

ACRYLITE®

ACRYLITE® Soundstop
for Noise and Windbarriers



RÖHM

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ACRYLITE® Soundstop BirdGuard Structure Mounted System on the Jones Branch Connector in Tysons Corner, VA

Noise is a complex phenomenon in our modern, mobile society.

Noise and the Environment

The growing noise level of rail and road traffic is detrimental to our health in the long term.

Noise is the term we give to a sound we subjectively feel to be a nuisance. A good example is music, which may be “pleasant” or “obtrusive”, depending on the listener. On the other hand, noise is also a physical factor that can be precisely measured in the form of sound pressure, sound frequency and sound level.

The effects of noise on society and the physical burden imposed by noise have been the focus of numerous scientific studies in the recent past. The US Federal Highway Administration (FHWA) mandates a noise study on highway alteration or construction projects where the noise level is at or above 67 dB. The minimum noise reduction design goal is 5 dB.



Noise control along traffic routes is increasingly gaining in importance to control noise levels in the face of rising traffic volume.

Functional and aesthetic noise control with ACRYLITE® Soundstop

Earthberms and noise barriers of sufficient height are the number one noise control instrument. Since earthberms (usually landscaped) take up a lot of space, noise barriers are normally given preference in built-up areas. As the space between buildings and roads is becoming ever smaller, these barriers need to be attractive-looking as well as functional. Transparent sections in noise barriers help to avoid the tiring tunnel effect for drivers, and offer a better view without casting shadows on the road surface or neighbouring properties. Noise barriers

made from ACRYLITE® Soundstop combine functionality and attractiveness with protection for residents. At the same time, they create a more interesting environment for road users, and successfully dispel the impression of driving through a tunnel.

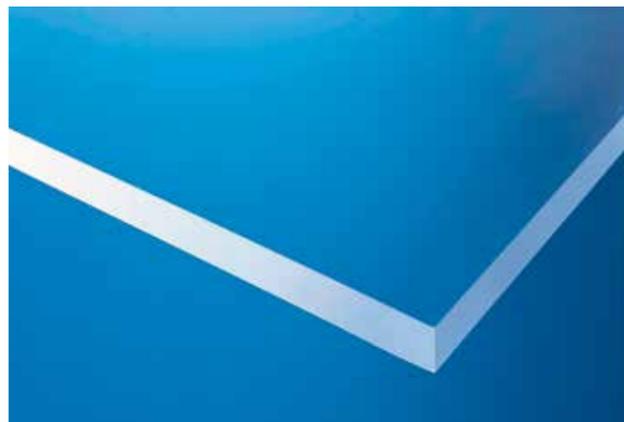
When noise barriers are installed along bridges, the inherent weight of the structure, its resistance to bridge vibrations and lightweight architecture play an important role in addition to space saving. Here too, highly transparent ACRYLITE® Soundstop, which is much lighter than silicate glass, and above all, much more break-resistant, has proved increasingly suitable in recent years.



Product Overview

ACRYLITE® Soundstop is a grade of acrylic specially developed for use in transparent noise barriers. This material developed by the Acrylic Products Business Unit of Roehm America LLC was first employed in 1980.

That means 40 years of world-wide experience in the use of ACRYLITE® Soundstop. ACRYLITE® Soundstop is available in different variants to meet a wide range of requirements.



ACRYLITE® Soundstop transparent

Large-sized, highly transparent cast (GS) or extruded (XT) sheets. The clear grade offers a light transmission of over 90 percent. ACRYLITE® Soundstop is available in clear color and in a series of transparent colors.



ACRYLITE® Soundstop GS CC transparent with integrated filament retention

ACRYLITE® Soundstop GS CC with embedded polyamide filaments for fragment retention. In the event of any damage to the sheets, these filaments retain any sheet fragments and prevent them from falling to the roadway below. This is why ACRYLITE Soundstop GS CC is approved for use on bridges, as well as other potential impact areas.



ACRYLITE® Soundstop XT BirdGuard

Transparent acrylic sheet for noise barriers with printed 2 mm wide black stripes spaced at 30 mm intervals. As these stripes are applied inside the material, they cannot be washed off by cleaning agents or graffiti removal procedures. These stripes are visible obstacles for birds while assuring the maximum transparency of the element.



ACRYLITE® Soundstop SC with matte surfaces

This product variant has a surface texture that diffuses light and reduces reflections, as shown in the panel on the right. Distracting reflections like the lights of other vehicles are reliably prevented. Although the texture reduces the transparency of the sheets, light transmission is retained on both sides of the barrier.



ACRYLITE® Soundstop GS Opaque ACRYLITE® Soundstop GS CC Opaque

Homogeneously solid-colored cast sheets in two shades of gray enable an extremely wide range of design variants. These sheets are also available with embedded polyamide threads that prevent dangerous fragments from falling if and when an accident occurs.

Product Properties

ACRYLITE® Soundstop sheets (in transparent grades)

are highly light-transmitting and transparent

The transparent grade has a light transmission of over 90 percent and is thus vastly superior to sheets of glass or other transparent plastics, such as polycarbonate. The light transmission is measured according to ASTM D1003. The extremely good weather resistance of ACRYLITE® also ensures that the high transmission is retained for many years. On delivery, the measured values are 90% minimum, and still 88% minimum even after 30 years of use outdoors.

offer extremely high resistance to weathering and aging.

ACRYLITE® acrylic material is well-known for its unsurpassed resistance to weathering and aging. International vehicle manufacturers prescribe the use of this material for reverse and signal lights, because only acrylic offers the long-term brilliance and color fastness required to retain the luminous intensity and signal effect of automotive lights.

In signage too, ACRYLITE® proves its extreme longevity without its surface becoming matte, without turning yellow or brittle, and without the colors fading. Even after many years of outdoor exposure, the surfaces of ACRYLITE® stay just as smooth as when they left the factory.

are break-resistant.

ACRYLITE® Soundstop is about 11 times more break-resistant than window glass of comparable thickness. That makes it superior even to safety glass, and meets all the safety requirements for noise barrier materials.

The strength of the sheets plays a significant role when it comes to resisting impact as well as structural vibrations, e.g. on bridges.

are lightweight.

ACRYLITE® Soundstop has a specific gravity of 1.19 g/cm³ and weighs only half as much as silicate glass. A 20 mm thick sheet therefore weighs only 4.86 lbs per square foot. That makes it much easier to handle large sheets, in particular. The low weight of ACRYLITE® Soundstop also enables more lightweight construction, especially when installed on bridges.

are easy to form in a versatile manner.

ACRYLITE® Soundstop sheets can be installed flat, cold-curved or thermoformed. The minimum bending radius for installing cold-curved elements is 330 times the sheet thickness. The possible radius for 20 mm thick sheets is about 21.6 feet. The structure must be sufficiently stable to maintain the cold-curved sheets in form. The sheets can be thermoformed into almost any imaginable configuration. They are heated to forming temperature and shaped as desired using suitable molds. After cooling, the sheets retain the given shape and are ready for installation.

The most frequent type of forming is line bending, e.g. of the upper, unsupported edge of the noise barrier facing the road. This increases the rigidity of the sheets that are not clamped along the top edge, and improves the noise protection offered by the elements.

has excellent sound-insulating properties.

