

# PRECONTRAIN TX30

## MAIN FEATURES

- Proven Design life 30 years +
- Comfort optimization : natural light and solar protection
- Taxyloop recycling provides 2nd generation materials

## APPLICATIONS

- Major construction projects
- Tensile roofs and structures
- Large free span and anti clastic shapes



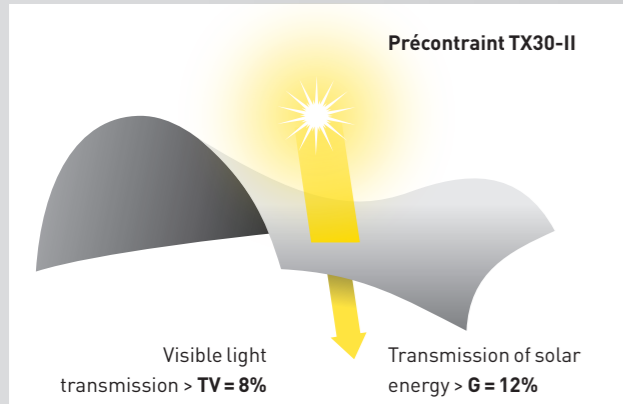
Durability of mechanical and aesthetical performances

### Choose a design life in excess of 30 years

The new generation of Précontraint TX30 composite materials has been developed to match the requirements of the most demanding projects.

This technology combines:

- CROSSLINK PVDF surface treatment highly resistant to photo-oxidation,
- 30 YEAR coating formula engineered to resist erosion for more than 30 years,
- Outstanding dimensional stability through the use of the Précontraint technology.

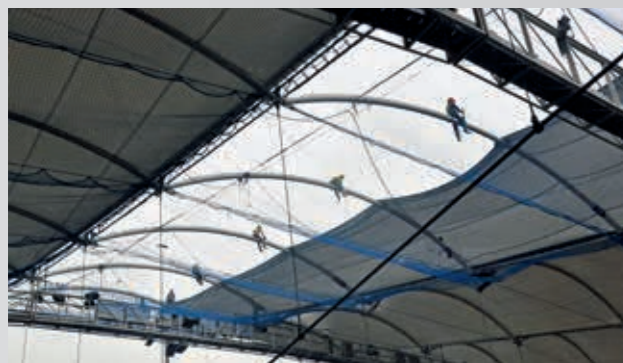


Optimum operating and energy cost

### Optimise natural light input and solar protection

Précontraint TX30 is engineered to optimise the comfort of the building users:

- Allows more natural light (Tv=8%) than the standard PVC composites (Tv =5%) which means 60% more light entrance.
- Better protection against solar heat (G=12%) than the PTFE composites (G = 20%).



Dismantling before recycling via Taxyloop : 50% environmental impact reduction

### Select an eco-responsible material

Précontraint TX30 is part of the Serge Ferrari eco-design policy including end of life management:

- Taxyloop® unique and operational recycling solution,
- Life Cycle Assessment,
- Health and Environmental performance: Eco IDentity.



# PRECONTRAIN TX30

	Précontraint TX30 - II	Précontraint TX30 - III	Précontraint TX30 - IV	Précontraint TX30 - V	Standards
Application	<b>Static and permanent structures - Tropical climates</b>				
Surface coating	CROSSLINK PVDF				
Life expectancy	<b>&gt; 30 years</b>				
<b>Technical properties</b>					
HT polyester cables	1100 Dtex	1100/1670 Dtex	1100/2200 Dtex	1670/2200 Dtex	
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
<b>Flame retardancy</b>					
Euroclass	<b>B-s2,d0</b>	<b>C-s2,d0</b>	<b>C-s2,d0</b>	<b>C-s2,d0</b>	EN 13501-1
Rating	Depending on the type, other fire certificate/country on demand <b>M2/NFP 92503, B1/DIN4102-1, NFPA 701, CSFM T19,...</b>				

> The technical data (above) are average values with a +/-5% tolerance

## ADDITIONAL INFORMATION

	Weldable after abrasion				
Assembly	0.78 mm	0.78 mm	1.02 mm	1.14 mm	
Total thickness	Degree 0, excellent	Degree 0, excellent	Degree 0, excellent	Degree 0, excellent	EN ISO 846 Method A
Micro organism resistance	<1%/<1%	<1%/<1%	<1%/<1%	<1%/<1%	EN15977
<b>Dimensional stability</b>	<0.4%/<0.4%	<0.4%/<0.4%	<0.4%/<0.4%	<0.4%/<0.4%	EN15977
Elongation 24h - 10 daN/5cm (warp/weft)	10 %	9 %	7 %	6 %	
Solar Transmittance (Ts)	75 %	75 %	76 %	76 %	
Solar reflectance (Rs)	14 %	13 %	11.5 %	10.5 %	EN 410
Solar Factor (g)	8 %	7.5 %	5.5 %	5 %	
Visible light Transmittance (Tv)	84 %	84 %	85 %	85 %	
Visible light Reflectance (Rv)	0%	0%	0%	0%	
UV transmission	<b>Thermal and Acoustic performances</b>				
Thermal conductivity (vertical/ horizontal)	ca. U=5.6 / 6.4 W/sqm/°C				Calculated
Acoustic weakening index	ca. 14dBA	ca. 14dBA	ca. 15dBA	ca. 16dBA	ISO 140-3 & ISO 717-1
<b>LEED Heat island Effect</b>					
Solar reflectance index	SRI > 84%	SRI > 84%	SRI > 84%	SRI > 84%	SSc 7.2/7.1 (Roof/Non Roof)
<b>Management systems</b>					
Quality in conformity with					ISO 9001

