

English

Photo: © Daniel Booter

Push the limits of optics and transparency

SentryGlas[®] Xtra[®]

kuraray

SentryGlas[®]



Photo: © Daniel Booter

Designed to improve performance and efficiency

DEMONSTRATING THE ADVANCED INTERLAYER SOLUTIONS (AIS) COMMITMENT TO INNOVATION,

SentryGlas Xtra® (SGX®) interlayer continues the success story of SentryGlas®, giving architects greater confidence in laminate quality and laminators an easier route to market. SGX® interlayers remove a number of processing requirements and improve lamination processing efficiency. Of particular interest to architects and home builders – who want the best optical performance – and glass laminators – who want to deliver quality products – is the reduced risk of haze formation caused by an inadequate cooling rate. Adhesion to the air-side of glass is also significantly improved, with an adhesion promoter no longer required, making multi-ply laminated glass assemblies easier to process.

SGX® complies with global safety glazing codes such as ANSI Z97.1, EN14449, EN12543, EN12600, EN356 and Safety Glazing Certification Council (SGCC). Properly laminated and installed, SGX® laminates of 2.53 mm caliper have been tested and pass the large missile impact test per ASTM E 1996. Also SentryGlas Xtra® has approved Miami Dade County Product Control Notice of Acceptance (NOA).

BETTER OPTICS

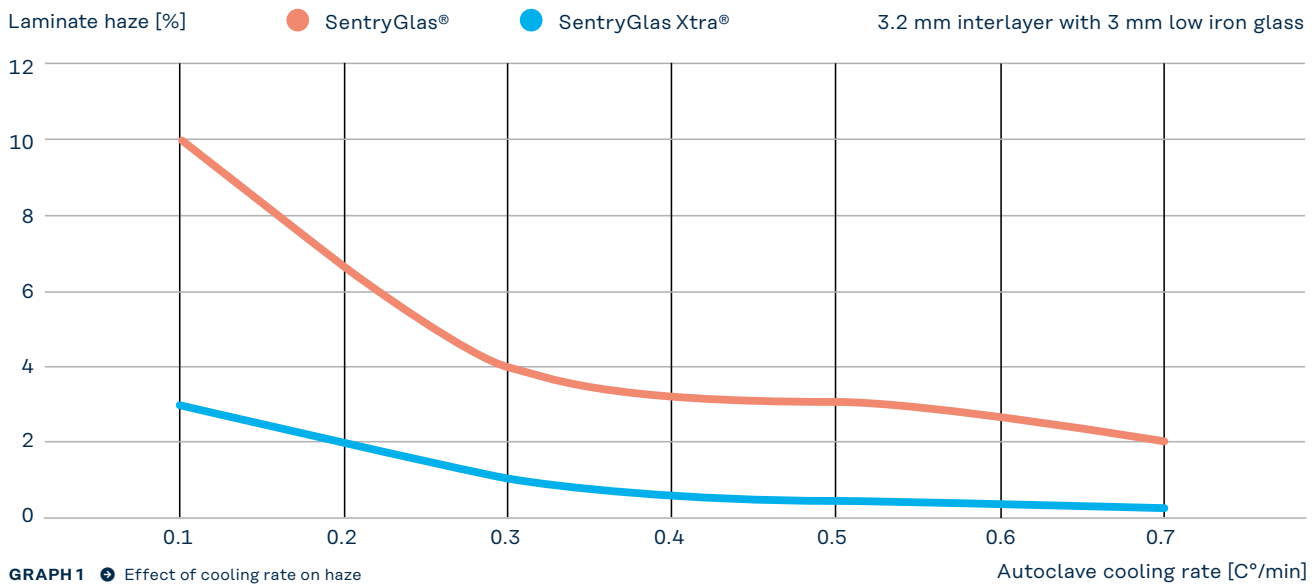
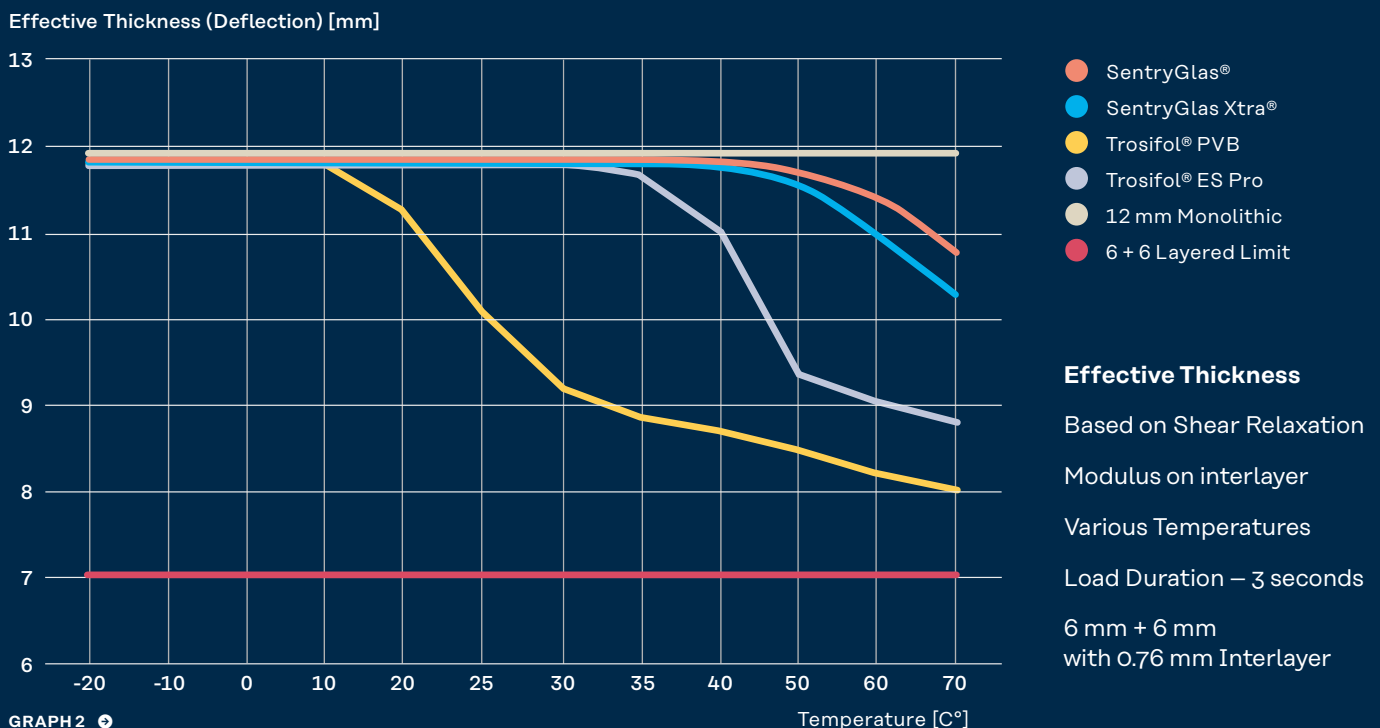
Reduced haze sensitivity
Improved visual consistency
Greater transparency

