

TROSIFOL™

CASE STUDY

GULFSTREAM CONDOMINIUMS ON NORTH PADRE ISLAND, NEAR CORPUS CHRISTI, TEXAS/USA



The Gulfstream Condominiums was able to open just four days after Hurricane Harvey thanks, in part, to its use of glazing that incorporates SentryGlas® Ionoplast interlayers from Trosifol™.

SENTRYGLAS® EQUIPPED GLAZING STANDS UP TO THE MIGHT OF HURRICANE HARVEY

Complex reopens just a few days after Category 4 storm made landfall

The Gulfstream Condominiums on North Padre Island, near Corpus Christi, Texas USA faced the full wrath of Hurricane Harvey on August 25th, 2017. But, even after being subjected to sustained wind speeds of up to 97 mph (156 km/h), the complex was back in business just four days after the storm.

The condominium's resilience in the face of such a severe storm was not only down to the strength of its impressive 47-year old structure, but also a decision made five years ago – during an extensive refurbishment – to install high performance storm-resistant glazing that incorporated 90 mil (2.28 mm) SentryGlas® Ionoplast interlayers from Trosifol™.

Originally developed for the high-building-envelope protection required for hurricane glazing in the United States, SentryGlas® did exactly what it was designed to do at the Gulfstream Condominiums - prevent glass breakage and the subsequent ingress of water and

wind-borne debris that accompanies storms of this magnitude. To put this in context, the storm dumped a year's-worth of rain in less than a week on Houston and much of South Eastern Texas.

According to a member of the management team at the complex: "This is a 47 year old building and all the windows were replaced as the result of a mandate from the board of owners. It was determined that hurricane-resistant glazing should be used due to our proximity to the beach and the potential impact of strong winds and storm events. We did have some damage to our roof and some of the fences and pergolas, but there was no structural damage and once the water, gas and electricity had been restored we were able to open up the complex just four days after Harvey. The damage along the coast was extensive, with some complexes experiencing massive glazing failures, which, due to the extensive repairs required, have resulted in them only being able to reopen in summer 2018.

