

# Ultra-high Strength Prestressing Strand

## Characteristic

Tensile strength and yield strength of Ultra-high strength prestressing strand (diameter: 15.7 mm) are approximately 20% greater than those of conventional prestressing strand.

(For example: prEN 10138-3 Y1860S7 15.7 mm)

The increased strength of Ultra-high strength prestressing strand enables a structure to be designed and built using fewer strand; therefore the weight of the structure can be reduced and design flexibility can be increased.

## Mechanical Properties

### Mechanical Properties

Product code	Nominal cross-sectional area	Breaking load	Load at 0.1% permanent elongation	Load at 0.2% permanent elongation	Elongation	Relaxation (0.7 $\sigma_{pu1}$ x 1000hr)
	mm <sup>2</sup>	kN	kN	kN	%	%
7-wire 15.7	150	≥ 335	≥ 298	≥ 285	≥ 3.5	≤ 2.5

### Reference Standard

Product code	Nominal cross-sectional area	Breaking load	Load at 0.1% permanent elongation	Load at 0.2% permanent elongation	Elongation
	mm <sup>2</sup>	kN	kN	kN	%
BS 5896:1980 7-wire super 15.7	150	≥ 265	≥ 225	—	≥ 3.5
JIS G 3536 SWPR7BN 15.2	138.7	≥ 261	—	≥ 222	≥ 3.5

### Comparing the Stress-Strain Curves with Ordinary PC Strand