EASIER PROCESSING

No air-side primer required
Improved adhesion
Simplified multi-ply laminates
Higher production efficiency

PROVEN PERFORMANCE

Hurricane impact capable
Safety Glazing compliant
Structural laminate performance
Global code acceptance

Haze less sensitive to autoclave cooling rate SentryGlas Xtra® vs. SentryGlas®**ASTM E1300 Effective Thickness Based on Interlayer Shear Relaxation – Modulus @ 3 seconds**

SentryGlas Xtra® is an enhanced version of our SentryGlas® ionoplast interlayer, offering a few key improvements.

SentryGlas Xtra® improves lamination processing efficiency and removes a number of the processing requirements. Of particular interest to laminators is the reduced risk of haze formation caused by an inadequate cooling rate during autoclaving. This means that laminators can increase the number of laminates in each autoclave run, increasing throughput efficiency.

Adhesion to the air-side of glass has also been significantly improved, eliminating the need for an adhesion primer, making multiple-ply laminated glass assemblies easier to process.

Laminate typical properties*

Property	Method	Value [%]
Light Transmission	EN410 (ASTM G 173-03)	90 (90)
UV Transmission	ISO 9050	< 1
Haze	ASTM D1003	< 1
Yellowness	ASTM D313	< 0.3

TAB 1 • * 0.89 mm with 4 mm clear glass

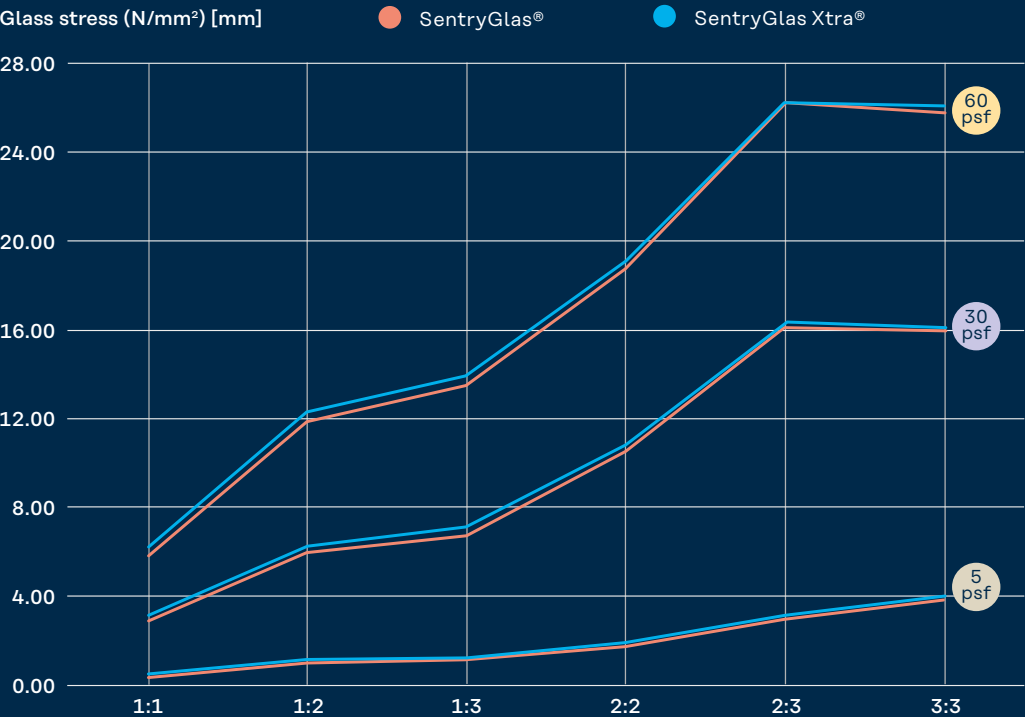
Robust adhesion to air side of glass without the need for primer

Haze formation less sensitive to autoclave cooling rate

Potential to increase autoclave laminate loading

Greater confidence in consistently achieving the highest optical quality

SentryGlas vs SentryGlas Xtra® – Stress



Details

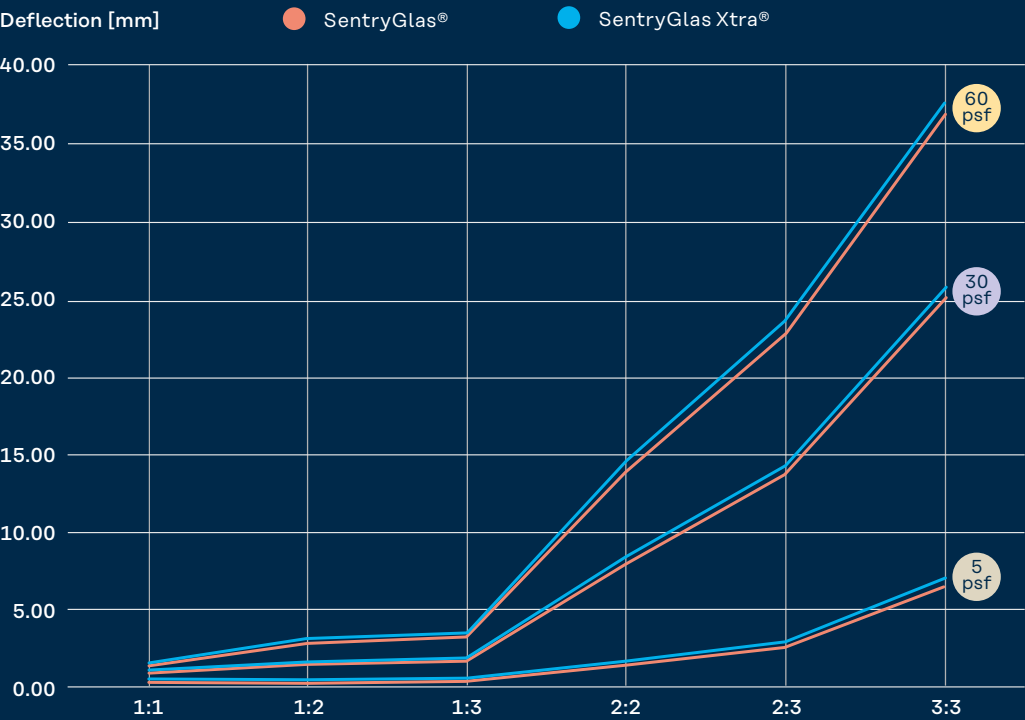
- 6 mm + 6 mm glass with 1.52 mm interlayer
- 6 different glass sizes from 1 m x 1 m to 3 m x 3 m
- 3 different wind load pressures; 5 psf, 30 psf & 60 psf