The weighted sound reduction index DLR according to EN 1793-2 is up to 33 dB. The sound reduction index DLSI when using the free-field measurement according to EN 1793-6 is 34 dB.

Safety

Transparent noise barriers made from ACRYLITE® Soundstop offer drivers greater safety than non-transparent systems.

Prevention of Tunnel Effect

With its high transparency, ACRYLITE® Soundstop lets drivers look at the changing landscape. This successfully prevents the tiring and dangerous feeling of driving through a tunnel. Moreover, the high light transmission ensures that no harsh shadows are cast on the road and that the lighting conditions remain constant. The eye is not obliged to adjust to the effects of light and dark all the time.

Resistance to Stone Impact according to EN1794

ACRYLITE® Soundstop is approved as safety glass and meets all the requirements of EN 1794 for the resistance of transparent noise barrier elements to stone impact. The high break resistance of ACRYLITE® Soundstop ensures that the sheets are not destroyed by stones or gravel projected by passing vehicles, nor by stones thrown from outside the barrier.

Fragment Retention

When noise barriers are installed on bridges, it must be ensured that the noise barrier presents no risk to persons or objects under the bridge. No fragments may be allowed to fall from the barrier after an accident, for example.

EN 1794 states that "if brittle materials or materials whose embrittlement cannot be excluded (e.g. plastics) are to be used, these elements or their fragments must be reliably secured by means of restraint structures."

The polyamide threads embedded in ACRYLITE® Soundstop GS CC correspond to these restraint systems, because they successfully prevent sheet fragments from falling. That is why ACRYLITE® Soundstop GS CC may be used in noise barriers along bridges without additional restraint systems.

ACRYLITE® Soundstop GS CC is approved for use in noise barriers along bridges without additional restraint systems.

Approvals and Test Certificates

There are a number of standards and approvals that apply to materials designed to reduce noise along traffic routes.

EN 1793-1 Road Traffic Noise Reducing Devices

Test method to determine acoustic properties Part 1: Product-specific characteristics of sound insulation. November 1997

EN 1793-2 Road Traffic Noise Reducing Devices

Test method to determine acoustic properties Part 2: Product-specific characteristics of airborne sound insulation. November 1997

EN 1793-3 Road Traffic Noise Reducing Devices

Test method to determine acoustic properties Part 3: Standardized traffic noise spectrum. November 1997

EN 1793-5 Road Traffic Noise Reducing Devices

Test method to determine acoustic properties. Part 5: Product-specific characteristics of sound insulation according to the free field measurement.

EN 1793-6 Road Traffic Noise Reducing Devices

Test method to determine acoustic properties. Part 5: Product-specific characteristics of airborne sound insulation according to the free field measurement.

EN 1794-1 Road Traffic Noise Reducing Devices

Non-acoustic properties Part 1: Mechanical properties and stability requirements. October 1998

EN 1794-2 Road Traffic Noise Reducing Devices

Non-acoustic properties Part 2: General safety and environmental requirements. October 1998

EN 1794-3 Road Traffic Noise Reducing Devices

Non-acoustic properties. Part 3: Fire behavior of noise protection devices and classification.

Bird protection

To find out more, please contact the American Bird Conservancy concerning the bird-deterrent effect of ACRYLITE® Soundstop GS CC and ACRYLITE® XT with Bird Guard acrylic sheets.



Playing it safe with ACRYLITE® Soundstop— 30-year guarantee

The yellowing power of UV rays can't impact ACRYLITE® Soundstop, thanks to the NATURALLY UV STABLE technology. And because we're so certain, we give the following guarantees:

- 30-year no yellowing guarantee
- 30-year maximum light transmission guarantee

The list gives a general overview without claiming to be complete:



Product Range

Various colors in ACRYLITE® Soundstop range are available.

Colors			
Transparent	Transparent Blue	Transparent Green	Transparent Brown
Clear	Midnight Blue	Danish Green	Smoky Brown
	Steel Blue	Forest Green	
	Sky Blue	Sea Green	
		Spring Green	
Opaque	Opaque Grey		
	Light Grey		
	Stone Grey		

Product Type	Thickness in mm	Size in mm	Miscellaneous
ACRYLITE® Soundstop XT	12, 15, 20, 25	2500 x up to 6000	Extruded transparent PMMA; various thicknesses, lengths over 6,000 mm, width 2,050 mm on request
ACRYLITE® Soundstop XT BirdGuard	12, 15, 20, 25	2000 x up to 6000	Extruded transparent PMMA with internal bird-deterrent stripes; various thicknesses, lengths over 6,000 mm, width 2,050 mm on request
ACRYLITE® Soundstop GS	12, 15, 20, 25	3050 x 2030 4050 x 2030 5050 x 2030 3300 x 2380	Cast PMMA; transparent or opaque; translucent and matte on one side on request
ACRYLITE® Soundstop GS CC	12, 15, 20, 25	3050 x 2030 4050 x 2030 5050 x 2030 3300 x 2380	Cast PMMA; transparent or opaque; translucent and matte on one side on request; with integrated splinter-free black polyamide threads lengthways and sideways; transparent threads on request

Surface Design

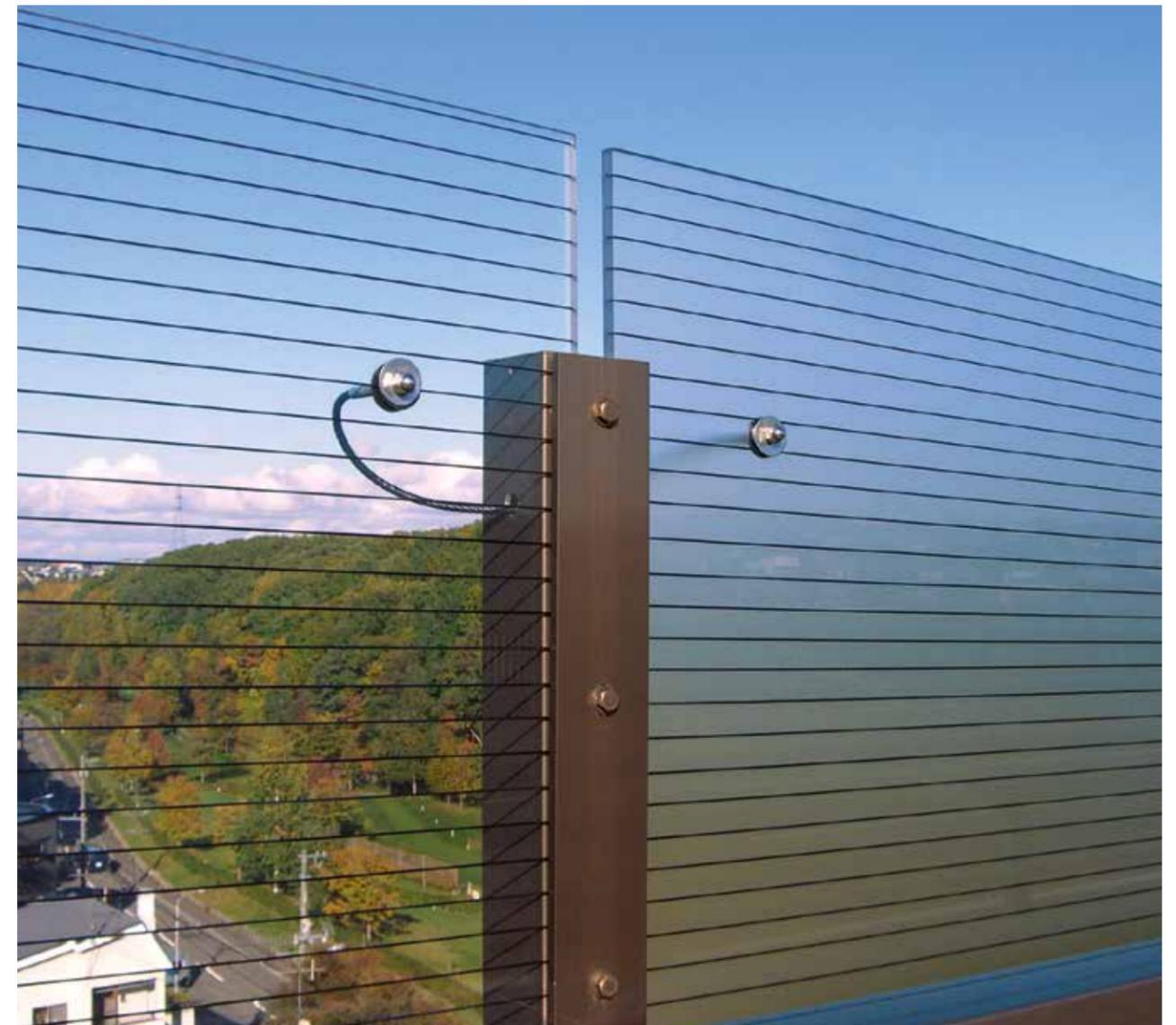
ACRYLITE® Soundstop has perfectly smooth surfaces that are available in different versions.

