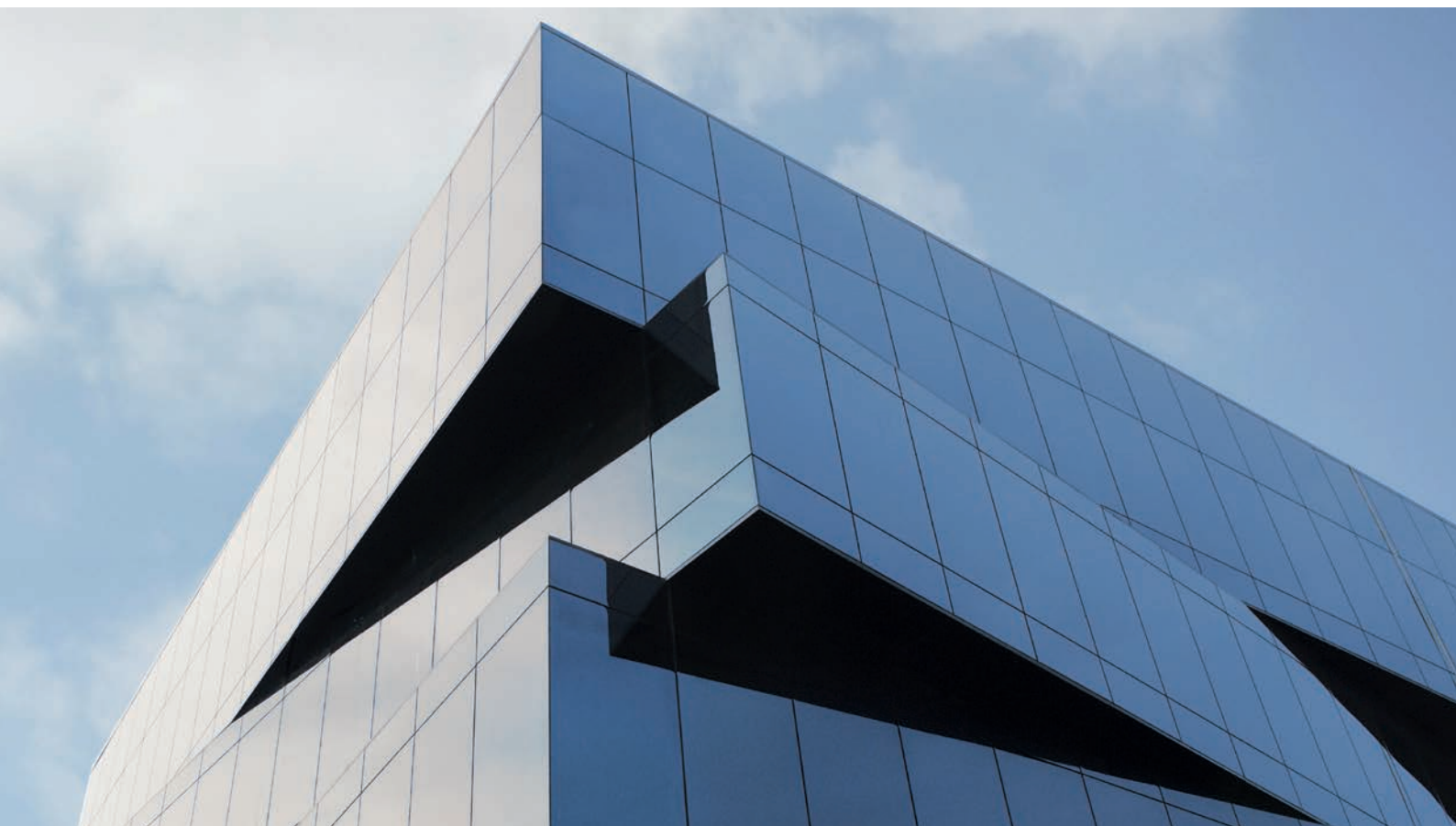


SEALANT COMPATIBILITY AND STRUCTURAL GLAZING

PRODUCT APPLICATION INFORMATION



BUILD WITH LIGHT®

Edge deletion is necessary to ensure that chemicals in certain sealants do not attack the silver layer in the coating. Extensive testing has shown that for some of the coating types, edge deletion is not necessary. Note: when a sealant is put behind an existing coating, a colour change may be visible.

Different sealant types use different mechanisms for sealant cure and some of the chemicals, used in the curing process, may attack the coating. For this reason, only approved sealants should be used.

The use of untested coated glass or unapproved sealants requires edge deletion in any case!

