

Cryodur 2990

The innovative cold work tool steel
for sheet metal processing

Punching, cutting and shearing tools made of Cryodur 2990

Improve production reliability,
cut production costs

Targeted problem solution

Although extremely wear-resistant tools for sheet metal processing can be produced from conventional ledeburitic cold work tool steels, one weakness is generally the lack of toughness and thus the risk of tool failure under high stresses. Tool changes and machine stoppages cost time and money.

Therefore, our materials specialists set out to develop a special steel that combines high resistance to abrasive and adhesive wear with great hardness and, above all, greater toughness.

With Cryodur 2990, we can offer you a steel grade with an ideal property profile for sheet metal processing.

For all punching, cutting and shearing tools, such as rotary shear blades, punches and dies, progressive dies. Other cold work applications are also possible (thread rolling, deep drawing ...).

Perfect alloy mix

The tough Cryodur grade stands out due to its special chemical composition and the resultant fine, homogeneous microstructure.

Cryodur 2990 is characterized by extraordinary hardness, strength and wear resistance. And with its newly acquired, enormous toughness, it also stands for high resistance to failure and thus for longer service lives and higher production quantities of the tools. Production reliability, productivity and, above all, cost-efficiency can be substantially improved with Cryodur 2990.

The higher dimensional stability of the tools permits compliance with demanding tolerances of the parts to be produced, thereby enhancing their quality.

Ideal property profile

- High toughness
- High compressive strength
- High resistance to abrasive and adhesive wear
- Good EDM properties
- Good surface treatability by all known methods
- Good inductive hardenability

Chemical composition

(typical analysis in weight-%)

C	Si	Cr	Mo	V
1.0	0.9	8.0	1.0	1.6



With Cryodur 2990 into the future

Withstands more, earns more

Specialist for cold work

Cryodur 2990 is the perfect steel for punching, cutting and shearing tools

- Rotary shear blades
- Punches
- Dies
- Circular shaer blades
- Progressiv dies

Advantages compared to conventional cold work tool steels

- Higher production reliability
- Longer service lives
- Higher productivity
- Greater cost-efficiency
- Higher product quality
- Fewer tool failures
- Less machine downtime
- Less lost production
- Lower tool costs
- Fewer production rejects

Delivery programme

Width / thickness in mm
1010.0 x 15.0
1010.0 x 25.0
1010.0 x 30.0
1010.0 x 40.0
1010.0 x 50.0
1010.0 x 60.0
1010.0 x 70.0
1010.0 x 80.0
1010.0 x 100.0
1010.0 x 125.0
1010.0 x 150.0

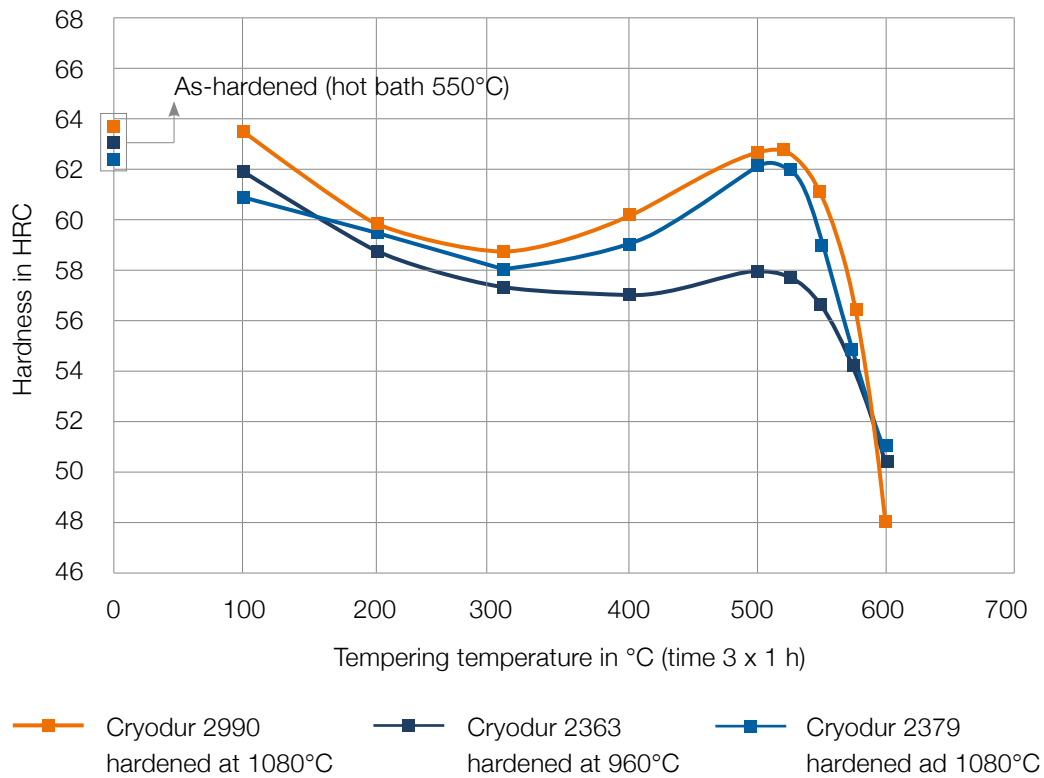
Durchmesser in mm				
20.5	25.5	50.8	81.0	91.5
111.5	122.0	131.5	141.5	151.5
161.5	182.0	202.0	222.0	152.0
272.5	302.5	307.0	323.0	143.0
373.0	403.0	413.0	428.0	453.0

Please enquire about special formats you may need.