Standard

- two high-gloss sides

Special manufacture

- one side matte (SC)



Functional Surfaces

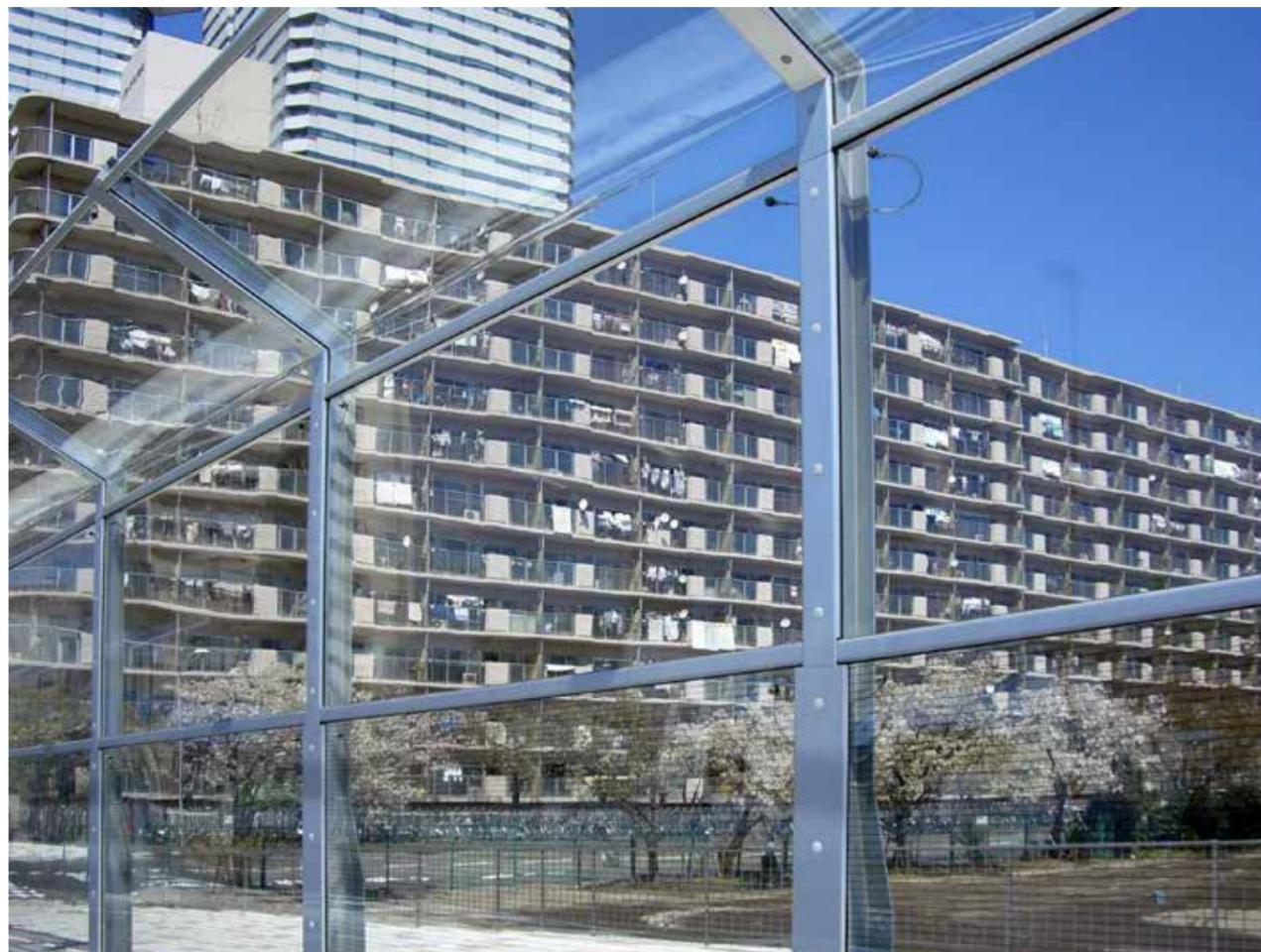
Depending on requirements, the surfaces of ACRYLITE® Soundstop can be provided with functional features.

Bird Deterrent

- ACRYLITE® Soundstop XT BirdGuard with internal bird-deterrent stripes
- Brushed bird-deterrent stripes; stripe width and stripe spacing on request
- Bird-deterrent screen printing; decoration type on request