Important Note:

- Guardian SunGuard® SuperNeutral (SN), SuperNeutral HT (SN-HT) eXtraSelective (SNX) and eXtraSelective HT (SNX-HT): edge deletion required
- SunGuard® Solar and High Durable (HD): no edge deletion required
- SunGuard® High Performance (HP): no edge deletion required if applied sealants and related applications are tested and approved - see table at pages 4 and 5.

Where edge deletion is required: remove the coating by using grinding appliances and grinding wheels developed specifically for this purpose (Fig. 3). More information about the appropriate types may be directly requested from Guardian.

Any overlapping of coatings and sealants should be limited to a maximum width of 2mm. Fig. 1 illustrates this requirement as an example in an insulated glass unit.

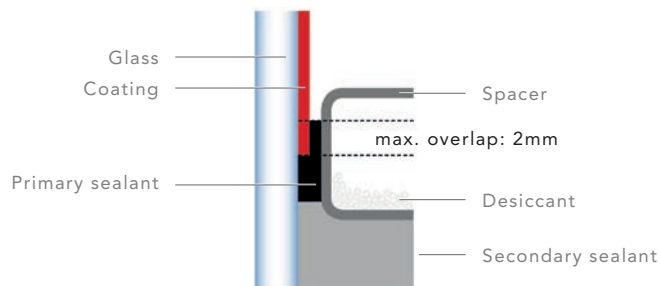


Fig.1 - Overlap

The ground-off margin should generally not be wider than 10mm, as otherwise it may enter the visible area. If for any reason the sealing depth of the insulated glass has to be increased, then the width of edge deletion of the coating must be increased accordingly. A coating detector can be used to check whether all coating has been removed (Fig. 2).

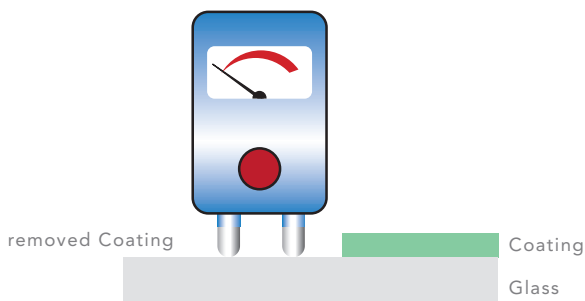


Fig.2



Fig.3

Important Note:

Where the edge deleted part is visible from the outside of the building, a colour difference will be visible with the coated part of the glass. In case of structural glazing, please contact the sealant manufacturer for further information. Guardian recommends a mock up to secure the static requirements. For special applications like step glazings with exposed coated surface (e.g. roofs, corners of structural glazings, etc.), please consult the local Technical Department at Guardian.

Use of Guardian SunGuard® coatings in structural glazing

A structural glazing façade is designed as an aluminium-framework in combination with special glass units. This aluminium-glass-system is hanged into a conventional curtain wall construction.

The glass is glued directly on the metal sub-construction or fixed by special screw systems between edge seal and frame. High modulus silicones are used for structural gluing and as structural sealant.

Possible structural glazing build ups are shown in Fig. 4a – c.

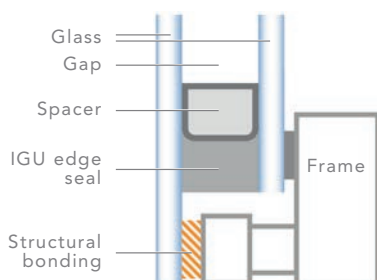


Fig.4a - Structural step glazing

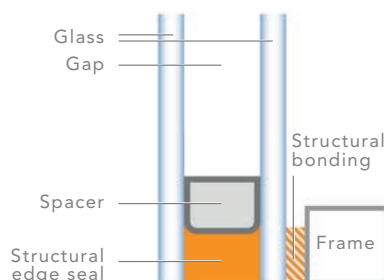


Fig.4b - Structural insulating glass

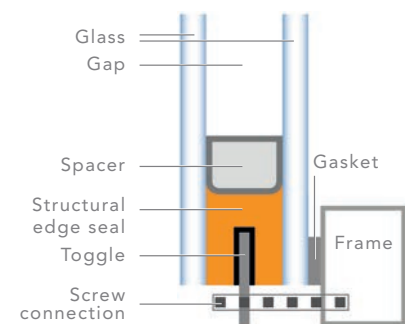


Fig.4c - Screw connection between edge seal and frame (toggle system)

If coatings are intended to be in contact with any silicone with structural functionality (edge seal or bonding) please contact Guardian for information and advice for the available tested coating-silicone-combinations.

