

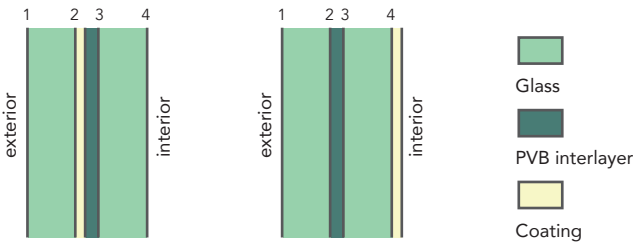
PROCESSING SUNGUARD[®] TO LAMINATED GLASS



BUILD WITH LIGHT[®]

Guardian SunGuard® products can be produced as laminated glass for safety and sound control requirements. To maintain aesthetics and ensure superior performance, special care must be taken during the fabrication.

The coating can be applied on surface 4 (laminated with coating outside) or on surface 2 (laminated with coating against PVB).



If the glass is **laminated with coating outside (surface 4)** special attention needs to be paid if the coating is exposed to mechanical contact - especially if nip rolls are used for the pre-lamination process. The coated surface requires a quality control after each fabrication step under suitable light conditions.

Regarding any further handling (e.g. transportation, cutting, edge working, washing) specific instructions for handling of SunGuard products shall be followed - if you require more information, please contact Guardian.

If the glass is **laminated with the coating against PVB (surface 2)**, SunGuard products are able to enhance the overall aesthetics and performance of laminated glass. However, thermal performance (SunGuard® High Performance and SuperNeutral) may diminish. Guardian can assist its customers in estimating thermal performance based on application. In addition, a colour shift may be noted when projects involve laminated and monolithic products side by side. Guardian recommends a mock-up.

Following coatings are compatible with the PVB interlayer:

SunGuard® Solar*	SunGuard® HD	SunGuard® HP	SunGuard® SN**
Neutral 67	Silver 70	Light Blue 62/52	SN 70/41
Light Blue 52	Neutral 67	Neutral 60/40	SN 70/37
Silver Grey 32	Diamond 66	Neutral 50/32	SN 62/34
Royal Blue 20	Light Blue 52	Silver 43/31	SN 51/28
Silver 20	Silver Grey 32	Neutral 41/33	SN 40/23
	Royal Blue 20	Amber 41/29	
	Silver 20	Silver 35/26	
	Silver 10		

* product available in specific regions only. Please contact your Guardian representative.
 ** in combination with Eastman PVB Saflex RB41 only



Conditions that affect non-coated laminated glass can also have an adverse effect on coated laminated glass products.

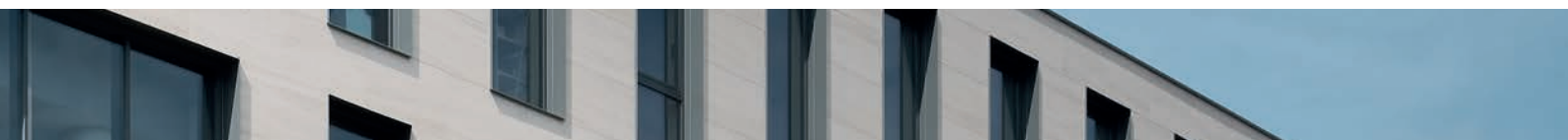
Without compatibility tests, the direct contact between PVB and any sealant materials should be avoided. Generally, laminated glass must not be standing in water or be exposed to high moisture. In order to avoid delamination or corrosion of the SunGuard High Performance coating, the glazing must be designed accordingly and the processor is responsible for the right application. As to edge deletion, in case of any doubt Guardian recommends a suitable edge deletion of the SunGuard High Performance coating in order to avoid edge corrosion. SunGuard SuperNeutral coatings must be edge deleted.

Following issues require special attention when using laminated glass with coating against PVB:

- Slight colour shift compared to non-laminated glasses of the same type
- Loss of thermal insulation performance of the coating (U-Value)
- Inside laminated coated glass products generally comply to EN 12543p3 Laminated glass. Only a few inside laminated coated glass products comply to EN 12543p2 Laminated safety glass. For further information, please contact your Guardian representative
- In combination with selective coatings (e.g. SunGuard High Performance or SuperNeutral) only one production charge of the coated base glass should be used due to stronger requirements on colour tolerances (please contact Guardian regarding your particular project or further information)
- For durability tests of laminated glass please refer to EN 12543-4
- To avoid punctual stress, special care shall be taken as to the drill alignments

Guardian does not recommend use of resins, coloured PVB, structured PVB, Sentry-Glass or EVA foil unless compatibility tests have been successfully performed. If these materials are intended to be used in a direct contact with SunGuard, a suitable compatibility test performed by the processor is mandatory.

These guidelines are for information purpose only and Guardian does not provide any warranty with respect to their content. Guardian provides only a limited warranty for SunGuard products and not regarding the intended further processing or end product, which remains the full responsibility of the processor.



Verification

The signature below verifies that the processor has read and understands the full content of the PROCESSING SUNGUARD® TO LAMINATED GLASS / GUARDIAN_SGLaminated_PG_EN_0217

Name/Signature: _____ Title: _____

Company/Stamp: _____ Date: _____

Please return this page signed via email at information@guardian.com

SunGuard Products are available at several locations situated throughout Europe. Please contact your local Guardian representative or your local Technical Advisory Center for further information.

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This document is the only valid one for the processing of SunGuard to laminated glass.

Please visit www.sunguardglass.com or contact Guardian for its most current version.

The products in this publication are sold subject to Guardian's standard terms and conditions of sale and any applicable written warranties. It is the responsibility of the purchaser to confirm that the products are suitable for their intended application in compliance with the applicable laws and regulations. Please contact your local Guardian representative to obtain any applicable handling and fabrication guides and for the most current product information.



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