Fabricating: Cut-to-size

- Rectangular cuts
- Bevel cuts; drilled holes on request



Technical Data

Physical Properties	Test Standard	ACRYLITE® Soundstop XT & XT with BirdGuard	ACRYLITE® Soundstop GS ACRYLITE® Soundstop GS CC ^{(a) (b)}
Mechanical			
Specific Gravity	ASTM D792	1.19	1.19
Tensile Strength	ASTM D638	10,000 psi (69 MPa)	11,000 psi (76 MPa)
Elongation at Break (%)		4.0	6.8
Modulus of Elasticity		450,000 psi (3100 MPa)	450,000 psi (3100 MPa)
Flexural Strength	ASTM D790	15,800 psi (109 MPa)	16,500 psi (114 MPa)
Flexural Strain at Break (%)		4.0 %	4.3 %
Modulus of Elasticity		470,000 psi (3240 MPa)	470,000 psi (3240 MPa)
Compressive Strength (Yield)	ASTM D695	17,000 psi (117 MPa)	18,000 psi (124 MPa)
Rockwell Hardness	ASTM D785	M-100	M-100
Risk of Falling Debris – Pendulum Impact (> 12 mm)	EN 1794-2, Annex B	Pass – Class 2	Pass – Class 3
Impact – Windborne Debris in Hurricanes (> 15 mm)	ASTM E1996	Pass	Pass
Unnotched Charpy Impact, 5 years natural outdoor weathering	ASTM D4812	6.5 ft-lbs/in ²	6.5 ft-lbs/in ²
Optical (Colorless)			
Refractive Index	ASTM D542	1.49	1.49
Initial Light Transmission	ASTM D1003	92 %	92 %
15 years natural outdoor weathering		92 %	92 %
Initial Haze	ASTM D1003	1.0 %	1.0 %
15 years natural outdoor weathering		4.2 %	5.0 %
Initial Yellowness Index	ASTM E313	< 1.0	< 1.0
15 years natural outdoor weathering		< 1.0	1.8
Thermal			
Resistance to Brushfire (15 mm thickness)	EN 1794-2, Annex A	Class 2	Class 2
Deflection Temperature under load, 264 psi (1.82 MPa)	ASTM D648	220°F (104°C)	240°F (116°C)
Coefficient of Linear Expansion	ASTM D696	0.000040 in/in/°F (0.072 mm/m °C)	0.000040 in/in/°F (0.072 mm/m °C)
Vicat Softening Temperature	ASTM D1525	220 °F (105°C)	239 °F (115°C)
Flammability, Burning Rate (15 mm thickness)	ASTM D635	0.70 in/min (17.8 mm/min) CC2	0.78 in/min (19.9 mm/min) CC2
Self-Ignition Temperature	ASTM D1929	860°F (460°C)	878°F (470°C)
Smoke Density Rating (15 mm thickness)	ASTM D2843	0.5 %	0.3 %
Service Temperature	–	< 160°F (71°C)	< 180°F (82°C)
Sound Transmission			
Sound Transmission Class (STC)	ASTM E90	15 mm – 32 dB 20 mm – 34 dB 25 mm – 36 dB	15 mm – 32 dB 20 mm – 34 dB 25 mm – 36 dB
Weight per Square Foot			
		15 mm 20 mm 25 mm	3.66 lb/ft ² (179 kg/m ²) 4.86 lb/ft ² (23.8 kg/m ²) 6.1 lb/ft ² (29.8 kg/m ²)

^(a) Typical values; should not be used for specification purposes.

^(b) Values shown are for 0.250" (6 mm) thickness unless noted otherwise. Some values will change with thickness.



Typical Specification*

Transparent Noise Barrier Panels

1. General

Furnish materials and construct transparent noise barrier panels as shown on the plans and required by this specification.

Prior to beginning the work, the Contractor will submit manufacturer's samples of product, certified test data, and shop drawings of framing and connection details for approval.

2. Test Standards

ASTM Standards and Test Methods

- D635 – Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position
- D638 – Tensile Properties of Plastic
- D785 – Rockwell Hardness of Plastics and Electrical Insulating Materials
- D790 – Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- D1003 – Haze and Luminous Transmittance of Transparent Plastics
- D1929 – Ignition Properties of Plastics
- D2843 – Density of Smoke from Burning or Decomposition of Plastics
- E313 – Calculating Yellowness and Whiteness Indices from Instrumentally Measured Color Coordinates
- E90 – Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions
- E413 – Determination of Sound Transmission Class
- E1996-97/02 – Performance of exterior windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes
- G21 – Determining Resistance of Synthetic Polymer Materials to Fungi
- EN 1794-1 Road Traffic Noise Reducing Devices – Non-Acoustic Performance
 - Part 1 – Mechanical Performance and Stability Requirements
 - Part 2 – General Safety and Environmental Requirements

3. Materials

Use materials conforming to the pertinent requirements of the following:

- The noise barrier shall be a rigid monolithic sheet and comply with all requirements of this specification.
- The structural components of the system shall be designed in accordance with AASHTO LRFD Bridge Design Specifications 8th Edition (2017).
- Materials will conform to applicable shop drawings.
- Manufacturers must have a minimum 10-year history of producing transparent noise barrier assemblies for highway noise barriers. Evidence of long-term performance consisting of performance statement letters or personnel for contact shall be furnished upon request.

Shop Drawings: Shop drawings shall be provided by the supplier, detailing all relevant aspects of sheet installation, and connection details, and stamped by a professional engineer registered in the applicable state.

Transparent Panel Assemblies: If so required by the contract specifications and drawings, the transparent panel shall be assembled within a frame, to provide a Transparent Panel Assembly. All details of the Transparent Panel Assembly will be detailed on shop drawings and submitted to the Department's Representative for approval.

Color: Unless otherwise specified the transparent noise barrier shall be colorless.

Dimensions: Dimensions of the transparent noise barrier panel shall be specified by the applicable drawings. Unless otherwise specified, the tolerance on length and width dimensions shall be $-0, +0.25$ ".

Resistance to Weathering: After exposure to outdoor weathering for a period of ten years the noise barrier panel shall show no evidence of cracking or crazing and shall comply with the requirements of Table 1. Manufacturer must be able to furnish test reports showing compliance with the requirements of Table 1 from an independent laboratory with accreditation by the American Association for Laboratory Accreditation (A2LA).

Table 1: Weathering Requirements

Property	Requirement	ASTM Test Method
Light Transmission	> 88 %	D 1003
Haze	< 10%	D 1003
Yellowness Index	< 5	E 313
Tensile strength	> 80 % of initial value	D 638
Flexural strength	> 80 % of initial value	D 790

Shatter Resistance: (Note to specifier: this should only be included if there are concerns about falling debris – this application includes additional cost)

When the panel is to be mounted on a structure or in such a way that if damaged they could pose a hazard to road users or others; the transparent panel shall be required to retain all broken pieces by employing either an internal or external restraint system. Supplier shall show evidence of ability for panels to retain all broken pieces after ten or more years of outdoor exposure.

Impact Resistance: The noise barrier shall meet the requirements of EN 1794-1, Appendix C. The noise barrier shall pass the large missile impact test, ASTM E 1996-97/02.

Graffiti Resistance: Supplier shall recommend an effective, compatible graffiti remover and upon request furnish a product sample and provide a graffiti removal demonstration.

Bird Deterrence: (note to specifier: this should only be included if there are concerns about bird impacts – this application includes additional cost)
When specified to have the optional bird deterrence feature the panels shall have a pattern capable of preventing in excess of 90 % of bird impacts. The panel manufacturer shall possess and furnish evidence of the panel efficacy upon request. The bird deterring pattern must be an integral part of the panel, capable of withstanding graffiti removal efforts. Application of films in a secondary, post production process, are not allowed due to the tendency of these films to delaminate, haze, or otherwise prematurely degrade the visual performance of the panel.

Wind Load Resistance: The maximum elastic deflection d_{max} , under the design wind load shall be less than 3 inches. When a load factor of 1.5 is applied to the design wind load:

- The sheet shall not show any symptoms of failure such as buckling or cracks.
- The sheet shall not become detached from its supports or fittings.

