



## E STEEL SDN BHD (891338-A)

NO 3, Lorong Sungai Puloh 7/KU 6,  
Kawasan Perindustrian Sungai Puloh, 42100 Selangor D.E  
Tel : 03-3292 8686 / 32928666 / 32928777  
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### DIN 1.6587/18CrNiMo7-6 steel supplier with round, square, flat, block, and shaft etc.

DIN 1.6587/18CrNiMo7-6 is a low carbon, case hardening (carburizing) steel which contains 1.8% chromium – nickel – molybdenum as strengthening agents as per EN 10084. Characterised by high core strength and toughness in medium to large sections with case hardness up to Rc62 when carburized, hardened and tempered, and it is also used in area of heavy and high strained gear parts with high demands on toughness at core tensile of 1050–1350N/mm<sup>2</sup>. DIN 1.6587/18CrNiMo7-6 is same as 17CrNiMo6 steel, generally supplied in the annealed condition with a maximum brinell hardness of 229 (Rc22).

### Chemical Composition of 1.6587

Standard	Grade	C	Mn	P	S	Si	Ni	Cr	Mo
EN 10084	18CrNiMo7-6	0.15-0.21	0.50-0.90	≤ 0.025	≤ 0.035	≤ 0.04	1.4-1.7	1.5-1.8	0.25-0.35
	1.6587								

### 18CrNiMo7-6 Mechanical Property

Size mm	≤ 11	12-30	31-63
R Mpa	1180-1420	1080-1320	980-1270
Rp 0.2 Mpa	≥ 835	≥ 785	≥ 685
A %	≥ 7	≥ 8	≥ 5
C %	≥ 30	≥ 35	≥ 35
Kv J	≥ 44	≥ 44	
Hardness HB	354-406	327-384	295-373



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### **Forging**

DIN 1.6587 | 17CrNiMo6 | 18CrNiMo7-6 forging temperature: 900 – 1100°C, cool slowly in the sand after forged.

### **Heat Treatment**

- Normalizing: 850 – 880°C/air
- Soft annealing: 650 – 700°C/furnace
- Stress relieve: 630- 650°C
- Carburising: 880 – 980°C
- Core hardening: 830 – 870°C/water
- Intermediate annealing: 630 – 650°C
- Case hardening: 780 – 820°C/water
- Tempering: 150 – 200°C

### **Surface Hardness**

- Treated to improve shearability(+S): Max 255HB
- Soft annealed(+A): Max 229HB
- Treated to hardness range(+TH): 179-229HB
- Treated to ferrite-pearlite structure and hardness range(+FP): 159-207HB

### **Application**

DIN 1.6587 | 17CrNiMo6 | 18CrNiMo7-6 steel for the parts which require core tensile strength and high hardness. Susceptible to the large sized parts with high wearing resistance and loading such as: Heavy Duty Bushings and Bearings, Cam Followers, Clutch Dogs, Compressor Bolts, Extractors, Fan Shafts, Heavy Duty Gears, Pump Shafts, Sprockets, Tappets, Wear Pins, Wire Guides etc..