## Certifications, labels, recycling capacity

Environmental impacts: LCA and LEED reports available on request

ECO IDentity Profil  
See the brochure

> The values here above are 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.

## → Contact

- Headquarters: + 33 (0)4 74 97 41 33
- Your local representative: [www.sergeferrari.com](http://www.sergeferrari.com)

## → Taxyloop®

- The Serge Ferrari operational recycling chain
- Secondary raw materials of high intrinsic value compatible with multiple processes
- A quantified response to combat depletion of natural resources

[www.taxyloop.com](http://www.taxyloop.com)

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# PRECONTRAIT TX30

The new generation of composite material Précontraint 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 30YEAR PVC coating formula and a CROSSLINK PVDF top coat.

## Exclusive Précontraint Serge Ferrari® technology

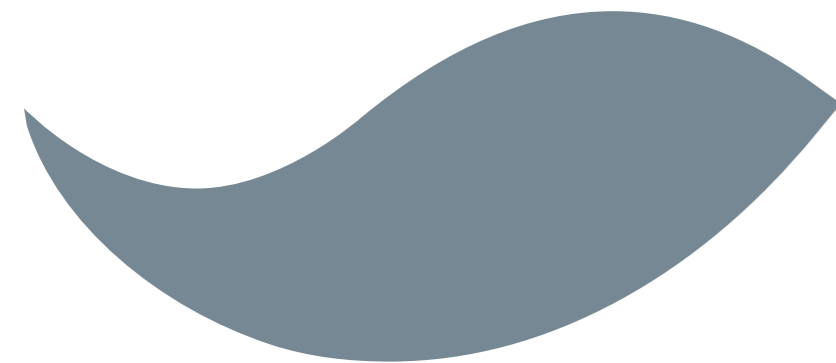
The Serge Ferrari exclusive technology, patented worldwide, provides unique properties to the Précontraint composite membrane compared to conventionally coated materials.

- The polyester micro-cables are tensioned in both directions during the coating process for greater dimensional stability and consistency.
- The Précontraint base cloth is therefore flatter and better protected by a thicker coating over the micro-cable base cloth.



## Natural light for architecture

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





## The 30 YEAR coating formula provides an outstanding mechanical longevity

The mechanical longevity is directly linked to the quality of the coating which protects the yarns. The Précontraint TX30 longevity is served by:

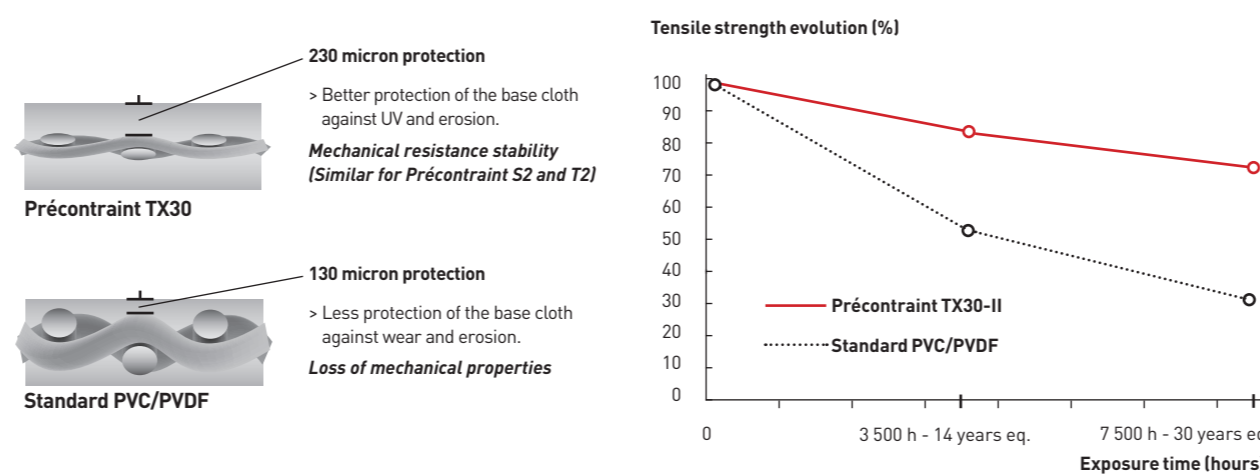
- A 30 YEAR coating formula resistant to the erosion generated by weather agressions ( UV, rain...),
- A thicker coating at the top of micro-cables resulting from the Serge Ferrari Précontraint technology®.