Resistance to Roadside Chemicals: The transparent noise barrier shall be resistant to standard de-ice chemicals such as:

- Calcium Chloride, Magnesium Chloride, Potassium Acetate, Calcium / Magnesium Acetate, and Sodium Acetate

Resistance to Fungi: The transparent noise barrier shall undergo testing in accordance with ASTM G21 and have a zero rating, show no signs of fungi growth, after the standard 28-day test period.

* This is an example of a typical specification. Please contact Roehm America for additional information regarding the various ACRYLITE® Soundstop systems available. Each system is designed for specific applications and has different technical specifications.

Cleaning

ACRYLITE® Soundstop has a perfectly smooth surface that shows no wear even after many years owing to its excellent weather resistance.

Dirt is normally removed by rainwater.

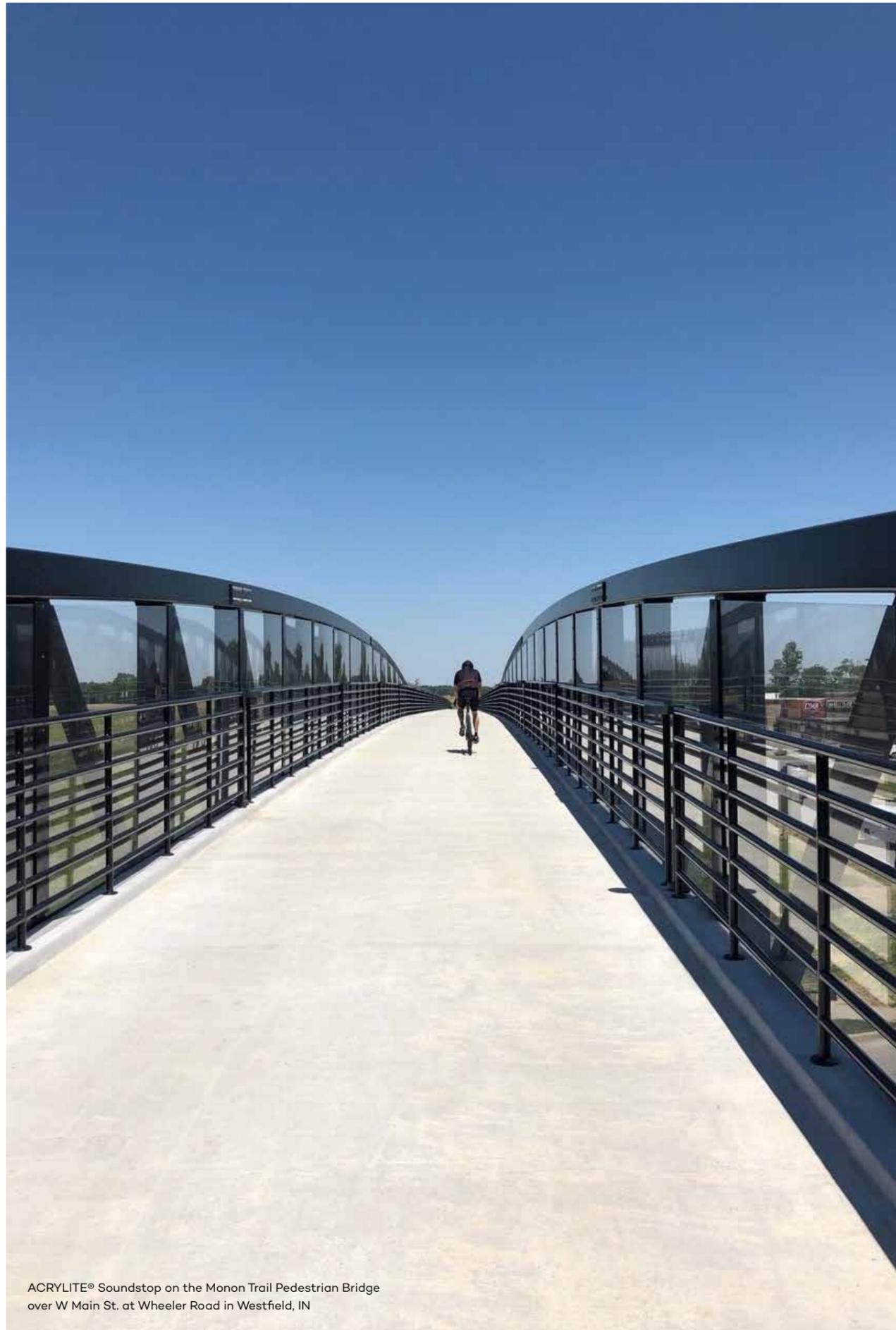
That means rain is usually sufficient for adequate cleaning of the sheets. If more intensive cleaning is required, the sheets can be washed with low surface-tension water.

The most economical way is to use high-pressure cleaning equipment.



Graffiti

Spray paints can be removed from ACRYLITE® Soundstop. We recommend the use of special graffiti removers e.g. Disappear Organic Graffiti / Adhesive Remover from New Dimensions Solutions, LLC, Tagaway Graffiti Remover from ETS Company, followed by washing with copious amounts of water.



ACRYLITE® Soundstop on the Monon Trail Pedestrian Bridge over W Main St. at Wheeler Road in Westfield, IN

References: North America



ACRYLITE® Soundstop Ready Fit System with anodized bronze framing
near Telegraph Canyon Road off the I-805 Freeway in Chula Vista, CA



ACRYLITE® Soundstop CMU System with powder coated aluminum framing
behind Nacion Ave off the I-805 Freeway in Chula Vista, CA



ACRYLITE® Soundstop Ready Fit System
on Park Drive above the South Bay Freeway (CA-54)
in Spring Valley, CA



ACRYLITE® Soundstop CMU System
near Exit 90 Alicia Pkwy on the I-5 in Laguna Hills, CA



ACRYLITE® Soundstop Ready Fit System
near Target on W Redondo Beach Blvd. in Gardena, CA



ACRYLITE® Soundstop Ready Fit System
on I-75 in Dayton, OH



ACRYLITE® Soundstop GS CC TL4 System
at Exit 19 on I-475 in Toledo, OH



ACRYLITE® Soundstop GS CC TL4 System
on I-580 just before Foothill Blvd. in San Leandro, CA



ACRYLITE® Soundstop GS CC Spring Green Structure Mounted System with green steel framing
on the Peters Creek Bridge (NC-150) over US-158/US-421 in Winston-Salem, NC



ACRYLITE® Soundstop with BirdGuard
on Esplanade Ave in North Vancouver, BC, Canada



ACRYLITE® Soundstop Ready Fit System with black powder coated aluminum frames
on Route 18 in New Brunswick, NJ



ACRYLITE® Soundstop GS CC Structure Mounted System
on the Scudder Falls Bridge on I-295, Ewing Township, NJ



ACRYLITE® Soundstop GS CC Structure Mounted System
on the Governor Mario M. Cuomo Bridge, Tarrytown, NY



ACRYLITE® Soundstop GS CC Smoky Brown Structure Mounted System
on I-88 over Roosevelt Road and IL-38 in Elmhurst, IL



ACRYLITE® Soundstop CMU System
on the I-5 in Mission Viejo, CA

References: Germany*



Noise barrier, Autobahn A9, Trockau
PLEXIGLAS® Soundstop GS CC
Fa. Markus Kaiser

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Noise barrier, Railway station Baden Baden
PLEXIGLAS® Soundstop GS CC
R. Kohlhauer GmbH



