SentryGlas®
IONOPLAST INTERLAYER

SentryGlas® ionoplast interlayer – Make glass safer. Build stronger, lighter

For glass that's more than glass

Originally created for specialty markets such as high-security glazing and hurricane windows, SentryGlas® ionoplast interlayers now are being specified wherever architects or engineers need a material that can make a difference in glass performance.

The strength and open-edge durability of SentryGlas® interlayer enable frameless safety glass balustrades at sports stadiums

5 times tougher, up to 100 times stiffer

Stronger and more rigid than conventional laminating materials, SentryGlas® ionoplast interlayers help create safety glass that protects against bigger storms, larger impacts and more powerful blasts. They become an engineered component within the glass, holding more weight, so the glass can serve as a more active structural element in the building envelope, increasing framing system design freedom.

All this, plus SentryGlas® improves long-term weather resistance of laminated glass systems.

SentryGlas® structural interlayer performance helps architects and glazed building system manufacturers meet society's need for greater security, energy efficiency, noise reduction, healthful living, safety and maintenance ease. It helps builders do more with less, creating innovative new spaces, while providing greater protection for occupants.

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Low Deflection, Stronger Glass Before and After Breakage

SentryGlas® ionoplast interlayer is up to 100 times stiffer and 5 times stronger than traditional interlayers, helping thinner laminates meet specified wind loads or structural requirements. In many applications laminated glass made with SentryGlas® acts like an engineered composite, with low mechanical strain under loads, and outstanding post-breakage resistance to creep and collapse.

Bolted and Frameless Glass

Laminated glass made with stiff SentryGlas® can tolerate high stress loads. The interlayer becomes a higher performing structural layer in the multilayer composite. This gives architects and framing system engineers greater design freedom, useful in creating innovative new bolted and point-supported systems. Clean, smooth, expansive façades can now be engineered with minimal metal exposure and reduced need for four-sided edge framing.

A New Era For Exposed Edges

Gone are the days when laminated safety glass needed to be edge-framed partly to hide potential edge defects after weathering. Compared with many commonly used interlayers, the advanced polymer used in the SentryGlas® interlayer is less susceptible to moisture intrusion or other weathering effects.

Butt-Joined Freedom, Too

In testing with widely used glazing sealants, butt-joined panels of laminated glass made with SentryGlas® interlayers show excellent compatibility, remaining free of clouding or other edge defects after years of weather exposure and inspection. Butt-joined exterior glazing made with SentryGlas® and installed in buildings around the world continues to show outstanding reliability and freedom from edge defects.

Effortless, Ready Protection

By installing windows, doors, canopies, balustrades or curtain wall systems made with SentryGlas®, building owners get fulltime protection against wind-borne debris, the leading cause of window failure and property loss. And unlike owners who rely on shutters, owners who install glass made with SentryGlas® don't have to be home to deploy their safety system when weather threatens. Their protection is already in place, guarding their investment in accordance with the world's most demanding building codes.

(It can help defend against blasts, burglaries and break-ins, too.)

More Daylight, Less Worry

Because SentryGlas® is stiffer and tougher than conventional interlayers, it can withstand greater impacts (stronger winds and larger objects) in materials-saving thin glazing installations. It also can be used in larger panes of storm-protected glazing, increasing the vision are and reducing framing material and installation labor.

The extra stiffness of SentryGlas® also helps create a flatter glazing surface, with low postinstallation warpage. Reduced deflection helps the glass withstand greater wind forces ... even when dry-glazed.

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In post-breakage wind cycle testing required for tough new building codes, hurricane glass made with SentryGlas® lasts longer and maintains building protection long after alternative laminated safety glass has failed and opened the building interior to wind, rain, and the potential devastating effects of over-pressure.

Let's Make Something Perfectly Clear

For all its strength, SentryGlas® interlayer comes with outstanding clarity. It starts clear, and stays clear ... with a Yellowness Index (YI) starting at 1.5 and lower (versus 6 to 12 for conventional interlayers).

That means extra transparency and more predictable color in laminated glass, more consistent with the glass color selected for the project. And with SentryGlas® interlayer the clarity is permanent; it won't turn yellow over time. The interlayer stays clear, and requires no added adhesives, laminating aids or plasticizers to perform well in the laminate.

Ultra-Clear Low-Iron Laminates

The outstanding clarity of SentryGlas® lets architects and designers realize their ultimate visions in low-iron safety glass. For the first time, designers can specify low-iron, laminated safety glass... and get the full, natural light transmittance they were looking for.

SentryGlas® interlayer strength and non-yellowing clarity enable use in elegant indoor and outdoor structural applications such as glass canopies, fins and balustrades.

SentryGlas® helped create a 45-ft-tall glass facade at the Lincoln Center's Alice Tully Hall in New York.

