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Dimensions and Properties of Low Relaxation Strand and Wire for Prestressed Concrete.

BS-5896.1980 PRESTRESSING STRAND

	Nominal Diameter in mm	Nominal tensile strength in N/mm ²	Nominal Steel area in mm ²	Nominal mass in g/m	Specified characteristic breaking load in KN	Specified characteristic 0.1% proof load in KN	Load at 1% elongation in KN	Elongation at maximum load Lo ≥ 500 mm in %	Relaxation	
									Initial load (% of actual breaking load) for all strands	Max. relaxation after 1000hrs. Relaxation class 2. For all strands
7 wire standard strand	15,2	1670	139	1.09	232	197	204	≥3,5	60 70 80	1,0 % 2,5 % 4,5 %
	12,5	1770	93	730	164	139	144	≥3,5		
	11,0	1770	71	557	125	106	110	≥3,5		
	9,3	1770	52	408	92	78	81	≥3,5		
7 wire super strand	15,7	1860	150	1.18	279	237	244	≥3,5		
	12,9	1860	100	785	186	158	163	≥3,5		
	11,3	1860	75	590	139	118	122	≥3,5		
	9,6	1860	55	432	102	87	90	≥3,5		
	8,0	1860	38	298	70	59	61	≥3,5		

BS-5896.1980 PRESTRESSING WIRE

Nominal Diameter in mm	Nominal tensile strength in N/mm ²	Nominal proof stress in N/mm ²	Nominal cross sectional area in mm ²	Nominal mass in g/m	Specified characteristic breaking load in KN	Specified characteristic 0.1% proof load in KN	Load at 1% elongation in KN	Elongation at maximum load Lo ≥ 200 mm in %	Relaxation	
									Initial load (% of actual breaking load) for all wires	Max. relaxation after 1000hrs. Relaxation class 2. For all wires
4	1670	1390	12,6	98,9	21,0	17,5	17,9	≥3,5	60 70 80	1,0 2,5 4,5
4	1770	1470	12,6	98,9	22,3	18,5	19,0	≥3,5		
4,5	1620	1350	15,9	125	25,8	21,4	21,9	≥3,5		
5	1670	1390	19,6	154	32,7	27,2	21,8	≥3,5		
5	1770	1470	19,6	154	34,7	28,8	29,5	≥3,5		
6	1670	1390	28,3	222	47,3	39,3	40,2	≥3,5		
6	1770	1470	28,3	222	50,1	41,6	42,6	≥3,5		
7	1570	1300	38,5	302	60,4	50,1	51,3	≥3,5		
7	1670	1390	38,5	302	64,3	53,4	54,7	≥3,5		

All strand and Wire is manufactured to BS5896(1980) prEN10138-3.2 and prEN10138-2.2 or any other internationally recognised standard. The Wire may be supplied spiral ribbed or chevron indented to suit customers requirement.

Load Extension Behaviour - The recommended Modulus of Elasticity for strand is 195 + -10 kN/mm² and for wire is 200 + -10 kN/mm²

Relaxation - The guaranteed maximum relaxation losses for all Low Relaxation strand and wire at 20 C from 70% of initial load after 1000 hours is 2.5%

Coil Weight and Dimensions - Strand is normally supplied in production lengths which may contain welds made before wire drawing. Production lengths of strand can be supplied in varying weights from 2.5 to 4.5 tonnes to suit customers' requirements. Wire can be supplied in coil weights from 500kg's to 2500kg's.

Protection - All material will be supplied export wrapped unless other wise requested.