Noise barrier, Travequerung, Lübeck
PLEXIGLAS® Soundstop GS CC
Fa. Markus Kaiser



Noise barrier, Landau
PLEXIGLAS® Soundstop GS CC
R. Kohlhauer GmbH



Noise barrier, Nibelungenbrücke, Regensburg
Lower part made of PLEXIGLAS® Soundstop NT
Fa. Markus Kaiser



Noise barrier, Eltville
PLEXIGLAS® Soundstop XT



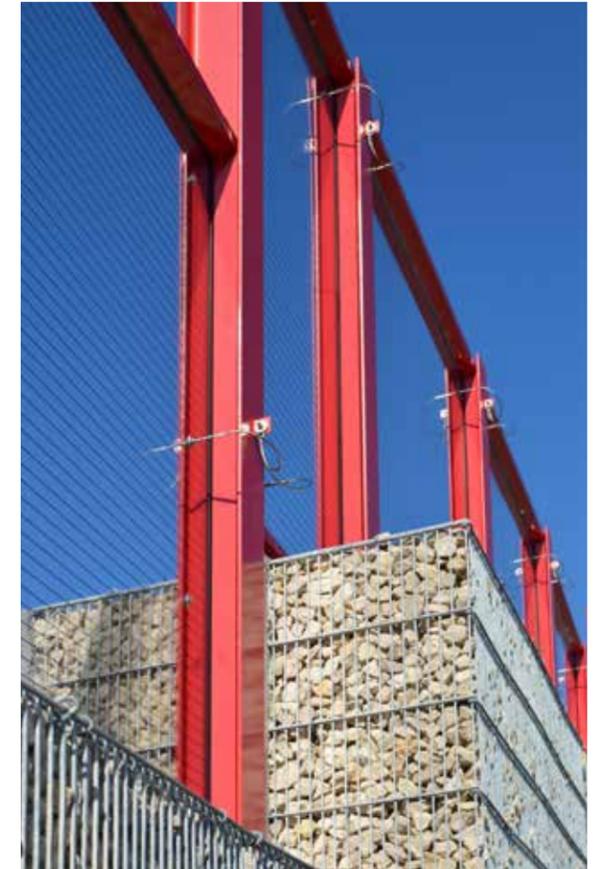
Noise barrier, gas station Wesseling
PLEXIGLAS® Soundstop GS CC
installed as an acrylic element with aluminum frame
Alusyston Lärmschutz GmbH



Noise barrier, Rheinbrücke A1, Leverkusen
PLEXIGLAS® Soundstop GS CC
Alusyston Lärmschutz GmbH



Noise barrier, Donaubrücke, Ingolstadt
PLEXIGLAS® Soundstop GS CC
Fa. Markus Kaiser



Noise barrier, Pirmasens
PLEXIGLAS® Soundstop GS CC, 15 mm



Noise barrier, Bridge Schwabach A6, Schwabach
PLEXIGLAS® Soundstop GS CC





Noise barrier, Pollenfeld
PLEXIGLAS® Soundstop XT BirdGuard, 20 mm



Noise barrier, City Schwabach
PLEXIGLAS® Soundstop GS CC
Franken-Schotter GmbH & Co. KG
91757 Treuchtlingen Dietfurt



References: Switzerland*



Noise barrier, Highway N1, Morges West, Kanton Waadt
PLEXIGLAS® Soundstop GS
Usine des Jurats S.A.



Noise barrier, Baregg
PLEXIGLAS® Soundstop GS CC und XT
Weleco AG, Dietikon

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References: Austria*



Noise barrier, A23, Knoten Inzerdorf
PLEXIGLAS® Soundstop GS CC
Forster Metallbau Gesellschaft m.b.H. Wien



Noise barrier, Rederbrücke, Steyr
PLEXIGLAS® Soundstop GS CC
STRABAG-Thalgau, Forster Lärmschutz Elemente, Forster Metallbau Gesellschaft m.b.H.



Noise barrier, regional tram Traun test track
PLEXIGLAS® Soundstop GS CC
Forster Metallbau Gesellschaft m.b.H. Traun



Noise barrier, A1, Melk
PLEXIGLAS® Soundstop XT
Alpine, Salzburg



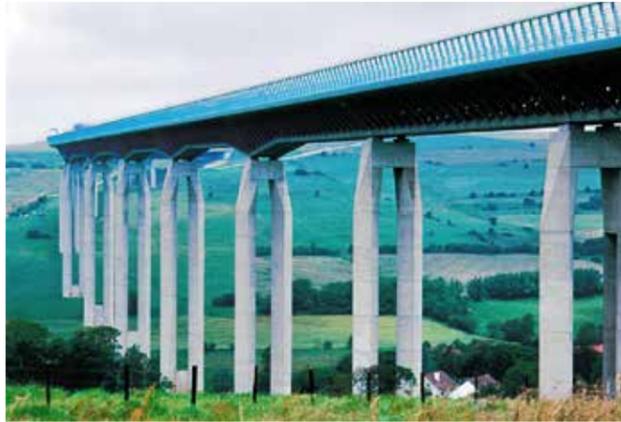
Noise barrier, A1, Steinhäusl
PLEXIGLAS® Soundstop GS CC
Forster Metallbau Gesellschaft m.b.H.



Printed noise barrier
PLEXIGLAS® Soundstop GS CC
Forster Metallbau Gesellschaft m.b.H. St. Pölten

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References: France*



Wind screen, Boulogne sur mer
PLEXIGLAS® Soundstop XT
Boulogne sur mer



Noise barrier, Boulevard Intercommunal du Parisis
PLEXIGLAS® Soundstop GS CC
Direction Départementale de l'Équipement, Val d'Oise



References: Spain*



Noise barrier, Parc Oceanografic Valencia
PLEXIGLAS® Soundstop GS

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References: Italy*



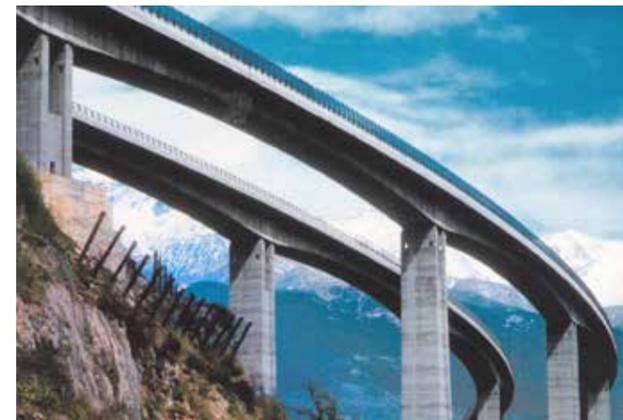
Tunnel entrance, Monte Barro, Lecco
PLEXIGLAS® Soundstop XT
Tubosider ITALIANA S.p.A.



Noise barrier, high-speed section Rom-Neapel
PLEXIGLAS® Soundstop XT
Saico Spa, Arezzo



Noise barrier, high-speed section Rom-Neapel
PLEXIGLAS® Soundstop XT
Saico Spa, Arezzo



Noise barrier, Bridge Turin-Frejus
PLEXIGLAS® Soundstop XT
Tubosider ITALIANA S.p.A.