Comparison of properties

	Cr-content in weight-%	Hard- ness	Wear resistance adhesive	Wear resistance abrasive	Com- pressive strength	Thoughness
Cryodur 2363	5	+	+	+	++	++
Cryodur 2990	8	++	+++	++	+++	+++
Cryodur 2379	12	++	++	+++	++	+

Tempering behaviour

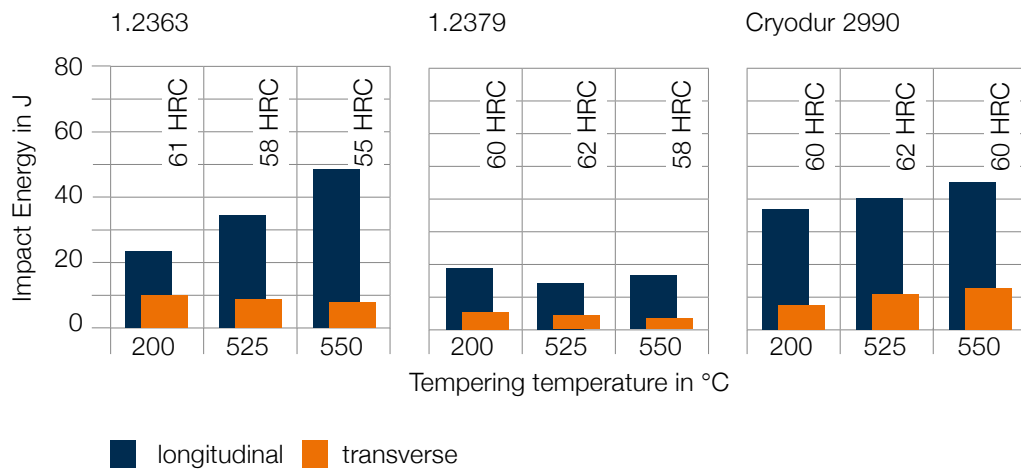


Cryodur 2990

The perfect steel for cold work

Toughness of Cryodur 2990

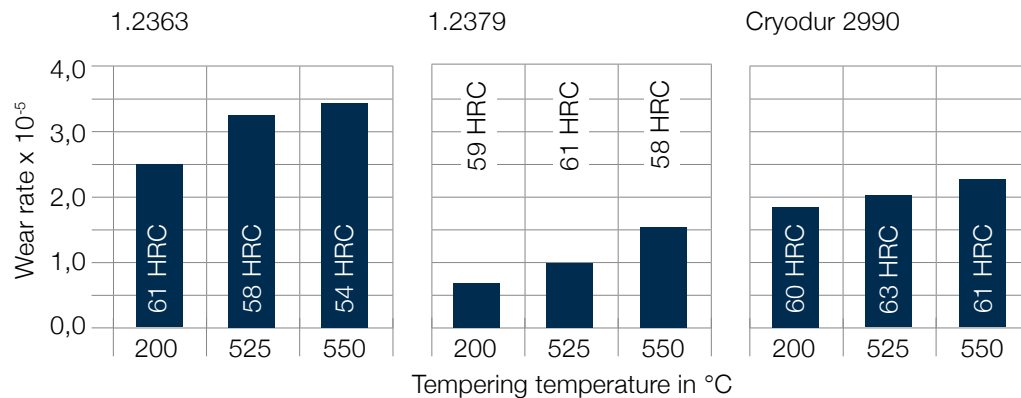
Higher toughness and simultaneously high hardness.



Wear resistance of Cryodur 2990

Very good resistance to both, abrasive and adhesive wear.

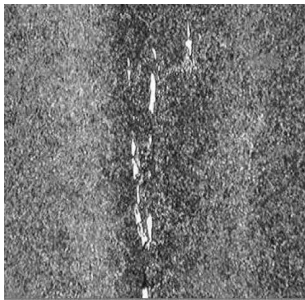
Example: "Pin-on-disk test for comparing the abrasive wear rate".



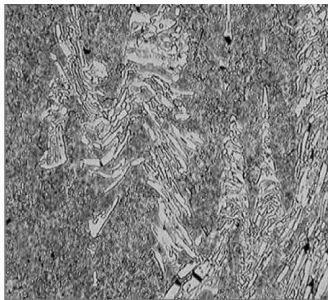
Microstructure of Cryodur 2990

- Small carbide size
- Little carbide banding
- Homogeneous structure

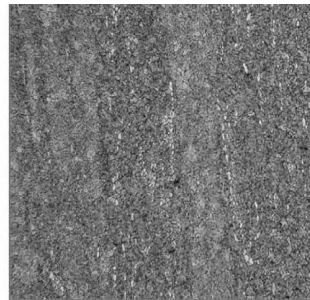
1.2363



1.2379



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General note (liability)

Printing errors, omissions and changes accepted. Product-specific data sheets have priority over the information provided in this brochure. The desired performance characteristics are binding only if they are exclusively agreed upon at the conclusion in a contract.



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