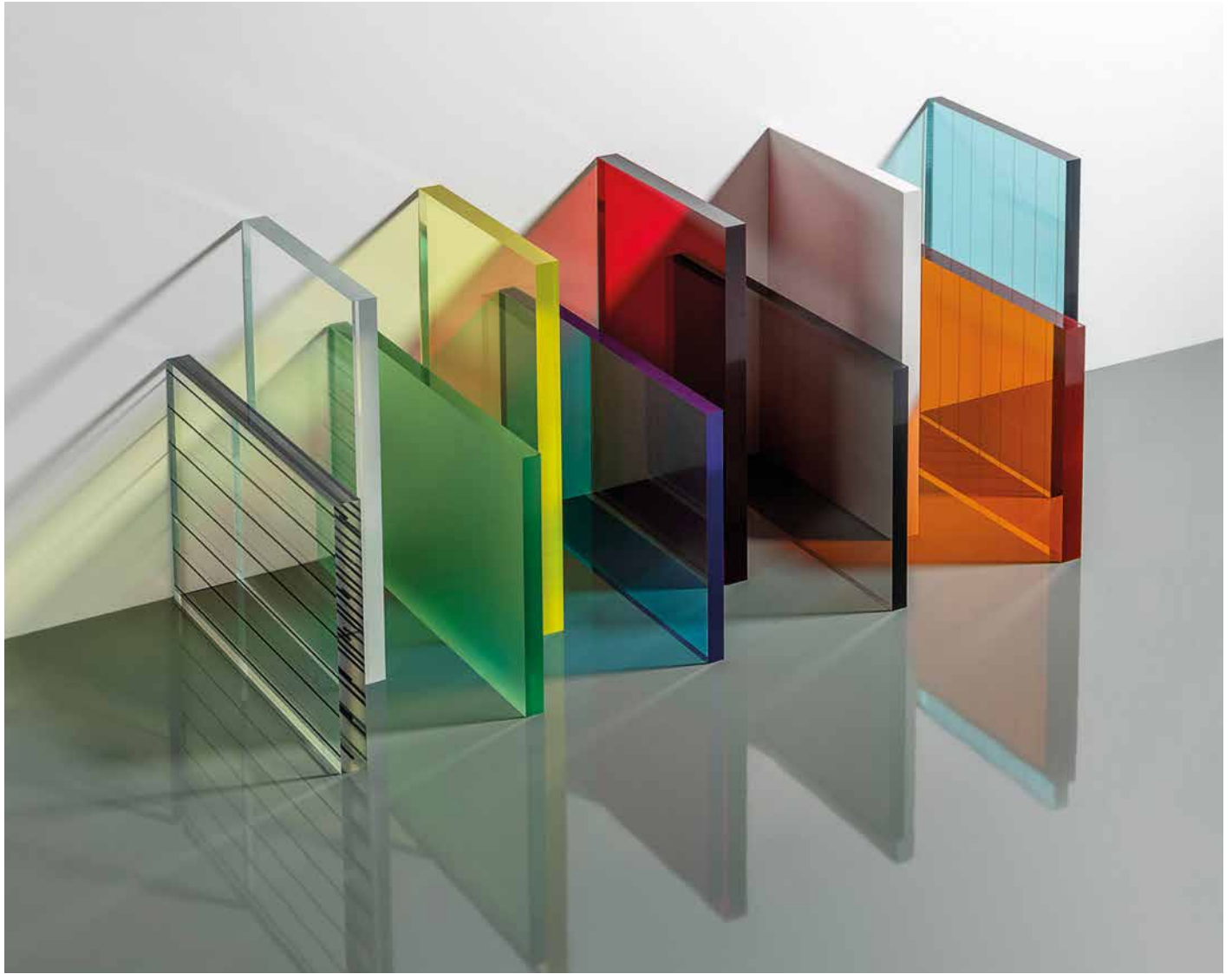


PLEXIGLAS®

ACRYLITE®
Soundstop for Wind Barriers



POLYVANTIS



ACRYLITE® 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

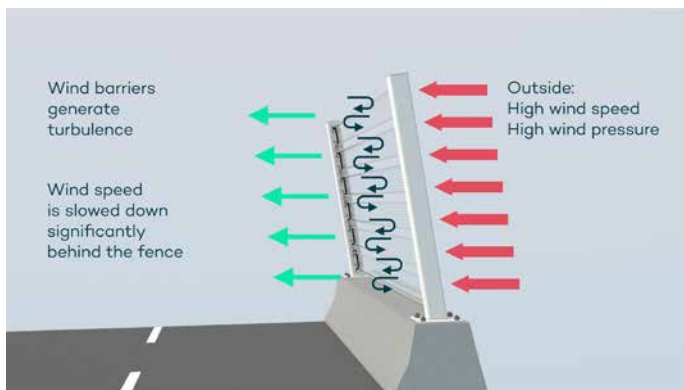
storm gusts, this causes considerable economic consequences, such as possible longer detours, a challenge to the delivery times, and even leads to production down-time. Therefore, effective wind protection can not only save lives but also safeguard the economic performance of infrastructure.

Formed ACRYLITE® 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. ACRYLITE® 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.

How ACRYLITE® 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.

Cross-section examples:



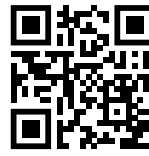
Half pipe



"C" shape

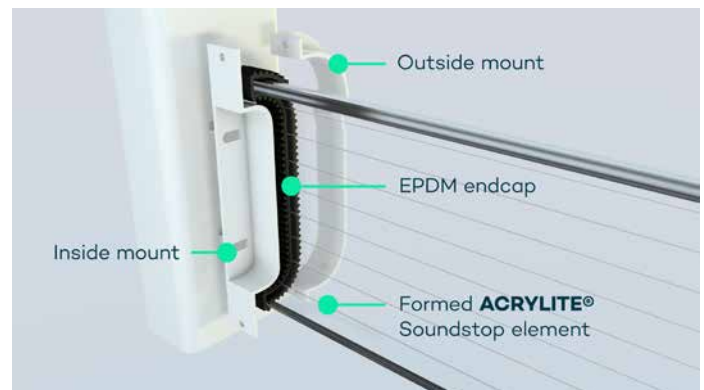


"Z" shape



Watch the video on YouTube:
"How the formed elements made of ACRYLITE® Soundstop acrylic reduce the wind forces on the bridge"

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



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

Benefits of using ACRYLITE® 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 warranty against yellowing.
- **High Impact Resistance** – Withstands debris, plowing operations, and hurricane-force winds.
- **Enhanced Safety** – ACRYLITE® 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.

ACRYLITE® Soundstop wind barrier systems, including the dimension and shape of the element, as well as the thickness of ACRYLITE® 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 ACRYLITE® Sounstop GS CC wind barriers



Verrazano Bridge, USA



Viadukt Črni Kal, Slovenia*



Burapha Withi Expressway, Thailand*



Millau Bridge, France*



* Please see the trademark disclaimer

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® = registered trademark

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