



400GHT[®]

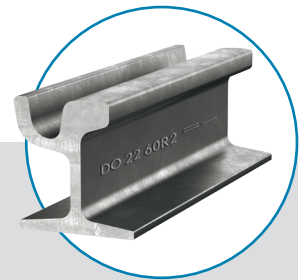
Track performance as design criterion

Description

The rail steel grade 400GHT[®] is a fine pearlitic rail grade. It is produced by combining an innovative material design with the application of the HSH[®] heat treatment technology. The 400GHT[®] leads to the longest service life while gauge corner repair welding is no longer necessary.

Area of application

The 400GHT[®] is highly recommended by voestalpine for curves in grooved rail tracks below $R = 150$ m. This leads significantly to the technical and economical optimization of the entire track.



Your Benefits

- » Longest rail service lives
- » industrial quality over the entire service life
- » lowest life cycle costs
- » lowest maintenance costs
- » significant noise reduction due to slowest corrugation development

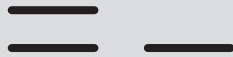
TECHNICAL CHARACTERISTICS

Rail Steel Grade 400GHT®

This data sheet applies to grooved rails produced by voestalpine Rail Technology GmbH, 8700 Leoben-Donawitz, Austria – according to state of the art rail production technology and based on the international standards EN14811:2019 and EN13674-1:2017.

High-strength rail grades might require modifications in processing methods such as bending, drilling, cutting as well as joint-, repair- and seam-welding procedures. In any case, we recommend to contact the respective sub-supplier before processing high-strength rails to optimize all processes and to prevent damages to the rail.

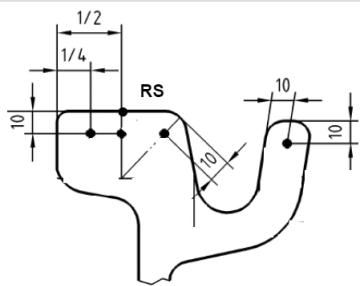
Steel Grade Description

Steel Grade	Surface Hardness [BHN]	Description of Steel Design	Field of Application	Branding
400GHT®	400±20	<ul style="list-style-type: none"> » Non Alloy (C-Mn) » Heat treated – HSH® Technology » UHC® Steel design 	» “put-in-&-forget” Strategy	

Chemical Composition

C [%]	Si [%]	Mn [%]	Cr [%]	P [%]	S [%]	H [ppm]
0.90-1.05	0.20-0.60	1.00-1.30	max. 0.30	max. 0.020	max. 0.020	max. 1.5

Hardness

	Position	Hardness [BHN]
	RS & cross section	380-420

Tensile Testing

Tensile Strength [MPa]	Elongation [%]
≥ 1280	≥ 8

Thank you very much for your interest.
 We are happy to answer your questions under product_management@voestalpine.com
 Also your local contact person is looking forward to support you.