

Main applications

High-end & large roofs

Stadium roofs & sport hall envelopes

Static & permanent structures



Long term service life
and durable aesthetics
for demanding
translucent roofs

- Proven design life > 30 years
- Durability clean & easy maintenance
- High translucency & consistent color (visu service)
- High dimensional stability due to Precontraint technology



Precontraint

Xtrem TX30

Excellent longevity
& natural light input



Precontraint

Xtrem TX30

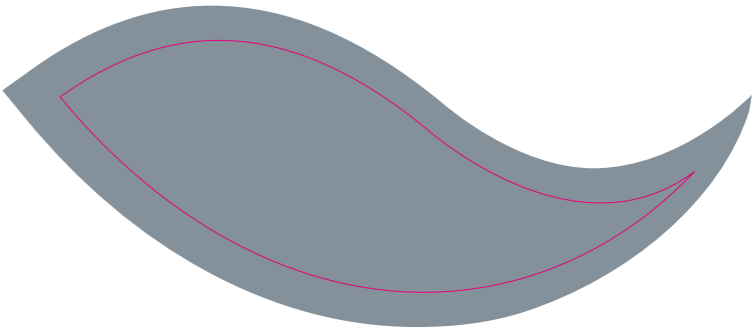
	Precontraint TX30 - II	Precontraint TX30 - III	Precontraint TX30 - IV	Precontraint TX30 - V	Standards
Application	Static and permanent structures - Tropical climates				
Surface coating	CROSSLINK PVDF				
Life expectancy	> 30 years				
■ Technical properties					
HT polyester cables	1100 Dtex	1100/1670 Dtex	1100/2200 Dtex	1670/2200 Dtex	
Weaving patern (warp/weft)	PRECONTRAIT				
Weight	1050 g/sqm	1050 g/sqm	1350 g/sqm	1500 g/sqm	EN ISO 2286-2
Width	178 cm	178 cm	178 cm	178 cm	(+1mm / -1mm)
Tensile strength (warp/weft)	430/430 daN/5cm	560/560 daN/5cm	800/700 daN/5cm	1000/800 daN/5cm	EN ISO 1421
Tear strength (warp/weft)	55/50 daN	80/65 daN	120/110 daN	160/140 daN	DIN 53.363
Adhesion	12 daN/5cm	12 daN/5cm	13 daN/5cm	15 daN/5cm	EN ISO 2411
■ Flame retardancy					
Euroclass	B-s2,d0	C-s2,d0	C-s2,d0	C-s2,d0	EN 13501-1
Rating	Depending on the type and country, additional fire certificates available upon request M2/NFP 92507, B1/DIN4102, NFPA 701, CSFM T19, AS/NZS 1530-3, AS/NZS 3837 Group1				
> The technical data (above) are average values with a +/-5% tolerance					

ADDITIONAL INFORMATION					
Assembly	Weldable after abrasion				
Total thickness	0.78 mm	0.78 mm	1.02 mm	1.14 mm	
Micro organism resistance	Degree 0, excellent	Degree 0, excellent	Degree 0, excellent	Degree 0, excellent	EN ISO 846 Method A
■ Dimensional stability					
Elongation 24h - 10 daN/5 cm (warp/weft)	<1% / <1%	<1% / <1%	<1% / <1%	<1% / <1%	EN15977
Residual elongation	<0.4% / <0.4%	<0.4% / <0.4%	<0.4% / <0.4%	<0.4% / <0.4%	EN15977
■ Thermal and Acoustic performances					
Visible light Reflectance (Rv)	84 %	84 %	85 %	85 %	
Visible light Transmittance (Tv)	8%	7,5%	5,5%	5%	
Solar Factor (gl)	14 %	13 %	11.5 %	10.5 %	EN 410
Thermal conductivity (vertical/ horizontal)	ca. U=5.6 / 6.4 W/sqm/°C				
Acoustic weakening index	ca. 14dBA	ca. 14dBA	ca. 15dBA	ca. 16dBA	ISO 140-3 & ISO 717-1
■ LEED Heat island Effect					
Solar reflectance index	SRI > 95%	SRI > 95%	SRI > 95%	SRI > 95%	SSc 7.2/7.1 (Roof/Non Roof)
■ Management systems					
Quality in conformance with	ISO 9001				

Precontraint®
Technology

20-year
warranty

 Environmental impacts:
EPD, LEED and CSR reports
available on request



> The ADDITIONAL INFORMATION here above is given as an indication. Our products are subject to changes prompted by technological developments. We reserve the right to modify their characteristics at any time. The buyer of our products is responsible for checking the validity of the above data.