Noise barrier, Ponte Roma, Bolzano
PLEXIGLAS® Soundstop GS CC
FIP Industriale Spa, Selvazzano Dentro (Padova)



Noise barrier, Pontebba, Udine
PLEXIGLAS® Soundstop XT
ABB installazioni Spa, Milano

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Noise barrier, Highway Trento Sud Flyover
PLEXIGLAS® Soundstop GS CC 20 mm, Clear
Trento Sud Flyover



Noise barrier, Highway Valdastico Sud
PLEXIGLAS® Soundstop XT 20 mm, Spring Green
Valdastico



Noise barrier, Piazza Maggi, Milano
PLEXIGLAS® Soundstop XT
Technical, Provaglio (Brescia)



References: England*

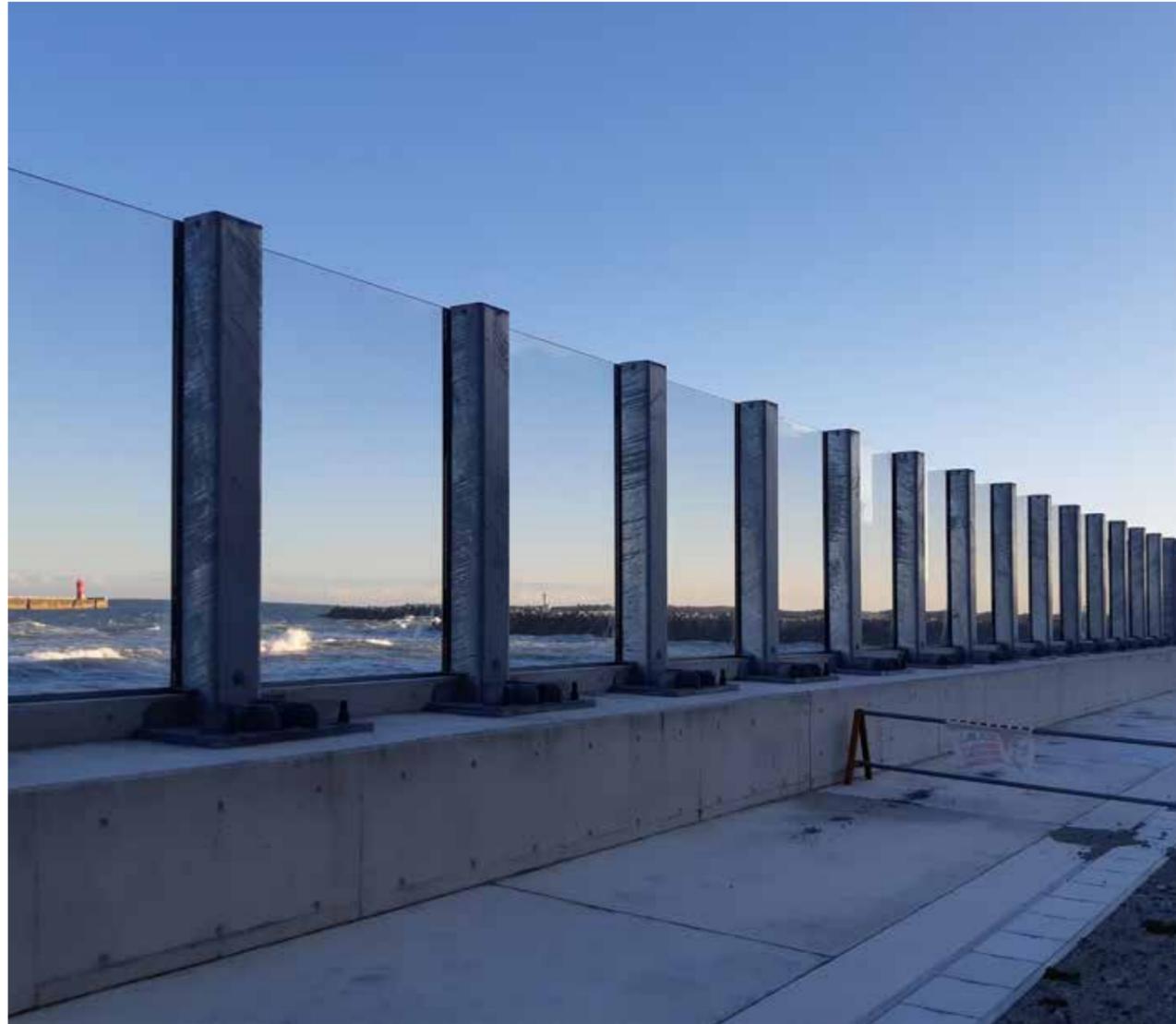


Wind screen, Mersey bridge, Liverpool
PLEXIGLAS® Soundstop GS
Liverpool

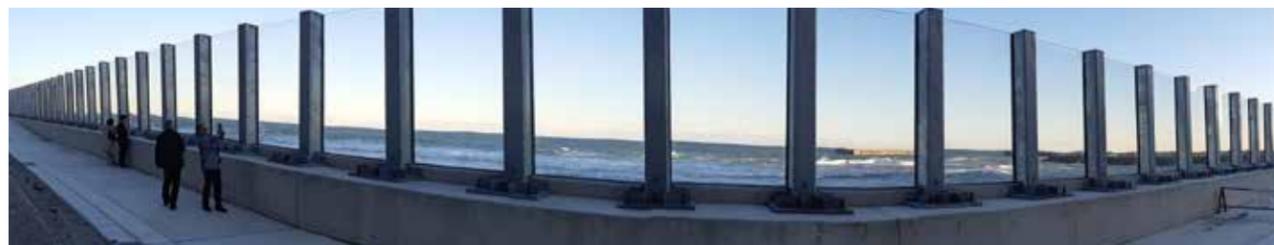


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References: Japan*



Fukushima Tsunami barrier
PLEXIGLAS® Soundstop GS, 40 mm
Fukushima



Noise barrier, Obara
PLEXIGLAS® Soundstop GS CC
Tokyo Rope Ltd.

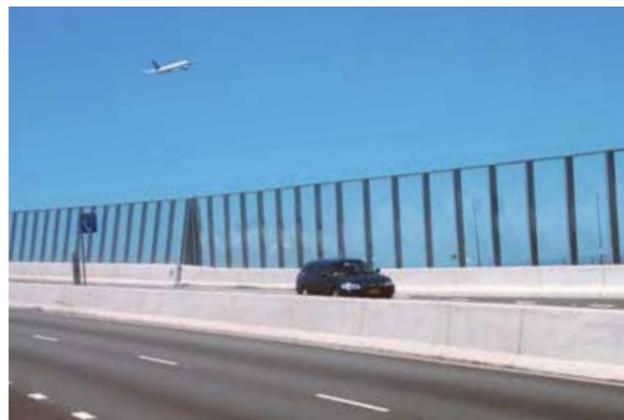


Noise barrier, Highway Tsuruoka
PLEXIGLAS® Soundstop GS CC
Tsuruoka



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References: Australia*



Wind screen, M-5 East Freeway, Sydney
PLEXIGLAS® Soundstop XT and GS CC
Boulderstone Hornibrook
Bilfinger Berger Joint Venture

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Noise barrier, Parramatta Rail Link, Sydney
PLEXIGLAS® Soundstop GS CC
Ingal Civil Products



Noise barrier, M5, Melbourne
PLEXIGLAS® Soundstop
John Holland



Noise barrier, Eastern Distributor, Sydney
PLEXIGLAS® Soundstop XT and GS CC
Leighton Constructions

References: Hongkong*



Noise barriers, noise control tunnel Eastern Corridor
PLEXIGLAS® Soundstop GS CC and GS
Active Way Ltd.