## 30 YEAR coating formula to stand the test of time

Product reference	Standard PVC	Précontraint TX30
Top coat treatment	Standard PVC / PVDF	30 YEAR coating / CROSSLINK
Cross section after accelerated Weathering test 7500 H - 30 Year Florida Eq		
Coating thickness at the top of the yarns 7500 H - 30 Year Florida Eq	Exposed yarns, not protected High erosion	Highly protected yarns Very limited erosion

## Mechanical strength evolution

The mechanical strength has been measured at different intervals during the accelerated weathering.



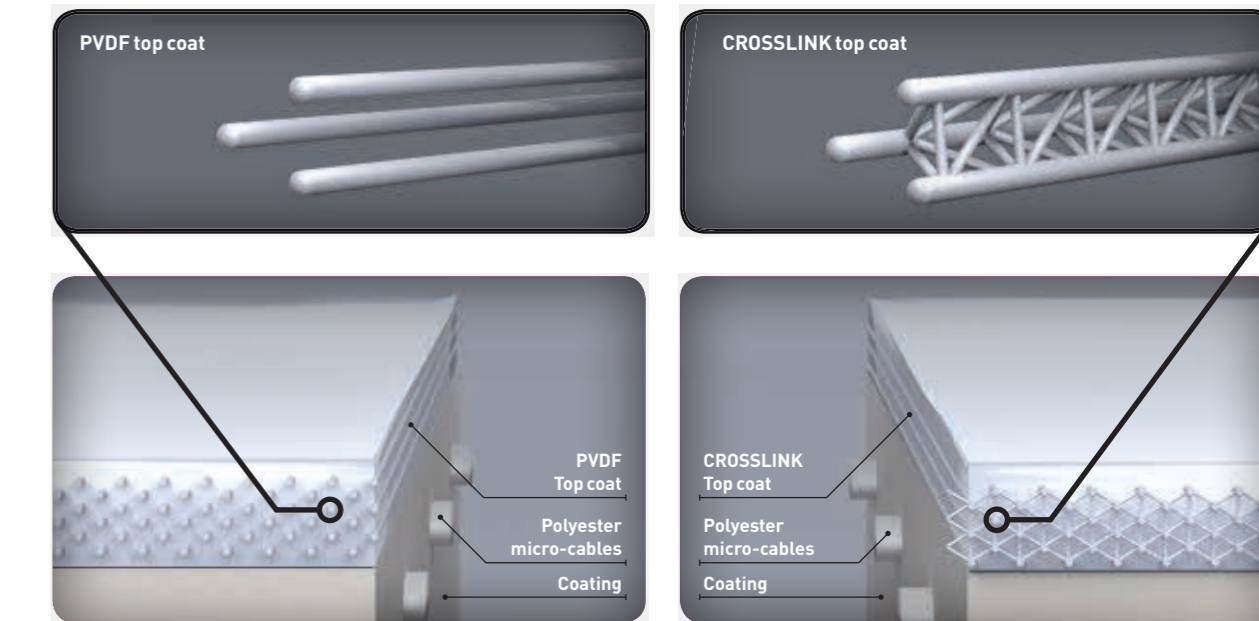
Précontraint TX30 maintains a better mechanical resistance after 30 years thanks to a better protection of the polyester micro-cables.

## CROSSLINK TOP COAT for durable aesthetics

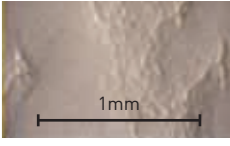
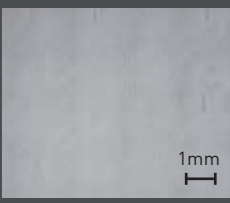
The CROSSLINK top coat formula generates irreversible links between molecular chains. This three-dimensional network provides long term benefits:

- higher resistance to photo oxidation and micro-cracks,
- stable and smoother surface to minimise in grained dirt,
- easier and more efficient cleaning of the even surface.

## CROSSLINK Top coat formula



## Surface evolution: Microscopic observation

Product reference	Standard PVC	Précontraint S2	Précontraint T2	Précontraint TX30
Top coat	PVDF weldable without abrasion	PVDF weldable without abrasion	Calibrated PVDF weldable after abrasion	CROSSLINK weldable after abrasion
Accelerated weathering 2.500 H - 10 year Florida Eq				
Accelerated weathering 7.500 H - 30 year Florida Eq				
CLOSE UP Yarn protection 7.500 H - 30 year Florida Eq				
	Lots of micro cracks and exposed yarns - Irreversible degradation	Lots of micro cracks and dirt build up	Limited micro cracks and dirt build up	No micro cracks, aesthetics is preserved, easy cleaning

TX30-II 3000

TX 30 I - II - III - IV and V samples are available on demand.

The here above data are extracts from a long term accelerated weathering test based on ISO 10640. The weathering protocol was validated by comparing outdoor exposed and artificially weathered materials. Study available on demand.