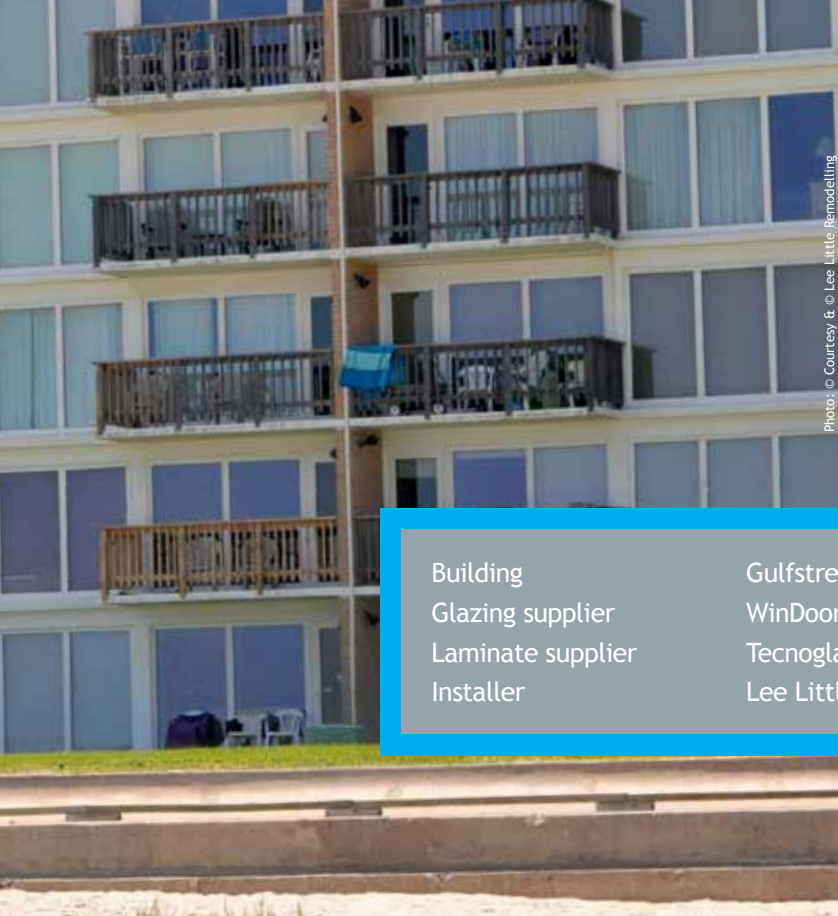


Photo: © Courtesy & © Lee Little Remodelling

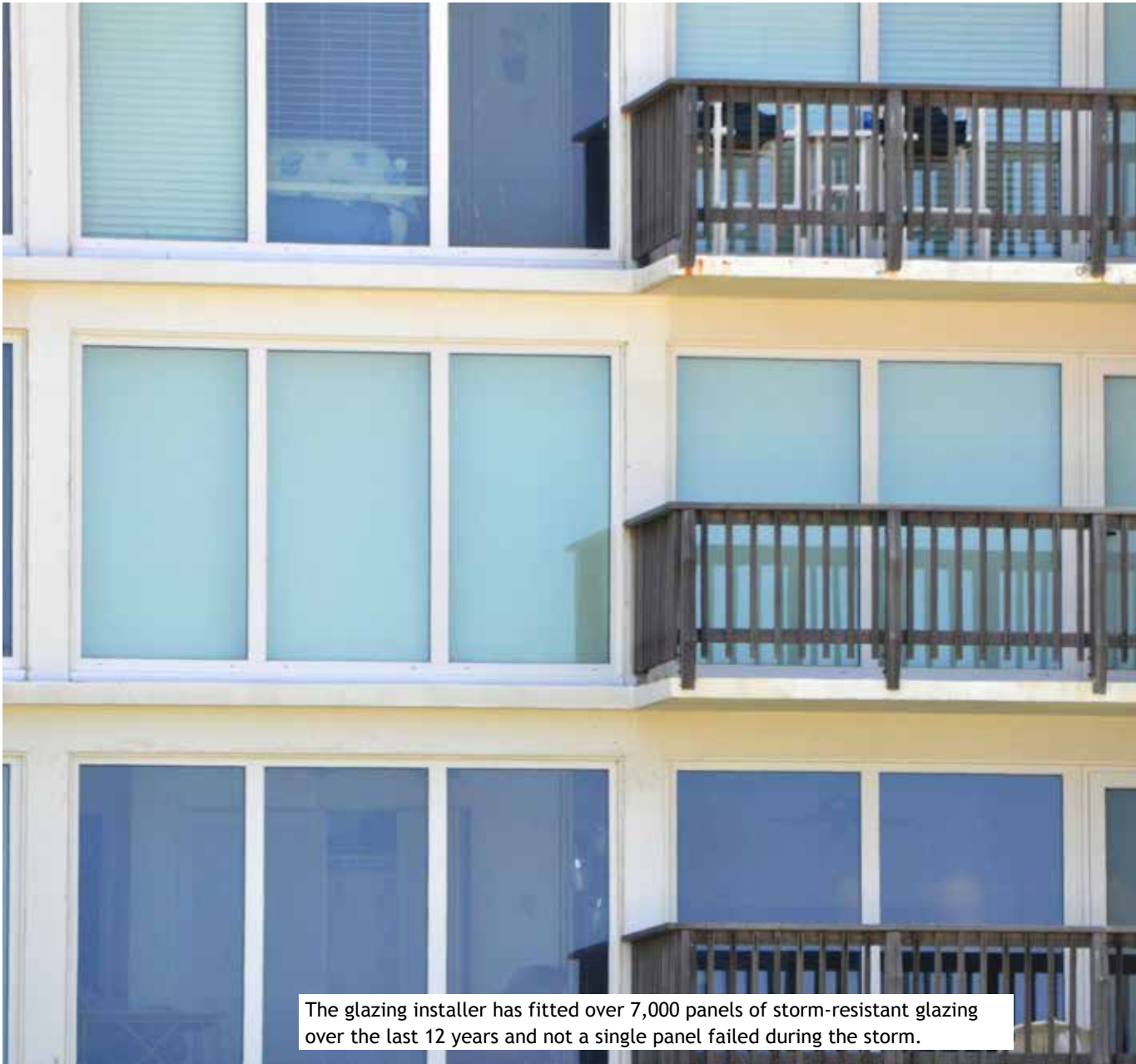
Building	Gulfstream Condominiums, Corpus Christi, Texas
Glazing supplier	WinDoor
Laminate supplier	Tecnoglass
Installer	Lee Little Remodelling

“We used Lee Little, a local contractor, to undertake the refurbishment work,” the management representative continues, “and although the storm-resistant glazing was more expensive than standard solutions, our decision has been more than vindicated by the fact that we were able to reopen the complex so quickly after Harvey.”



Photo: © Courtesy & © Lee Little Remodelling

The condominium complex fitted storm-resistant glazing - using a 90-mil (2.28 mm) SentryGlas® Ionoplast interlayers - in a major refurbishment five years ago.



The glazing installer has fitted over 7,000 panels of storm-resistant glazing over the last 12 years and not a single panel failed during the storm.

According to Lee Little: “Over the last 12 years we have installed some 7,000 panels of laminated safety glass that we ordered from Orlando, USA-based WinDoor, and during Hurricane Harvey not a single one failed. Even one cracked panel in a condominium in Port Aransas that was due to be replaced before the storm, showed no further breakage after the storm. As you can imagine, damage repairs are monopolizing a lot of our time at the moment and the highly visible lack of damage to the Gulfstream Condominiums has meant that most of the glazing repairs we are undertaking are being mandated by the owners to incorporate storm-resistant interlayers such as SentryGlas®. In fact, since Harvey, we are in the process of taking orders from nine other complexes in the same area for an estimated 15,000 panels.”