Young's Relaxation Modulus

- 50°C @ 3 sec
- SentryGlas® = 78 MPa
- SentryGlas Xtra® = 37.6 MPa

GRAPH 3 • Data calculated using Mepla Pro 2025

SentryGlas vs SentryGlas Xtra® – Deflection



- Details**
- 6 mm + 6 mm glass with 1.52 mm interlayer
 - 6 different glass sizes from 1 m x 1 m to 3 m x 3 m
 - 3 different wind load pressures; 5 psf, 30 psf & 60 psf
- Young's Relaxation Modulus**
- 50°C @ 3 sec
 - SentryGlas® = 78 MPa
 - SentryGlas Xtra® = 37.6 MPa

GRAPH 4 Data calculated using Mepla Pro 2025



Impact performance

Test	Laminate construction	Category	Compliance
ANSI Z97.1	0.89 mm (35 mil)/ 3 mm Annealed Glass	Class A Category II/ Class B Category I	Pass
EN12600	0.76 mm (30 mil)/ 3 mm Annealed Glass	1B1	Pass
EN356	0.76 mm (30 mil)/ 3 mm Annealed Glass	P1A	Pass

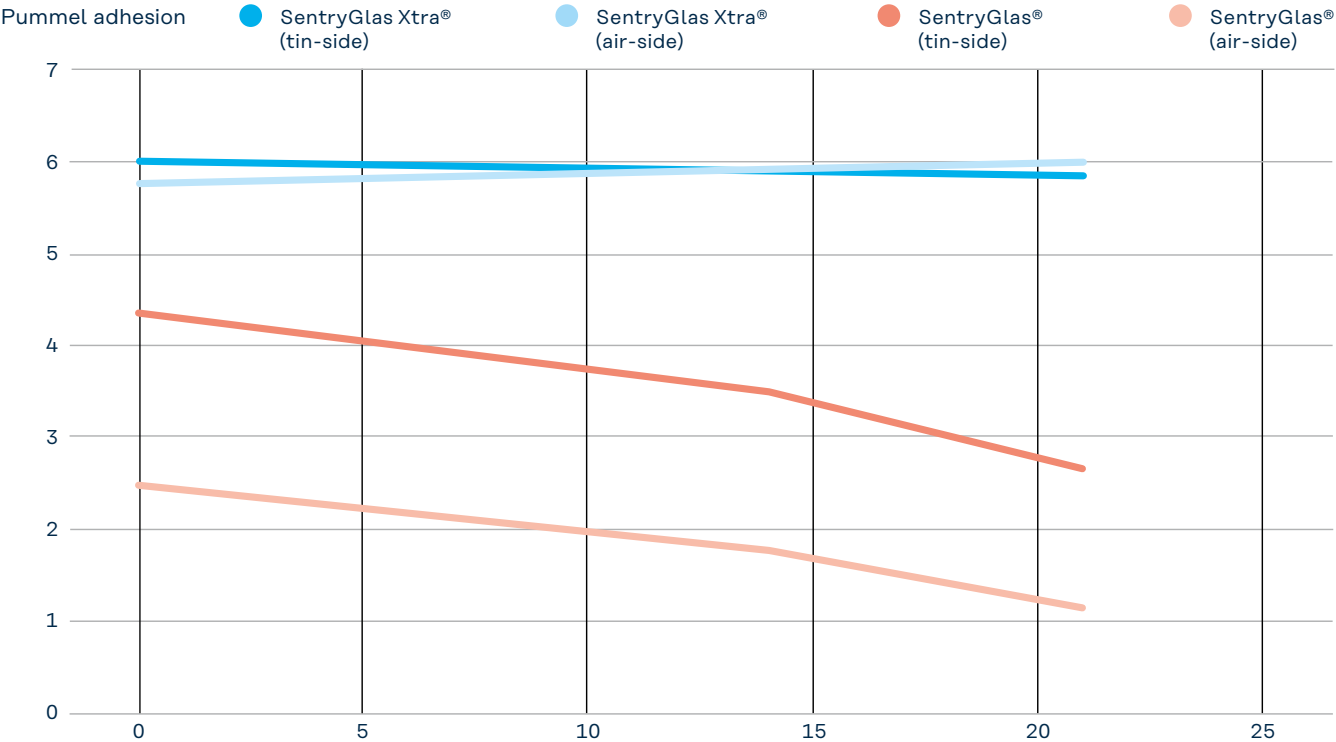
TAB 2 * 0.89 mm with 4 mm clear glass

Weathering testing

Test	Compliance
ANSI Z97.1 (3,000 hours Xenon)	Pass
EN12543 4000 hours	Pass

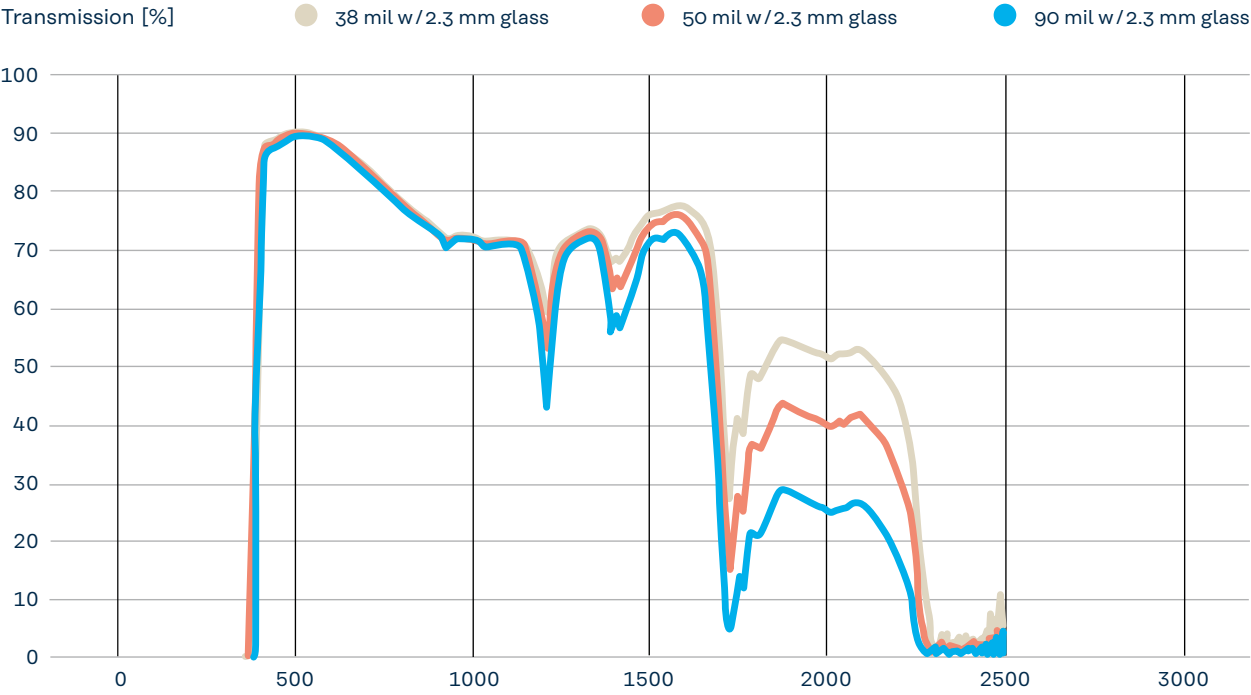
TAB 3

Pummel adhesion comparison SentryGlas® vs. SentryGlas Xtra®



GRAPH 5 Pummel adhesion air vs. tin side and effect of moisture (3.2 mm interlayer with 3 mm low iron glass) Exposure time [days]

SentryGlas Xtra® total solar transmission curves



GRAPH 6 Wavelength [nm]

Contact



FOR FURTHER INFORMATION

on products from Kuraray, please visit www.kuraray.com.

You can find further information on our Trosifol® and SentryGlas® products at www.trosifol.com.

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in glazing.**



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