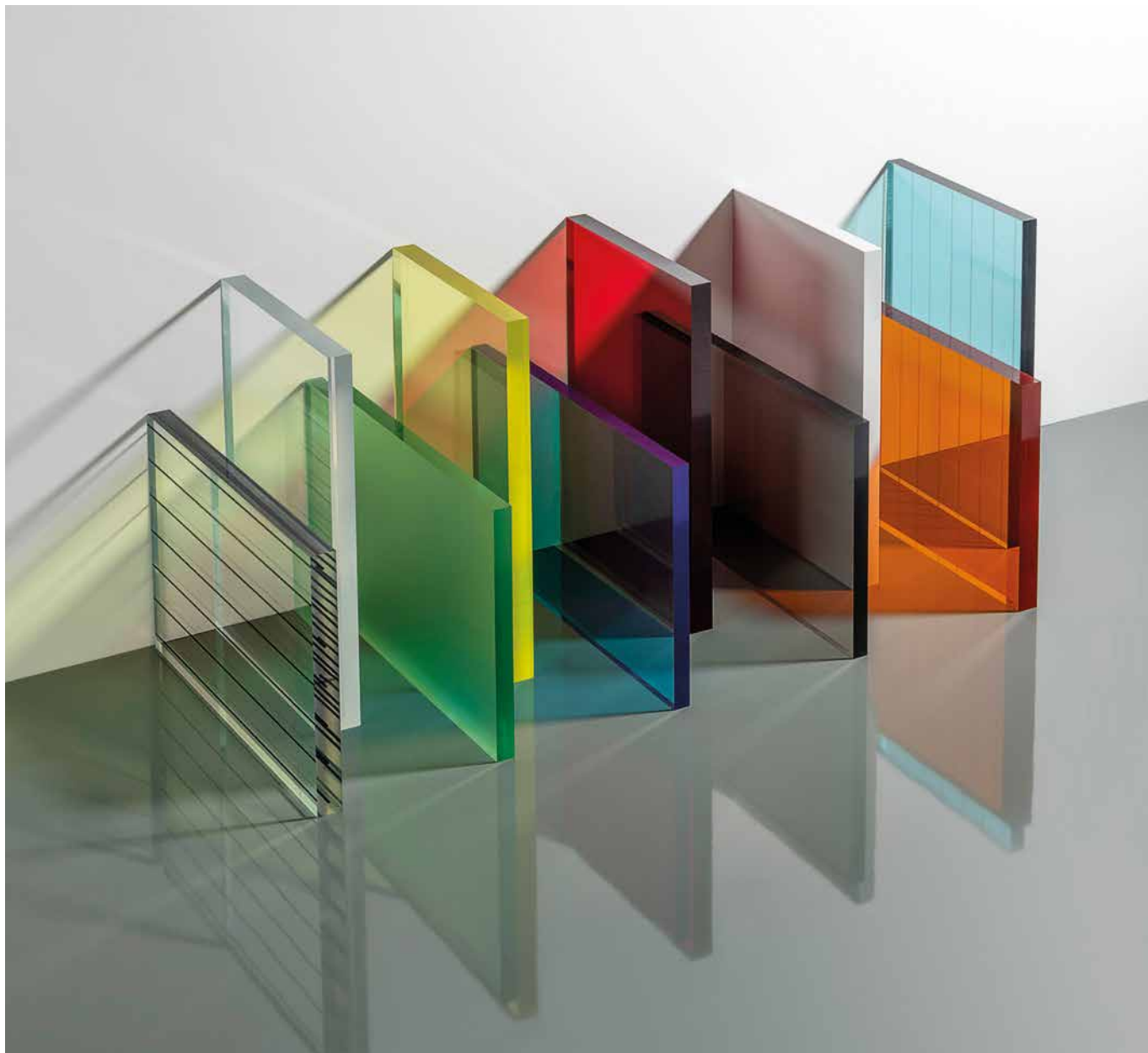


PLEXIGLAS®

PLEXIGLAS®
Soundstop for Wind Barriers



POLYVANTIS



PLEXIGLAS® Soundstop Engineered Wind Protection for Bridges

Keeping Traffic Moving at Any Windspeed

Bridges are typically exposed construction. High above valleys or along coastlines, gusts of wind can reach storm force without warning. Strong crosswinds act directly on vehicles and significantly increase the risk of accidents, especially for tall vehicles such as trucks or buses due to their large surface. When a bridge has to be closed due to

storm gusts, this causes considerable economic consequences, such as possible longer detours, a challenge to the delivery times, and even leads to production downtime. Therefore, effective wind protection can not only save lives but also safeguard the economic performance of infrastructure.

Formed PLEXIGLAS® Soundstop wind barriers significantly reduce crosswinds on bridges and reliably protect road travelers.

