

Material Grade: **18CrNiMo7-6**
 Material Condition(s): **Untreated/ Annealed**
 Surface Finish: **As rolled/ As forged**

Associated Standard: **BS EN 10084**
BS EN ISO 683-17

Description:

Alloyed case hardening steel for heavy and high strained gear parts with high demands on toughness at core tensile strength of 1050 - 1350 N/mm²

Typical applications: **Bushings, wear pins, bearings, sprockets, gears and shafts etc.**
It can also be used for high tensile applications un-carburised but through-hardened and tempered.

Typical conditions: **no designation or +U - as rolled**
+A - soft annealed
+H - with additional hardenability
+HH - with enhanced hardenability test

1. STEELMAKING

	<u>C</u>	<u>Si</u>	<u>Mn</u>	<u>S</u>	<u>P</u>	<u>Cr</u>	<u>Ni</u>	<u>Mo</u>
Min	0.15		0.50			1.50	1.40	0.25
Max	0.21	0.40	0.90	0.035	0.035	1.80	1.70	0.35

2. MECHANICAL PROPERTIES

Test type		Tensile and hardness test (at room temperature)					
		Yield (Re)	0.2 % proof	UTS (Rm)	Elong (A)	R of A (Z)	Hardness
Variation	Unit	N/mm ²	N/mm ²	N/mm ²	%	%	HB
18CrNiMo7-6 + A	Min						
	Max						229

3. TYPICAL JOMINY HARDENABILITY - grade 18CrNiMo7-6+H

Jominy reported in 1/16"

	<u>1.5</u>	<u>3</u>	<u>5</u>	<u>7</u>	<u>9</u>	<u>11</u>	<u>13</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>
HRC max	48	48	48	48	47	47	46	46	44	43	42	41	41
HRC min	40	40	39	38	37	36	35	34	32	31	30	29	29