

SentryGlas® ionoplast interlayer  
and SentryGlas® Xtra™ ionoplast interlayer

# Bulletin

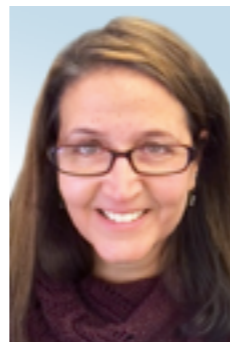
The Original – only by Kuraray



## SentryGlas® ionoplast interlayer and SentryGlas® Xtra™ ionoplast interlayer

# The Original - only by Kuraray

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SentryGlas® ionoplast interlayer was developed in 1998 by the DuPont company to meet the requirements of the hurricane impact glazing market after Hurricane Andrew. SentryGlas® has since come to be recognized as a high performance interlayer for structural and security laminated glass.

**SENTRYGLAS®** SentryGlas® greatly improves the safety of glass while providing superior strength, clarity, open edge stability, and post breakage performance. With over 24 years of proven field performance and durability, SentryGlas® provides confidence to architects and engineers in their glazing system designs.

All of this is possible by the unique chemistry of this patented resin developed by DuPont. Through the acquisition by Kuraray of DuPont Glass Lamination Solutions business in 2014, Kuraray is now the exclusive producer of SentryGlas® ionoplast interlayers products based on this patent.

### PRODUCT INTRODUCTIONS / HISTORY

- SentryGlas® Plus (SGP) sheet launched 1998
- SentryGlas® Plus sheet with improved optics and adhesion 2005
- SentryGlas® Plus High UV transmission 2005
- Re-Branding of SentryGlas® Plus (SGP) to SentryGlas® (SG) 2008
- SentryGlas® (SG) on rolls 2012
- SentryGlas® on rolls up to 270 cm 2014
- SentryGlas® (SG) Translucent White 2016
- New production line for rolls in Holesov Czech Republic installed 2018
- SentryGlas® Xtra™ (SGX™) for improved lamination performance 2019
- SentryGlas® Xtra™ (SGX™) on rolls 2020
- SentryGlas® and SentryGlas® Xtra™ on rolls up to 330 cm wide 2021

+

Trust only SentryGlas® by Kuraray when your project depends on it.

Specify SentryGlas® interlayer by Kuraray as basis of design.

### EXCEPTIONAL IN YID, HAZE AND ADHESION

Authentic „SentryGlas® by Kuraray“ interlayers have better YID and haze when compared to other ionomer (SGP) interlayer alternatives.

#### Yellowness index and haze for SentryGlas® interlayer and competitors – 3.43 mm (140 mil)\*

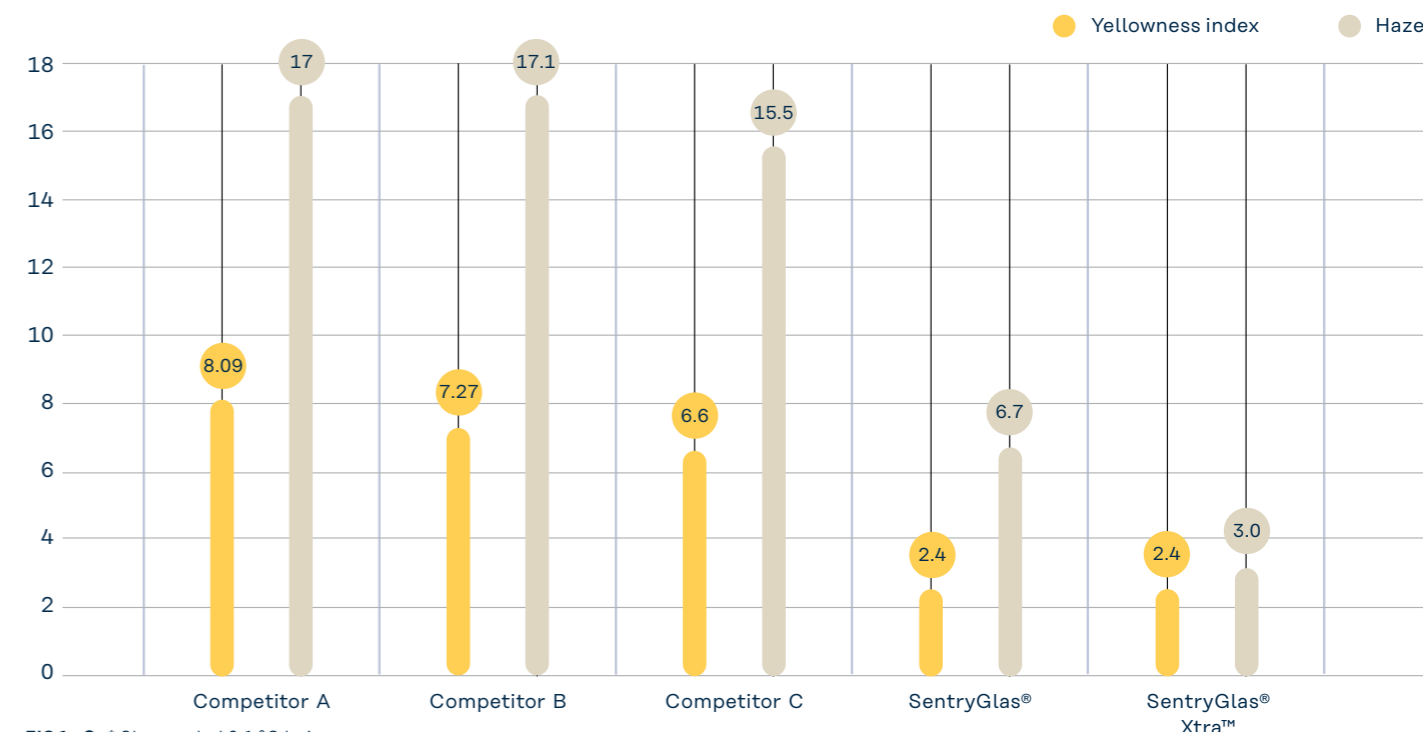


FIG 1 • \* Slow cooled 0.1 °C / min.

