

**1.6523 20NiCrMo2-2 | AISI 8620**

**Summary**

The material 1.6523 is an alloyed case steel, which is very popular in the field of automotive engineering due to its good mechanical properties.

**Chemical Analysis**

	C	Si	Mn	P	S	Cr	Ni	Mo
min.	0,17	-	0,65	-	0,02	0,35	0,40	0,15
max.	0,23	0,30	0,95	0,025	0,035	2,20	0,70	0,25

**Characteristics**

Weldability : good weldable

Toughness : very good

Machinability : good

Corrosion resistance : low

Wear resistance : gut good (in the cured state)

**International designation**

EN10084      1.6523 / 20NiCrMo2-2

AISI            8620



**Mech. Properties at room temperature (Diagonal)  
Forged material**

Re Yield point	A Elongation	KV Impact Strength	Rm Tensile Strength	HB Hardness
		Max. 40		Max. 280

### Physical Properties:

Density in kg / dm <sup>3</sup>	7,75
Electrical resistance at 20°C in (Ω mm <sup>2</sup> )/m	0,12
Elasticity modul (10 <sup>3</sup> MPa)	210
Thermal conductivity at 20°C in W/(m K)	46
Specific heat capacity at 20°C in J/(kg K)	430

### Application areas

The 1.6523 is often used for case-hardened components of automotive and mechanical engineering. This material is also known specially in North America under the name SAE AISI 8620.

### Processing

Nitriding	is possible
Flame hardening	is not possible
Induction hardening	is not possible
Machining works	is possible

### Main applications

1.6523 is used for industrial components and is often used on racks, guide pins and camshafts. Bushings, sleeves and bearings are made of this material as well.

The steel 1.6523 is suitable for case-hardened parts.

### Heat treatment

**Normalizing:** Normalizing is carried out at a temperature of approx. 910°C.

The subsequent cooling takes place in the air. Thereby, the workability can be improved. Normalizing can be used before case hardening, .

**Soft annealing:** the annealing occurs at temperatures of 650°C - 700°C. This is followed by a slow cooling in the oven.

**Heat treatment:** this takes place at temperatures between 840°C - 870°C. Depending on the cross section, it is then quenched in oil or with air.

**Tempering:** to improve toughness with minimal impact on hardness tempering is done at the following temperatures: 200°C - 700°C.

#### Special features

We store the material 1.6523 annealed in excellent quality.  
Our 1.6523 is US approved. The smelting rate is min. 3.5.

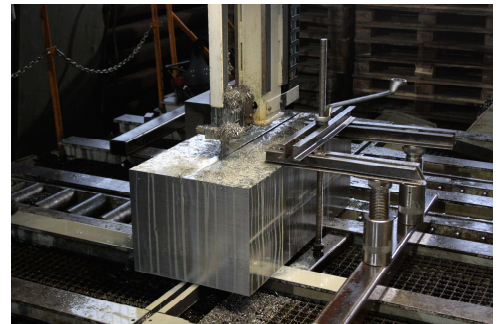
#### Delivery options

We saw the material to your exact measurements.

#### Request/questions:

Do you have a request, or have a question about the material 1.6523?  
Contact us! Our competent staff will gladly help you.

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