Mechanical Properties
Arminox Stainless Steel Reinforcement

German Zulassung Z-1.4-80
British Standard BS6744:2001 A2:2009

Property	German Standard (Zulassung Z-1.4-80)		British Standard BS 6744		
Grade	1.4571		1.4301, 1.4436 1.4362, 1.4462		
Product	Coil	Bar	Coil, Bar		
0,2 % proof strength - $R_{p0,2}$	>= 510 N/mm^2	>= 500 N/mm^2	>= 500 N/mm^2		
Ultimate tensile strength - R_m	>= 550 N/mm^2	>= 550 N/mm^2	-		
Stress ratio – R_m / $R_{p0,2}$	>= 1,08	>= 1,08	>= 1,1		
Total elongation at max. force - A_{gt}	>= 5,5 %	>= 5,0 %	>= 5,0 %		
Elongation at fracture - A_5	-	-	>= 14 %		
Elongation at fracture - A_{10}	>= 16 %	>= 15 %	-		
Bend test	Yes	Yes	Yes		
Cross sectional area	+/- 4 %	+/- 4 %	Nominal		
Ø5	19,6 mm^2	19,6 mm^2	19,6 mm^2		
Ø6	28,3 mm^2	28,3 mm^2	28,3 mm^2		
Ø7	-	-	38,5 mm^2		
Ø8	50,3 mm^2	50,3 mm^2	50,3 mm^2		
Ø10	78,5 mm^2	78,5 mm^2	78,5 mm^2		
Ø12	113,1 mm^2	113,1 mm^2	113,1 mm^2		
Ø14	154,0 mm^2	154,0 mm^2	153,9 mm^2		
Ø16	201,0 mm^2	201,0 mm^2	201,1 mm^2		
Ø20	-	-	314,2 mm^2		
Ø25	-	-	490,9 mm^2		
Ø32	-	-	804,2 mm^2		
Ø40	-	-	1256,6 mm^2		
Ø50	-	-	1963,5 mm^2		
Nominal weight per meter run	-	-	Tolerance		
			Ø5 - Ø6		+/- 9 %
			Ø7 - Ø12		+/- 6 %
			>Ø12		+/- 4,5 %
			1.4301	1.4436	1.4362, 1.4462
Ø5	0,156 kg	0,156 kg	0,155 kg	0,157 kg	0,153 kg
Ø6	0,226 kg	0,226 kg	0,224 kg	0,226 kg	0,221 kg
Ø7	-	-	0,304 kg	0,308 kg	0,300 kg
Ø8	0,401 kg	0,401 kg	0,397 kg	0,402 kg	0,392 kg
Ø10	0,626 kg	0,626 kg	0,620 kg	0,628 kg	0,612 kg

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Property	German Standard (Zulassung Z-1.4-80)		British Standard BS 6744		
Nominal weight per meter run	-	-	Tolerance		
			Ø5 – Ø6		+/- 9,0%
			Ø7 – Ø12		+/- 6,0%
	Coil	Bar	>Ø12		+/- 4,5%
	1.4571	1.4571	1.4301	1.4436	1.4362, 1.4462
Ø12	0,903 kg	0,903 kg	0,893 kg	0,905 kg	0,882 kg
Ø14	1,229 kg	1,229 kg	1,216 kg	1,231 kg	1,200 kg
Ø16 – without Zulassung	1,604 kg	1,604 kg	1,589 kg	1,609 kg	1,569 kg
Ø20	-	-	2,482 kg	2,514 kg	2,451 kg
Ø25	-	-	3,878 kg	3,927 kg	3,829 kg
Ø32	-	-	6,353 kg	6,434 kg	6,266 kg
Ø40	-	-	9.927 kg	10,053 kg	9,790 kg
Ø50	-	-	15,512 kg	15,708 kg	15,297 kg
Relative rib area f_R	Coil	Bar	Coil, Bar		
	1.4571	1.4571	1.4301	1.4436	1.4362, 1.4462
Nominal size	Min.	Min.	Min.		
Ø5	0,04485	0,039	0,039		
Ø6	0,04485	0,039	0,039		
Ø7	-	-	0,045		
Ø8	0,05175	0,045	0,045		
Ø10	0,05980	0,052	0,052		
Ø12	0,06444	0,056	0,056		
Ø14	0,06444	0,056	0,056		
Ø16	0,06444	0,056	0,056		
Ø20	-	-	0,056		
Ø25	-	-	0,056		
Ø32	-	-	0,056		
Ø40	-	-	0,056		
Ø50	-	-	0,056		

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