* Warranty: Please refer to the text of our warranty. The warranty is valid only after a written confirmation on a case-by-case basis of warranty application. The warranty will not apply to mobile structures. The buyer of our products is fully responsible for their application or their transformation concerning any possible third party. The buyer of our products is responsible for their implementation and installation according to the standards, use and customs and safety rules of the countries where they are used.

Precontraint TX30 has been developed to meet the mechanical and aesthetical longevity requirements of the most demanding projects. In addition to the proprietary Précontraint technology benefits, the Précontraint TX 30 material combines an ultra resistant 30 YEAR coating formula and a **CROSSLINK PVDF top coat**.

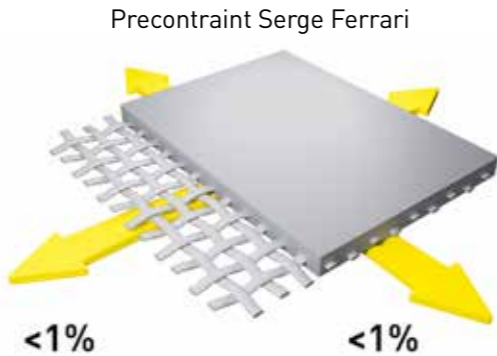
Dimensional stability / Low maintenance

The Serge Ferrari exclusive **Précontraint technology** provides unique dimensional stability compared to conventionally coated composites. It avoids re-tensioning and sagging.

- The polyester micro-cables are tensioned in both directions during the coating process resulting in flatter micro-cables and lower elongation and creep in both directions.

Elongation (EN 15997) : <1% / <1% (warp/weft direction)

Approx. 3 times lower elongation than Non Precontraint composites.



Natural light for architecture

Hold this section up to a light source to gauge the translucency of Precontraint TX30


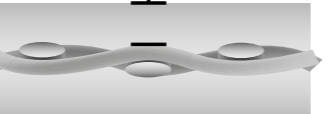
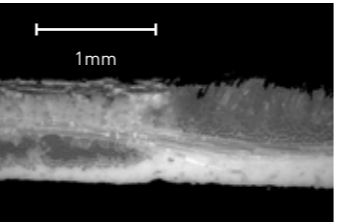



The 30 YEAR coating formula provides outstanding mechanical longevity

The mechanical longevity is directly linked to the quality and thickness of the coating which protects the yarns from the UV. The Precontraint TX30 longevity is served by:

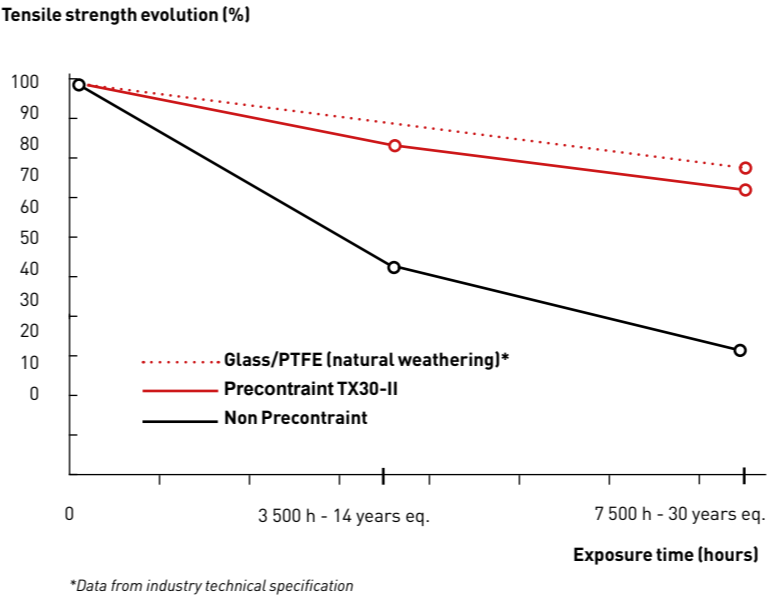
- **A 30 YEAR coating formula** that is highly resistant to the erosion generated by weather aggressions (UV, rain...),
- A thicker coating protection at the top of the flat micro-cables resulting from the Serge Ferrari **Précontraint technology**.

