COLD WORK STEELS

Available Product Variants

Long Products* | Plates

*) Presented data refer exclusivly to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Product Description

BÖHLER K320 corresponds to the material 1.2355 (50CrMoV13 -15, S7). According to the AISI classification system, this tool steel belongs to the group of impact-resistant tool steels (S types). This popular tool steel offers high toughness and good machinability with moderate wear resistance. BÖHLER K320 is used in cold and hot work applications as well as in plastic mold making. This tool steel is used for a wide range of tools where impact strength, good machinability and simple heat treatment are important.

Process Melting

Airmelted

Properties

- Toughness & Ductility : good
- Wear Resistance : good
- Compressive strength : good
- Dimensional stability : good

Applications

- Machine knife (for producers)
- Fine Blanking, Stamping, Blanking
- Rolling
- Powder Pressing
- Cold Forming

Technical data

Material designation	
~1.2357	SEL
~50CrMoV13-14	EN
S7	AISI

Chemical composition (wt. %)

C	Si	Mn	Cr	Mo	V
0.53	0.30	0.60	3.25	1.45	0.25

Material characteristics

	Compressive strength	Dimensional stability during heat treatment	Toughness	Wear resistance abrasive
BÖHLER K320	★★★	★★★	★★★	★★★
BÖHLER K305	★★★★★	★★★	★★	★★★★★
BÖHLER K306	★★★★	★★★	★★★★	★★★
BÖHLER K313	★★★★	★★★	★★★	★★★
BÖHLER K329	★★★	★★★	★★★★	★★★★
BÖHLER K600	★	★★★	★★★★★	★
BÖHLER K601	★	★★★	★★★★	★★
BÖHLER K605	★★	★★★	★★★★	★

Delivery condition

Annealed

Hardness (HB)	max. 225

Heat treatment

Annealing

Temperature	820 to 850 °C | 1,508 to 1,562 °F	Slow controlled cooling in furnace at a rate of 10 to 20 °C/hr (18 to 36 °F/hr) down to approximately 600 °C (1112 °F) || Further cooling in air.

Stress relieving

Temperature	600 to 650 °C | 1,112 to 1,202 °F	After through heating, hold in neutral atmosphere for 1-2 hours. || Slow cooling in furnace || Intended to relieve stresses caused by extensive machining or in complex shapes.

Hardening and Tempering

Temperature	930 to 950 °C | 1,706 to 1,742 °F	Quenching: Oil, air. || Holding time after temperature equalization: 15 to 30 minutes.

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

Sheet & Plates: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact voestalpine BÖHLER Bleche GmbH & Co KG.

The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.

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voestalpine
ONE STEP AHEAD.