

CRYLON[®] SBW - SOUND BARRIER WALL



Description

The CRYLON[®] SBW (Sound Barrier Wall) Variation is a special setting of our extruded acrylic sheets, developed for noise barrier wall systems. Due to their special properties, CRYLON[®] SBW sheets offer a wide range of creative applications in building and industrial glazing, wherever noise protection and transparency are required.

The CRYLON[®] SBW Design variant enables a standardized or individualized print, such as strips for bird protection.

CRYLON[®] SBW sheets have been tested and approved according to the European standards EN 1793 and EN 1794 and correspond to the German regulatory ZTV-Lsw06. They comply with the requirements for noise insulation, fire performance, stability under wind load and stone impact resistance. In addition, CRYLON[®] SBW sheets show excellent UV and weather resistance, and a 10-year warranty is available.




Technical properties according to DIN EN 1793 and 1794 (Requirements for Sound barrier walls)

SOUND BARRIER WALL

Properties	Method	Unit	CRYLON [®] SBW
Airborne sound insulation DL _R 15 – 25 mm	DIN EN 1793-2:2013	dB	31 – 32 group B3
Absorbable windload 15 - 20mm (2m x 2m) 20 - 25mm (2m x 3m)	DIN EN 1794-1:2011, Annex A	kN/m ²	2,13 1.86
Stone impact resistance	DIN EN 1794-1:2011, Annex C	-	Requirements fulfilled
Fire resistance (undergrowth fire)	DIN EN 1794-2: 2011, Annex A	classification	class 3

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Technical properties according to product standard DIN EN ISO 7823-2

GENERAL

Property	Method	Unit	CRYLON [®] SBW
Density	ISO 1183	kg/cm ³	1190
Forming temperature (depending on the process)	-	°C	140 - 160

MECHANICAL

Modulus of elasticity	ISO 527-2	MPa	3200
Tensile strength	ISO 527-2	MPa	70
Flexural modulus	ISO 178	MPa	3300
Flexural strength	ISO 178	MPa	115

OPTICAL

Light transmission (15 - 25 mm)	ISO 13468-2	%	> 90
Refractive index n _D ²⁰	ISO 489	-	1.492



THERMAL

Vicat softening point (B 50) (pretreatment: 16h at 80°C)	ISO 306	°C	105
Linear thermal expansion α	ISO 11359-2	mm/(m*K)	0.07
Service temperature continuous use	-	°C	70
Max. temperature, short term use	-	°C	90
Degradation temperature	-	°C	> 280
Specific heat capacity	ISO 11357-4	J/gK	1.47
Thermal conductivity	ISO 22007-1	W/mK	0.18

Note: These technical data of our products are typical ones. The actual measured values may deviate from these guide values and are subject to minor production-related variations.

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Notes on the protective film used

Apart from CRYLON[®] SBW Design, all CRYLON[®] SBW sheets are laminated with a special opaque white protective film with increased UV and weathering protection. It is recommended to remove this protective film before any kind of thermal processing (e.g. thermoforming, hot edging, flame polishing, laser cutting, etc.), as otherwise residues or marks may appear on the processed sheet.

Despite increased UV and weather resistance of the PE protective film used, its durability, temperature resistance and functionality are limited: When storing the boards indoors under proper and constant storage conditions, it is recommended to remove the PE film no later than 6 months after its application.

In case of outdoor storage under normal weather conditions (Central European area, global radiation 80 Kly), the film should be removed no later than 6 months after its application. In the case of outdoor storage in regions with increased UV radiation (global radiation of e.g. 160 Kly) and higher temperatures, however, the film should be removed no later than 3 months after it has been applied, as after this time there is a risk that the PE film will become brittle, adhesive residues may remain on the surface and can no longer be removed properly and without damaging the panel surface.

It is advisable to carry out your own practical tests. AdviGroup does not accept any responsibility for problems caused by self-adhesive films.

CRYLON[®] SBW sheets equipped with a special protective film more suitable for thermoforming are available on request, but the reduced UV and weather resistance of this protective film must be taken into account. Information on storage life and processing properties of this film can be found in the CRYLON[®] instruction options.

CRYLON[®] SBW Design panels are delivered with cork plates as an intermediate layer so that scratching during transport can be ruled out. It is recommended to use cotton gloves when handling the panels to avoid scratching them due to improper handling.

Manufacturing and processing techniques

CRYLON[®] SBW sheets can be easily processed, using standard techniques such as sawing, drilling, milling, polishing, thermoforming, hot edging, gluing, laser cutting and engraving. Detailed information on this is available in the CRYLON[®] instruction options and on request.

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