

## BGH Tough One

similar to 1.2343 acc. to DIN EN ISO 4957

Excellence in Specialty Steel

### Typical Composition Mass-%

	C	Si	Mn	Cr	Mo	V
BGH Tough One	0,35	0,15	0,35	5,00	1,90	0,55
1.2343 DIN	0,37	1,00	0,40	5,20	1,30	0,40

### Properties

1.2343 is a Cr-Mo-V-alloyed hot working steel which has proven good resistance against temperature changes and wear. However, toughness requirements of modern and filigree tools can only be achieved by using a remelted variant (ESR).

BGH Tough One with its optimized chemistry outperforms the DIN-grade 1.2343 regarding toughness and makes the use of ESR-grades redundant in most cases.

The same heat treatment parameters apply to BGH Tough One compared to the DIN-grade.

### Application Area

Highly stressed tools in environments with demands on resistance against wear and temperature changes in combination with good toughness values.

### Typical Applications

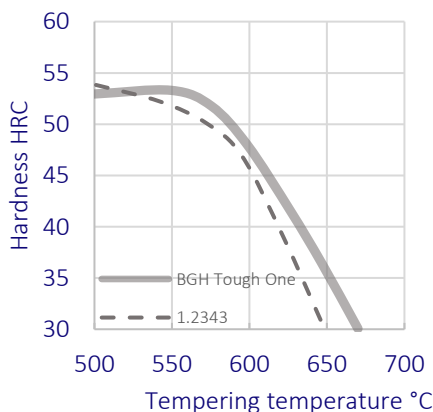
- ✘ Extrusion presses
- ✘ Forging dies
- ✘ Pressure die-casting
- ✘ Plastic moulds
- ✘ Press dies
- ✘ Hot shear blades

### Delivery Condition

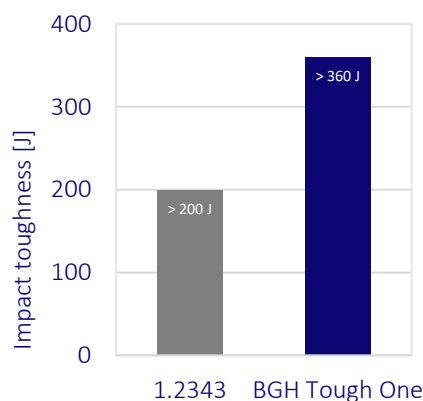
- ✘ annealed (+A) max. 229 HBW
- ✘ quenched and tempered (+QT) upon request
- ✘ EFS-annealed (extra fine structure)

### Heat Treatment Guideline Values

	Temperature [°C]	Cooling medium
Annealing (+A)	820 - 880	Air (furnace)
Stress relieving (+SR)	600 - 650	Air (furnace)
Quenching and tempering (+QT)	1010 - 1050 (Hardening) 500 - 550 (Tempering)	Nitrogen (min 5 bar), oil, polymer Air



Tempering graph, hardening temperature 1020 °C



Impact toughness at 45 HRC

### Quality

- ISO 9001
- ISO 14001
- ISO 50001
- Approvals acc. to standards like ABS, BV, DNVGL ...
- Customer specific approval certificates

### Innovation

- Fully automated ultrasonic testing up to dia. 1000 mm
- CO<sub>2</sub>-reduction by innovative heat treatment solutions

### Flexibility

- Product range from fine wire to forging
- Directly from stock close at hand

### Individuality

- Dimensions
- Tolerances
- Surface qualities
- Delivery conditions

### Your personal contact:

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