SunGuard HP, SunGuard SN and SunGuard SNX are not suitable for structural glazing. This applies also to standard insulating glass units where the outer pane is not mounted by profiles or any other supporting devices.

In this case the coating needs to be removed accordingly.

It is the full responsibility of the processor ensuring the quality of the edge deletion as well as the adhesion of structural silicones on edge-deleted surfaces.

Typically, applications with structural bonding need to be tested and approved. If an European certification for structural glazing according to ETAG 002-1 is required, please contact Guardian for detailed information about suitable glass types and tested coating-sealant combinations complying with the ETAG 002-1 requirements.

Another possibility for using high performing coated architectural glass (SunGuard SN, SNX, HP) in structural applications is "Guardian System TEA". This is a special enamel system applicable directly on the coated surface. After firing the coating is completely dissolved and only glass and enamel is left. This system is tested and approved for most of Guardians heat treatable SunGuard coatings. The mechanical and chemical very stable and optical homogeneous surface provides a reliable adhesion for structural applications. Guardian System TEA is tested and certified for various structural sealants according to ETAG 002-1. For detailed information please contact Guardian.

Compatible sealants for SunGuard® High Performance

Manufacturer	Sealant ID	Application	Light Blue 62/52	Neutral 60/40	Neutral 50/32	Silver 43/31	Neutral 41/33	Royal Blue 41/29	Amber 41/29	Bright Green 40/29	Bronze 40/27	Royal Blue 38/31	Silver 35/26
DOW-Corning	DC 791	weather sealant	*	*	*	*	*	*	*	*	*	*	*
DOW-Corning	DC 991	weather sealant	*	*	*	*	*	*	*	*	*	*	*
DOW-Corning	DC 3362	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
SIKA (Wacker)	IG 25	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
SIKA (Wacker)	IG 25 HM	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
Tremco	Proglaze 580	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
Tremco	JS 562	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
Tremco	Proglaze LMA	weather sealant	*	*	*	*	*	*	*	*	*	*	*
Tremco	JS 442	IG sealant (Polyurethane)	*	*	*	*	*	*	*	*	*	*	*
Momentive	IGS 3723	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
Ramsauer	Neutral 120	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
Ramsauer	Alkoxy 130	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
Ramsauer	Randverbund 380	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
H.B. Fuller	PS-998R	IG sealant (Polysulfide)	*	*	*	*	*	*	*	*	*	*	*
Fenzi	Thiover	IG sealant (Polysulfide)	*	*	*	*	*	*	*	*	*	*	*
Fenzi	Hotver 2000	IG sealant (Hotmelt)	*	*	*	*	*	*	*	*	*	*	*
Kömmerling	GD 116 IG	IG sealant (Polysulfide)	*	*	*	*	*	*	*	*	*	*	*
Kömmerling	GD 677 IG	IG sealant (Polyurethane)	*	*	*	*	*	*	*	*	*	*	*
Kömmerling	GD 920 IG	IG sealant (silicone)	*	*	*	*	*	*	*	*	*	*	*
Kömmerling	Isomelt	IG sealant (Hotmelt)	*	*	*	*	*	*	*	*	*	*	*
Bostik	Sealomelt	IG sealant (Hotmelt)	*	*	*	*	*	*	*	*	*	*	*
Bostik	Evo-Stik Hiflo	IG sealant (Hotmelt)	*	*	*	*	*	*	*	*	*	*	*
Bostik	Evo-Stik Hotmelt	IG sealant (Hotmelt)	*	*	*	*	*	*	*	*	*	*	*
Bostik	Bostik 5000	IG sealant (Hotmelt)	*	*	*	*	*	*	*	*	*	*	*
IGK	IGK 130	IG sealant (Polyurethane)	*	*	*	*	*	*	*	*	*	*	*
MC Bauchemie	Emcepren 200	IG sealant (Polyurethane)	*	*	*	*	*	*	*	*	*	*	*
Kadmar	Polikad-M	IG sealant (Polysulfide)	*	*	*	*	*	*	*	*	*	*	*

* Sealant/silicone compatible with SunGuard® High Performance product

These guidelines are for information purposes 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.

Important Note:

The responsibility for a proper protection of the SunGuard High Performance coatings is always at the processor.

Verification

The signature below verifies that the processor has read and understands the full content of the SEALANT COMPATIBILITY AND STRUCTURAL GLAZING / Product Application Information / SUNGUARD_SealantCompatibility_TI_EN_0118

Name/Signature: _____ Date: _____

Company/Stamp: _____ Title: _____

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 application of SunGuard in structural glazing.

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

Photo Title: PROJECT: Innovation Center – LOCATION: Santander, Spain – ARCHITECT: Luis Castillo

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