heat treatable with consideration of strength class 8.8 and 10.9, please contact us.
- Material following EN ISO 898-1 : 2013 is tested on the bright steel product.

#### Microstructure

The quenched and tempered structure consists of approx. 90 % martensite. The microscopic oxide purity grade according to DIN 50602 can be agreed. The grain size according to ASTM E 112 is  $> 5$ . Edge decarburization is not present after peeling.

#### Condition of delivery

Bright steel, quenched and tempered, peeled.

#### Miscellaneous

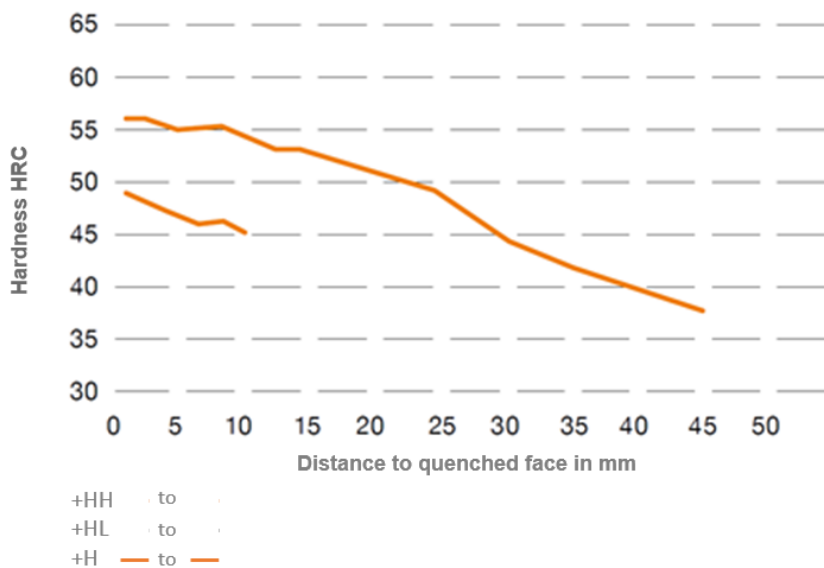
Other agreements according to the order.

#### Surface finish

The surface finish complies with the specifications of EN 10277. Ultrasonic full volume testing is possible. In the standard version, the rod ends up to 50 mm are untested.

#### Hardenability

##### 32CrB4



Lower limit and upper limit of quality +H  
 Without further specification we use quality +H; according to DIN EN 10263-4 : 2018.

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