

STANDARD REFERENCE:
 ASTM A 193

RODACCIAI REFERENCES AND COMPARABLE STANDARDS

| EUROPE | | ITALY | GERMANY | FRANCE | UK | USA |
|------------------|----------|-----------------|------------------|--------------------|---------------------|-------------------------|
| EN 10083-3: 2006 | | (UNI 7845 - 78) | (DIN 17200 - 89) | (NF A 35-552 - 86) | (BS 970 pt. 1 - 96) | ASTM |
| Grade | N° | | Werkstoff | N° | | |
| (42CrMo4) | (1.7225) | (42CrMo4) | (42CrMo4) | (1.7225) | (42 CD 4) | (708M40) |
| | | | | | | B7 - B7M 4140 - 4142 |

CHEMICAL COMPOSITION (CAST ANALYSIS) (%)

| C | Si | Mn | P / max | S / max | Cr | Mo | Al |
|-------------|-------------|-----------|---------|---------|-------------|-------------|-------------|
| 0,38 ÷ 0,48 | 0,15 ÷ 0,35 | 0,75±1,00 | 0,035 | 0,040 | 0,80 ÷ 1,10 | 0,15 ÷ 0,25 | 0,020÷0,050 |

MECHANICAL PROPERTIES - QUENCHED*

| | Size mm | R _{p0.2} (MPa) min | R _m (MPa) min | A ₄ (%) min | Z (%) min | Hardness max |
|-------------------|---------|-----------------------------|--------------------------|------------------------|-----------|------------------|
| A193 - B7 | ≤M64** | 720 | 860 | 16 | 50 | 321 HB or 35 HRC |
| | ≤M100** | 655 | 795 | 16 | 50 | 302 HB or 33 HRC |
| A193 - B7M | ≤M100** | 690 | 550 | 18 | 50 | 235 HB or 99 HRC |

* A193-B7: minimum tempering temperature 593°C - A193-B7M: minimum tempering temperature 620°C
 ** thread diameter

WORKING TEMPERATURES RECOMMENDED

| Operation | Hot forgings deformation | Normalizing | Soft annealing | Quenching in oil or water | Tempering |
|-----------|--------------------------|-------------|----------------|---------------------------|-----------|
| °C | 850÷1150 | 850÷880 | 680÷720 | 830÷850 | 593÷650 |

