

14NiCr14, 15NiCr13, 1.5752, 12X2H4A

APPLICATIONS

Case-hardening steel for plastic mold construction, mechanical engineering, vehicle construction (particularly automobile construction), aircraft construction and gear construction; highly stressed components, e.g. Piston rods, connecting rods, gears (e.g. gears, bevel gears, pinion gears and ring gears), shafts (e.g. pinion shafts, countershafts and propshafts), journals, bolts and cardan joints

CHEMICAL COMPOSITION

| | C | Mn | Si | P | S | Cr | Ni |
|-----|------|------|------|-------|-------|------|------|
| MIN | 0,14 | 0,40 | | | | 0,60 | 3,00 |
| MAX | 0,20 | 0,70 | 0,40 | 0,025 | 0,035 | 0,90 | 3,50 |

APPROXIMATE EQUIVALENT STANDARDS

| EN | DIN | STAND | UNE | AFNOR | BS | AISI/SAE | GOST |
|----------|----------|--------|-------|--------|--------|----------|---------|
| 15NiCr13 | 14NiCr14 | 1.5752 | F1540 | 14NC12 | 655H13 | 3310 | 12X2H4A |

MECHANICAL PROPERTIES

| | |
|--|-----------------------------------|
| Analysis Note | acc. to EN ISO 683-3 |
| Density [kg/dm ³] | 7,85 |
| Thermal Conductivity at 20°C [W/m*K] | 34,0 |
| Mc Thermal Expansion [10 ⁻⁶ * K ⁻¹] | 20-100 °C: 11,1 / 20-400 °C: 13,5 |
| Typical Heat Treatment | soft annealed |
| Typical Hardness [HBW] | max. 230 |
| Typical Tensile Strength [MPa] | ≈ 780 |

HEAT TREATMENTS - APPROXIMATE TEMPERATURES

| Annealed °C | Quenched °C | Tempered °C |
|-------------|---------------|-------------|
| 630-660 | 840 - 880 oil | 150-200 |

APPLICABLE STANDARD

EN 10084
 EN ISO 683-3; EN 10277-4
 BS 970; 655M13; 12HN3A

DELIVERY CONDITION

Annealed.