Temperatures above +300 °C

according DIN 17 240			Guideline for upper standard limit of temperature in continuous operation (acc. DIN 17 240)
Designation	Material number	Symbol	
C 35 N[2])	1.0501	Y	+ 350 °C
Ck 35	1.1181	YK	+ 350 °C[3])
Cq 35	1.1172	YQ	+ 350 °C[3])
24 CrMo 5	1.7258	G	+ 400 °C[4])
21 CrMoV 5 7	1.7709	GA	+ 540 °C
40 CrMoV 4 7	1.7711	GB	+ 540 °C
X 22 CrMoV 12 1	1.4923	V[6])	+ 580 °C
X 19 CrMoVNbN 11 1	1.4913	VW	+ 580 °C
X 8 CrNiMoBNb 16 16	1.4986	S	+ 650 °C
X 5 NiCrTi 26 15[5])	1.4980	SD	+ 700 °C
NiCr 20 TiAl	2.4952	SB	+ 700 °C

2) Not for screws or bolts
3) For nuts the upper limit of temperature in continuous operation may be 50°C higher.
4) For nuts of steel 24 CrMo5 there is no indication in DIN 17240 for use at even higher temperature. But, based on the strength of the material and on practical experience, this temperature limit may be exceeded according to DIN 17240 section 1.1 (edition July 1976). Indications are given in DIN 2507, part 2.
5) Not mentioned in DIN 17240 (aero-space material number 1.4944).
6) Symbol VH for steel X 22 CrMoV 12 1 with higher strength (yield stress $R_{p\,02} \perp 700$ N/mm^2) than according DIN 17 240.

Suitable mating materials for bolts and nuts

Materials	
Bolt	Nut
Ck 35 Cq 35	C 35 N, Ck 35, Cq 35
24 CrMo 5	Ck 35, Cq 35, 24 CrMo 5
21 CrMoV 5 7	24 CrMo 5 21 CrMoV 5 7
40 CrMoV 4 7	21 CrMoV 5 7
X 22 CrMoV 12 1 X 19 CrMoVNbN 11 1	X 22 CrMoV 12 1
X 8 CrNiMoBNb 16 16	X 8 CrNiMoBNb 16 16
X 5 NiCrTi 26 15	X 5 NiCrTi 26 15
NiCr20TiAl	NiCr20TiAl

N o t e: If in bolted joints fasteners of these materials together with extension sleeves are used, sleeves of the same material as the bolts are recommended.