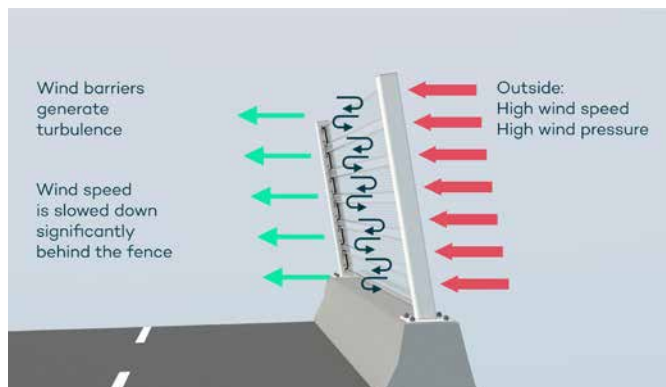
The primary component used in a wind barrier project is typically thermoformed into a curved element. PLEXIGLAS® Soundstop GS CC solid sheets can be formed into C-shaped element or other geometries.

The principle is that gaps between the formed elements do not provide a continuous surface for gusts to attack, thereby reducing wind forces on the bridge. At the same time, wind speeds can be reduced by around half.



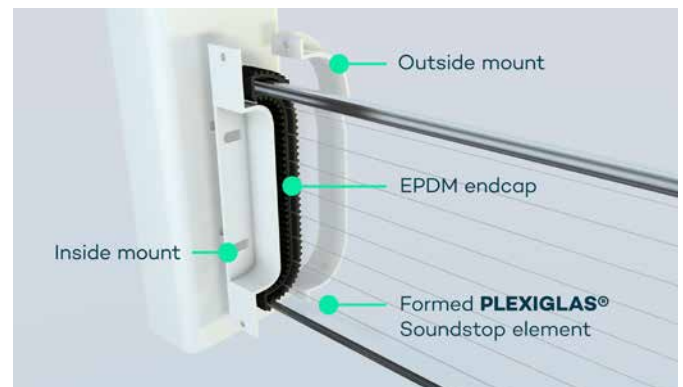
Watch the video on YouTube:
“How the formed elements made of PLEXIGLAS® Soundstop reduce the wind forces on the bridge”

How PLEXIGLAS® wind barriers reduce wind forces on the bridge:



Below are a few examples of various shaped element types that have been used for numerous wind barriers on bridges throughout the US and Europe. Each specific shape was carefully designed to accommodate the wind loads for the specific project.

Assembling of EPDM end cap with the formed PLEXIGLAS® Soundstop wind barriers:



Along with the curved element, an EPDM end cap is required. A chemical compatibility test must be conducted with PLEXIGLAS® Soundstop GS CC to ensure suitability with the acrylic.

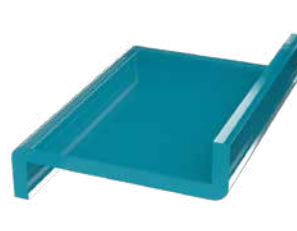
Cross-section examples:



Half pipe



“C” shape



“Z” shape

Benefits of using PLEXIGLAS® Soundstop acrylic

- **Clear Visibility** – Preserves sightlines and surrounding views.
- **Lightweight Design** – complete system weighs less than traditional barriers.
- **Reduced Structural Loads** – Transfers lower forces to bridge structures than full-surface walls.
- **Long-Term Performance** – Backed by a 30-year guarantee against yellowing.
- **High Impact Resistance** – Withstands debris, plowing operations, and hurricane-force winds.
- **Enhanced Safety** – PLEXIGLAS® Soundstop GS CC panels help prevent fragment fallout if fractured.
- **Design Flexibility** – Easily formed and fabricated for versatile designs.
- **Self-Cleaning Surface** – Rain naturally removes common road contaminants.
- **Low Maintenance** – Graffiti can be removed easily with approved cleaning products.
- **100 % Recyclable** – Supports sustainable material use.

Each project is analyzed, designed, and engineered according to project specifications.

PLEXIGLAS® Soundstop wind barrier systems, including the dimension and shape of the element, as well as the thickness of PLEXIGLAS® Soundstop GS CC sheet must be customized to fit each specific project and often include engineering design calculations and drawings.

Since each project has individual requirements and properties, we recommend using CFD simulation tools or wind tunnel testing as a base for engineering calculations and validation. Upon request we are happy to provide prototypes for mock-ups and full-size wind tunnel models.



Pelješac Bridge, Croatia

Established wind barrier projects worldwide using PLEXIGLAS® Sounstop GS CC wind barriers



Viadukt Črni Kal, Slovenia



Burapha Withi Expressway, Thailand



Millau Bridge, France



Verrazano Bridge, USA*



* Please see the trademark disclaimer

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