30 YEAR coating formula to stand the test of time

Product reference	Non Precontraint	Precontraint TX30
Before weathering	<div>130 micron protection</div>  <p>> Less protection of the polyester micro-cables against UV</p>	<div>230 micron protection</div>  <p>> Greater protection of the polyester micro-cables against UV</p>
After weathering 7500 h – 30 Year Florida Eq	<div>1mm</div>  <p>Erosion of the coating - Polyester micro-cables are naked and exposed to UV degradation.</p> <p>> Drop of mechanical properties (see below)</p>	 <p>Limited erosion – Polyester micro-cables are still well protected against UV by the coating.</p> <p>> Better mechanical longevity (see below)</p>

Mechanical strength evolution

The mechanical strength has been measured at different intervals during the accelerated weathering. Precontraint TX30 maintains a better mechanical resistance after 30 years thanks to a better protection of the polyester micro-cables.

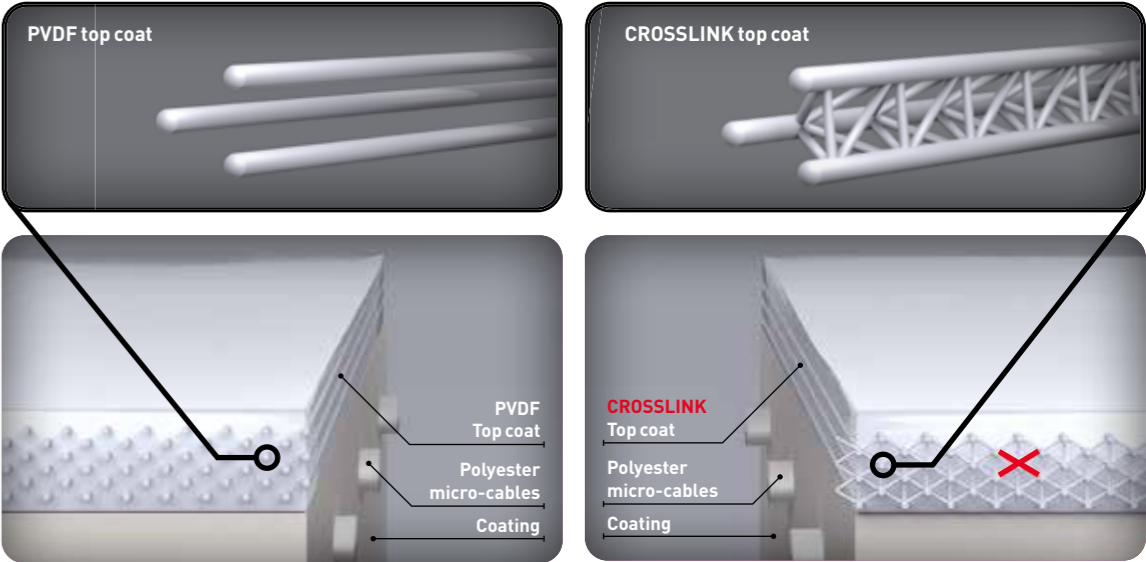


TX30 CROSSLINK TOP COAT for durable aesthetics





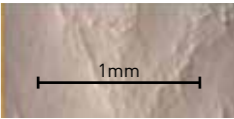


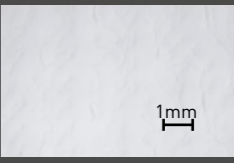
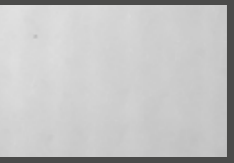
The CROSSLINK top coat formula generates irreversible links between molecular chains. This three-dimensional network provides long term benefits:

- durable aspect due to higher resistance to photo oxidation and micro-cracks,
- smoother surface to minimise ingrained dirt,
- easier and more efficient cleaning of the even surface.

TX30 CROSSLINK Top coat



Extreme surface resistance

Product	Standard	High end & durable composites	
Top coat	Non Precontraint Weldable PVDF	Precontraint TX30 CROSSLINK Weldable after abrasion	Glass / PTFE Weldable with additional tape
Friction coefficient*	0.59	0.27	0.23
Accelerated weathering 4.500 H - 18 year Florida Eq.			
Accelerated weathering 7.500 H - 30 year Florida Eq.		<div>1mm</div> 	
CLOSE UP Yarn protection 7.500 H – 30 year Florida Eq		<div>1mm</div> 	
	Lots of micro cracks and exposed yarns – Irreversible degradation	No micro cracks, aesthetics is preserved, easy cleaning	No micro cracks, aesthetics is preserved, easy cleaning

* a lower friction coefficient minimises the accumulation of dirt and pollution resulting in self cleaning properties.