The SentryGlas® interlayer from the Trosifol® Structural product family is five times stronger and up to 100 times stiffer than conventional laminating materials. With this kind of strength – in addition to its storm-resistant capabilities – the glass can also be deployed a more active structural element in the building envelope, opening up design possibilities that didn’t exist before. Besides its strength, SentryGlas® ionoplast interlayer retains its clarity – even after years of service. Unlike other interlayers, the SentryGlas® ionoplast interlayer is much less vulnerable to moisture exposure or yellowing over time.

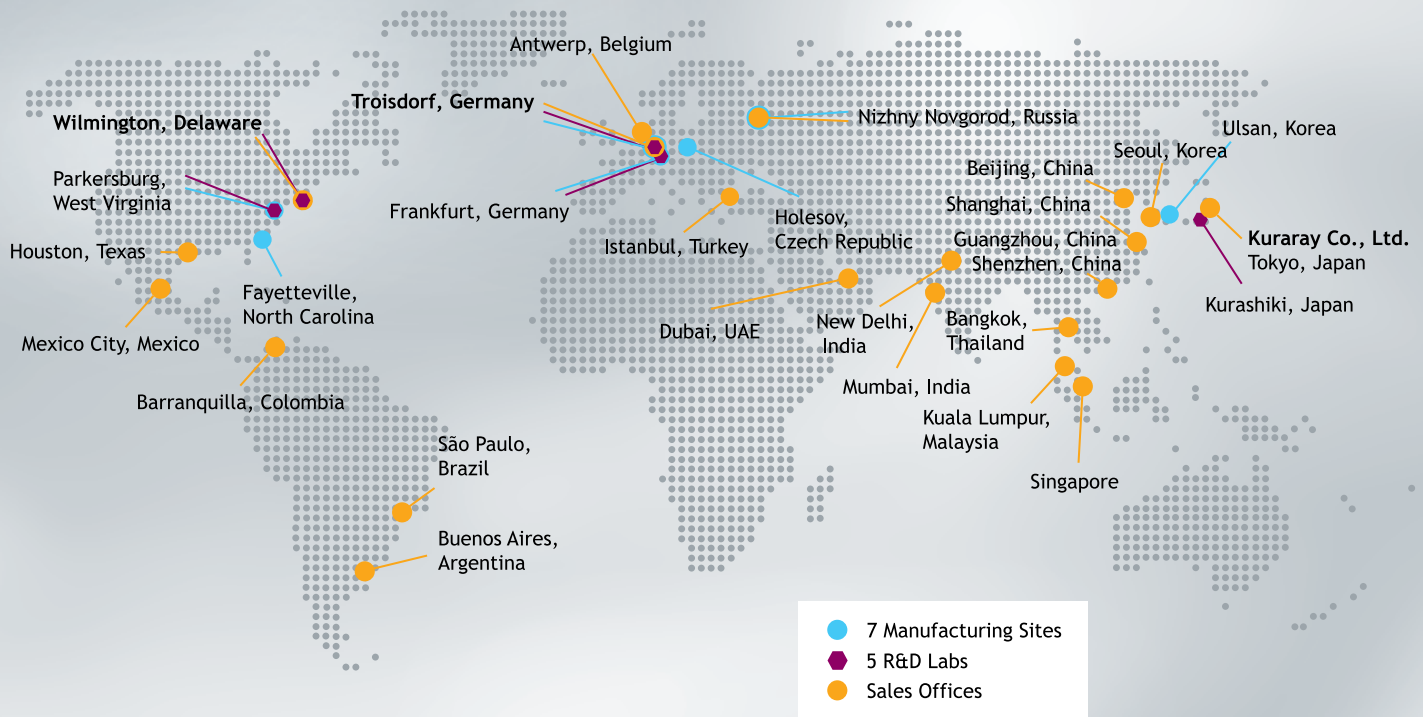


Trosifol™ is the global leader in PVB and ionoplast interlayers for laminated safety glass in the architectural segment. With the broadest product portfolio Trosifol™ offers outstanding solutions:

- **Structural:** Trosifol® Extra Stiff (ES) PVB and SentryGlas® ionoplast interlayer
- **Acoustic:** Trosifol® SC Monolayer and Multilayer for sound insulation
- **UV Control:** from full UV protection to natural UV transmission
- **UltraClear:** lowest Yellowness Index in industry
- **Decorative & Design:** black & white, colored & printed interlayers

This application of SentryGlas® is a graphic demonstration of a material admirably fulfilling its originally intended purpose. With new coastal properties appearing all across the globe, architects are now able to consider glass as a structural component and use it in a wider variety of applications, without having to worry about strength, impact resistance, edge performance and yellowing – even in the face of more salt-laden environments. Greater uptake in refurbishment efforts, such as those seen in Texas, will also help ensure that existing and historic buildings will be able to enjoy the same levels of protection and performance as their more contemporary new-build peers.





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