

Material Designation

1.4923 DIN

Standards

DIN EN 10269	AD 2000 W7
DIN EN 10302	TRD 100, TRD 106
DIN 17240	

Chemical Composition Mass-%

	C	Si	Mn	P	S	Cr	Ni	Mo	V
min.	0,18	0,1	0,4	-	-	11,0	0,3	0,8	0,25
max.	0,24	0,5	0,8	0,025	0,015	12,5	0,8	1,2	0,35

Customer specific restrictions upon request

Properties

1.4923 is a high-temperature Cr steel with scaling resistance up to 600 °C. Due to its alloying with vanadium, an improvement in creep strength is achieved.

The corrosion resistance to water vapour in the absence of chlorine and salt concentration is satisfactory and can be improved by polishing or surface grinding.

The remelted variant (ESR) guarantees the highest purity and homogeneity.

Delivery Condition

- ✘ quenched and tempered (+QT)
- ✘ quench., tempered, stress relieved (+QT+SR)
- ✘ annealed (+A), max. 302 HBW

Application Area

Components with high requirements for creep strength in environments with elevated temperatures and exposure to water vapour, e.g. in power generation in thermal power stations.

Typical Applications

- ✘ Fasteners
- ✘ High temperature bolts and shafts
- ✘ Turbine blades
- ✘ Pressure and steam boilers
- ✘ Reactor technology

Mechanical Properties acc. to DIN EN 10269

Condition	Yield strength [N/mm ²]	Tensile strength [N/mm ²]	Reduction of area [%]	Elongation [%]	Impact toughness [J] Charpy-V
+QT1	≥ 600	800 - 950	≥ 40	≥ 14	≥ 27 ¹⁾
+QT2	≥ 700	900 - 1050	≥ 35	≥ 14	≥ 20

¹⁾ AD2000 W7: ≥ 52 J for d ≤ 60 mm

Heat Treatment Guideline Values acc. to DIN EN 10269

	Temperature [°C] / Duration	Cooling medium
Quenching and tempering (+QT1)	1020 - 1070 (Hardening)	Oil, polymer, air
	680 - 740 (Tempering), min 2h	Air
Quenching and tempering (+QT1)	1020 - 1070 (Hardening)	Oil, polymer, air
	660 - 720 (Tempering), min 2h	Air

Quality

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

Innovation

- Fully automated ultrasonic testing up to dia. 1000 mm
- CO₂-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:

BGH Edelstahlwerke GmbH

Am Stahlwerk 1
01705 Freital
+49 351 646-0
www.bgh.de