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Noise barriers, noise control tunnel Eastern Corridor
PLEXIGLAS® Soundstop GS CC and GS
Active Way Ltd.



Inside view of noise control tunnel Eastern Corridor
PLEXIGLAS® Soundstop GS CC and GS
Active Way Ltd.



Noise barrier, Ho Lung Tao
PLEXIGLAS® Soundstop XT
Active Way Ltd.

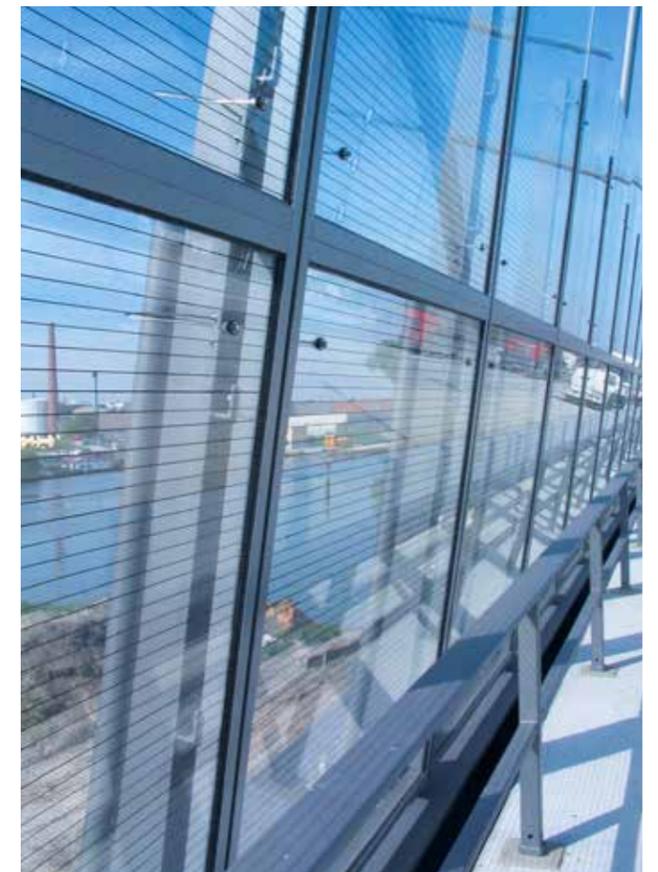
Project: Bridge over Britzer Zweigkanal*



PLEXIGLAS® Soundstop GS CC

Material Grade	Clear with black threads; Thickness: 20 mm
Site	A 113, Berlin, Britz quarter, Germany
Size	approx.. 500 m ²
Contractor	DEGES Deutsche Einheit Fernstraßenplanungs- und -bau GmbH Zimmerstraße 54, 10117 Berlin
Construction	Alusyston Lärmschutz GmbH, Düsseldorf
Build in	2003
Special feature	The noise barrier is curved 10° inwards in harmony with the bridge arches.

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Detailed View

The inclination of the noise barrier follows the inclination of the bridge structure (inclined inwards by 10°).

The uppermost PLEXIGLAS® SoundstopGS CC elements are partially freestanding.

Project: Noise Barrier AD Berlin / Neukölln*



PLEXIGLAS® Soundstop GS CC

Material Grade	Clear; Thickness: 20 mm
Site	A 100/A 113, Berlin/Neukölln, Germany
Size	69.000 m ² total surface area, largely transparent
Contractor	DEGES Deutsche Einheit Fernstraßenplanungs- und -bau GmbH Zimmerstraße 54, 10117 Berlin
Construction	Various specialized companies
Build in	2003/2004

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Detailed View

Project: Noise Barrier Normandy*



PLEXIGLAS® Soundstop GS CC

Material Grade	Clear; Thickness: 15 mm
Site	A 14, Paris-Normandie, France
Size	ca. 10.000 m ²
Contractor	SAPN – Société d'Autoroute Paris-Normandie Place Louis Armand, 75012 Paris
Construction	Agence Lavigne, 8 rue Gambetta, 92170 Vanves
Installation	RCA SACO
Build in	1995/1996
Special feature	Integrated street lighting in upper frame profile

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Detailed View

Project: Noise Barrier Komoko*



PLEXIGLAS® Soundstop XT

Material Grade	Clear; Thickness: 15 mm
Site	Praha 4, Modrany, CZ
Size	2.500 m ²
Contractor	Metrostav a.s., Kozeluzska 224, Praha 8
Construction	AZENIT spol. s.r.o., Radlicka 138, CZ-15000 Praha 5
Build in	2003
Special feature	Cold-curved

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Detailed View

About Us

The breadth of our range and innovative specialty products pave our customers' way to tomorrow's markets.

The Acrylic Products Business Unit of Röhm America, LLC is a pioneer and world market leader in methacrylate chemistry.

- Acrylic was invented in 1933 by Dr. Otto Röhm, and ACRYLITE® is a registered trademark. In the Americas, our noise control products are marketed under the ACRYLITE® Soundstop trademark. With its high proportion of specialties and system solutions, the business unit ensures the constant further development of existing market segments and the discovery of new potential in future-ready applications. The breadth of our range and innovative specialty products pave our customers' way to tomorrow's markets.

- The business unit opened up the noise control marketsegment in 1980 with the specially developed product ACRYLITE® Soundstop. Since then, both the products themselves and the product range have undergone continuous development and been adjusted to the requirements of the global market.
- Today, noise barriers made from ACRYLITE® can be found in Europe and Australia as well as in many countries of Asia and in the USA. The Acrylic Products Business Unit pursues the same targets as Röhm GmbH as a whole. With our innovations, we would like to help achieve effective results in our fields of application and improve the quality of life for people everywhere, at all times.

Items made from ACRYLITE® Soundstop can be found in the following countries:

- Canada
- USA
- Mexico
- Brazil
- Argentina
- Dominican Republic
- Jamaica
- Puerto Rico
- Uruguay



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SUSTAINABILITY

The Sustainable Development Goals (SDG), adopted by the United Nations in 2016, all have one goal: By 2030, all inhabitants of planet Earth should be able to live in dignity.

To this end, the United Nations has formulated 17 goals to support global sustainability efforts. The SDGs are our compass in aligning our sustainability-strategy, creating innovations and identifying new business opportunities and take advantage of them.

Products and solutions from Röhm make a measurable contribution to achieving these goals. This is how we assume responsibility.



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Acrylic Products

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www.roehm.com

® = registered trademark

ACRYLITE is a registered trademark of Roehm America LLC.

Certified to DIN EN ISO 9001 (Quality) and DIN EN ISO 14001 (Environment)

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