Authentic “SentryGlas® by Kuraray” interlayers have the best adhesion.

#### Peel adhesion (kgf)

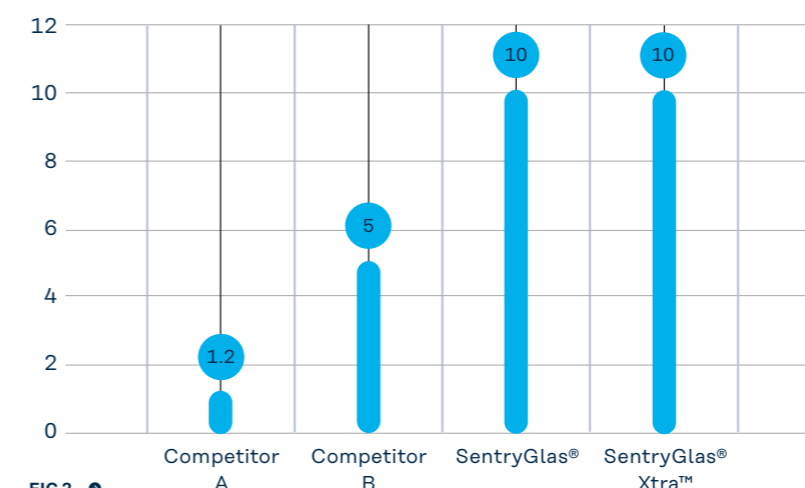
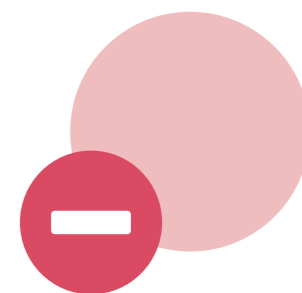


FIG 2 •

### RISK OF NOT USING AUTHENTIC “SENTRYGLAS® INTERLAYERS BY KURARAY”

- Structural glazing failures due to inaccurate data used for calculations
- Post breakage failures resulting in injury
- Potential delamination
- Optical defects
- Negative reputation
- Using Fake SGP interlayers may violate building codes and standards for a non-certified, not tested product



## Global test standards

# SentryGlas® and SentryGlas® Xtra™ have been tested by third party labs to global test standards for safety glass

### NORTH AMERICA CODES, ISO AND CSA



- ASTM E1300 laminate effective thickness method for structural performance
- SGCC listed. Required for use as safety glazing in North America.
- ANSI Z97.1
- Miami Dade NOA
- Recognized list of laminators maintained by Kuraray provided yearly to Miami Dade County. Must be on this list to obtain Miami Dade NOA required for hurricane market in Florida.

### EUROPEAN CODES



- Dibt approval for coupling approach – requires extensive 3rd party testing
- CSTB approval – required for use in France
- EN12543 radiation test data – required to sell interlayers in Europe
- EN12600 pendulum test
- EN356 ball drop test
- CEKAL

### APPLICATIONS TESTING



- Used by Department of State in US embassies since 2010
- Used in Apple Stores since 2002\*
- Hurricane impact glazing systems since 1998
- Tornado resistant systems
- Bullet resistant testing data
  - Underwriters Lab (UL) 752 Standard for Bullet Resisting Equipment
  - National Institute of Justice-NIJ 0108.01. Ballistic Resistant Protective Materials
  - EN1063 Glass in Building: Security glazing, testing and classification of resistance against bullet attack
- Bomb blast test data - both arena and shock tube
- Sealant and coating compatibility testing
- Extensive post-breakage testing - critical to safety in railings, floors, stairs and overhead glazing
- Anti-intrusion testing
  - ASTM F1233

\* Apple is a trademark of Apple Inc., registered in the U.S. and other countries and regions.



### GLOBAL TECHNICAL SUPPORT

- We've found that some Fake SGP competitors are using our modulus data and don't have their own.
  - Requires extensive testing and expertise in polymer mechanics
  - Verified by third party labs
  - Accurate data is critical to performance of glass system
- Global technical support for design calculations, window design, bullet and blast resistance
- Online tool for design calculations
- Lamination support to ensure laminates are properly laminated
- Performance monitoring program for laminators measuring haze and adhesion to ensure best quality laminates



### PRODUCT QUALITY

- Kuraray is expert in the extrusion of ionomers
- High level of contamination control
- SentryGlas® on rolls – exceptional flatness for improved lamination throughput
- SentryGlas® Xtra™
- Production sites are ISO 9001 certified



### DURABILITY

- Over 24 years of proven field exposure around the world
- Over 24 years of edge stability in Florida with no defects





Exceptional flatness

# Comparison to competitive ionomer offerings



**Competitive ionoplast interlayer:**  
Significant puckering of rolls

**SentryGlas® interlayer by Kuraray:**  
Exceptional flatness – improved processability



Grand Canyon Skywalk, Arizona, USA

# Contact



**FOR FURTHER INFORMATION**

on products from Kuraray, please visit [www.kuraray.com](http://www.kuraray.com).  
You can find further information on our Trosifol® and SentryGlas® products at [www.trosifol.com](http://www.trosifol.com).

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## **WORLD OF INTERLAYERS**

**What is the next project  
you are dreaming of?**