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Typical Physical Properties of SentryGlas® Interlayer

Property	Units Metric (English)	Value	ASTM Test
Young's Modulus	MPa (kpsi)	300 (43.5)	D5026
Tensile Strength	MPa (kpsi)	34.5 (5.0)	D638
Elongation	%	400	D638
Density	g/cm^3 (lb/in^3)	0.95 (0.0343)	D792
Flex Modulus 23°C (73 °F)	MPa (kpsi)	345 (50)	D790
Heat Deflection Temperature at 0.46 MPa	°C (°F)	43 (110)	D648
Melting Point	°C (°F)	94 (201)	(DSC)
Coefficient of Thermal Expansion (-20°C to 32°C)	10^{-5} cm/cm °C (mil/in °C)	10-15 (0.10-0.15)	D696

Permanent protection, with a view...

that's how residents and building owners in hurricane- and cyclone-prone areas describe the carefree storm-preparedness of tough, impact-tested safety glass windows made with SentryGlas® interlayer.

Helping builders and owners meet tough new wind storm codes

In areas subject to high winds or coastal storms, building owners who install protective laminated glass doors and windows often qualify for more affordable insurance.

SentryGlas® interlayers have been tested and accepted for use in hundreds of impact-resistant glazing systems meeting some of the toughest building codes in the world.

Protection that stays in place, 24 x 7

At hospitals and in other buildings where emergency preparedness matters most, and where "boarding up" isn't practical, specifiers often choose safety glazing made with SentryGlas® to meet or exceed local building codes

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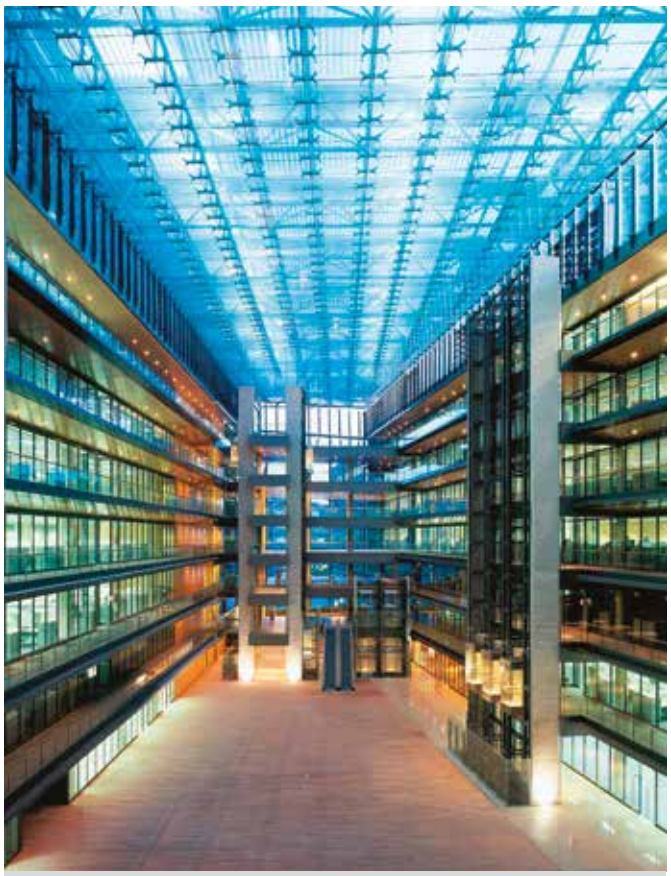
Available From Leading Laminators And Glazing System Installers

Experienced glass laminators, framing and facade system specialists and glazing contractors are available worldwide to meet the needs of architects and system designers specifying SentryGlas®.



Spanish energy giant, Endesa, fills its Madrid headquarters atrium with daylight using an energy-efficient, ventilated glass roof made with SentryGlas®.

REGIONAL CONTACT CENTERS

Kuraray Co., LTD
Ote Center Bldg.
1-1-3, Otemachi
Chiyoda-ku, Tokyo, 100-8115, Japan
Phone: +81 3 6701 1508

Kuraray Europe GmbH
Glass Laminating Solutions
Philipp-Reis-Str. 4
65795 Hattersheim, Germany
Phone: +49 (0) 69 30585300

Kuraray Americas, Inc.
2625 Bay Area Blvd. #600
Houston TX 77058, USA
Phone: +1.800.423.9762

Kuraray Mexico S.de R.L. de C.V.
Homero 206, Polanco V seccion,
cp 11570,
Mexico City, Mexico
Phone: +52 55 5722 1043

For further information about SentryGlas®, please visit

www.sentryglas.com

SYRACUSE GLASS COMPANY
www.syracuseglass.com
Our Commitment Shines Through

One General Motors Drive
PO Box 381 - Syracuse, NY 13206
Phone: 315.437.9971
Toll Free: 800.962.3211
Fax: 315.437.8118

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