

# **RELIABLE PIPES & TUBES LTD.**

GOVT. OF INDIA RECOGNIZED EXPORT HOUSE  
OHSAS 18001:2007 CERTIFIED ISO 14001:2004 CERTIFIED  
ISO 9001:2008 CERTIFIED PED CERT NO 01 202 IND/Q-11-0033

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Phone : +91 22 43431313 (25 Lines) | Fax : +91 22 2389 4511  
Email : [sales@reliablenickelalloys.com](mailto:sales@reliablenickelalloys.com) | [www.reliablenickelalloys.com](http://www.reliablenickelalloys.com)

## HASTELLOY(r) G. UNS. N 06007

### Chemical Composition

Element	Content (%)
Chromium, Cr	21-23.5
Iron, Fe	18-21
Molybdenum, Mo	5.5-7.5
Cobalt, Co	2.5 max
Niobium, Nb	1.75-2.5
Copper, Cu	1.5 min
Manganese, Mn	1-2
Silicon, Si	1 max
Tungsten, W	1 max
Carbon, C	0.05 max
Phosphorus, P	0.04 max
Sulfur, S	0.03 max
Nickel, Ni	Remainder

### Physical Properties

The physical properties of HASTELLOY(r) G™ are given in the following table.

Properties	Metric	Imperial
Density	8.91 g/cm <sup>3</sup>	0.322 lb/in <sup>3</sup>
Melting point	1343°C	2450°F

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## Mechanical Properties

The mechanical properties of HASTELLOY(r) G™ are given in the following table.

Properties	Metric	Imperial
Tensile strength	Min 760 MPa	Min 110000 psi
Yield strength (0.2% offset)	700-860 MPa	102000-125000 psi
Modulus of elasticity (room temperature)	192 GPa	27800 ksi
Elongation at break	Min 20%	Min 20%
Hardness, Brinell ( estimated from Rockwell C for Brinell 10 mm ball/3000 kg load)	290	290
Hardness, Knoop (estimated from Rockwell C)	345	345
Hardness, Rockwell A (estimated from Rockwell C)	66	66
Hardness, Rockwell C	Max 31	Max 31
Hardness, Vickers (estimated from Rockwell C)	300	300

## Thermal Properties

The thermal properties of HASTELLOY(r) G™ are given in the following table.

Properties	Metric	Imperial
Thermal expansion co-efficient (@20°C/68°F)	13 µm/m°C	7.22 µin/in°F