

STOPRAY SMART

SEALANT & PVB COMPATIBILITY GUIDE



ASIA EDITION

AGC

VERSION 2.0 – October 2019

This version of the guide replaces and cancels all previous versions.
Please regularly check www.agc-tas.com for any updates.

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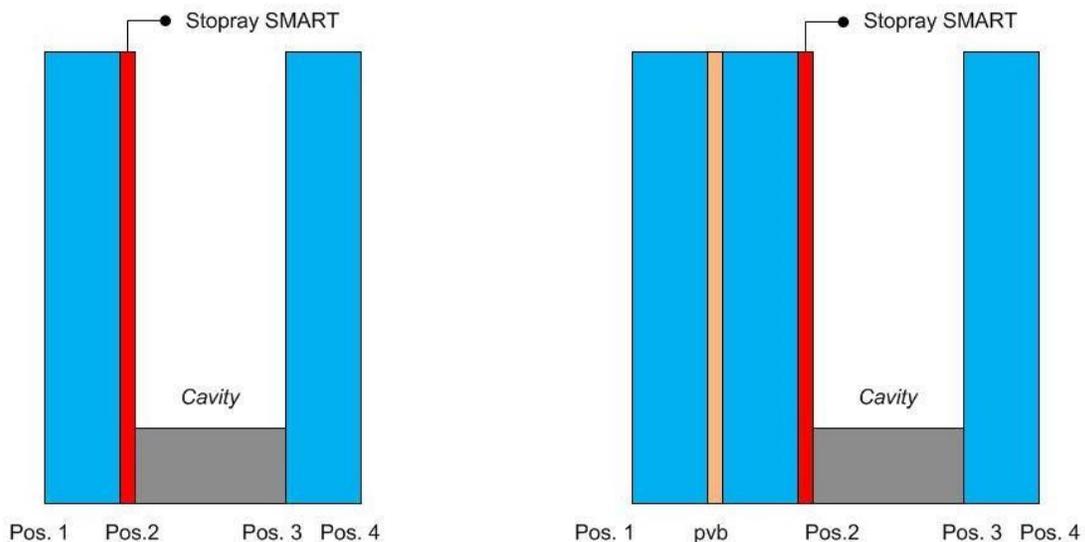
1. EDGE TRIMMING

1.1. Stopray SMART coating in contact with the sealing component of an Insulating Glazing

The assembly of a coated glass (containing a silver layer) into an insulating glazing unit, usually requires an edge-deletion of the coating prior to the assembly itself.

The edge-deletion is done in order to prevent the deterioration of the coating in the sealing joint due to external moisture, thus leading to a loss of adherence.

Tests conducted on the Stopray SMART products by using different sealants (see summary table in chapter 4) have shown that, **under strict conditions** as described in this guide, the **edge-deletion prior to assembly is not required**.



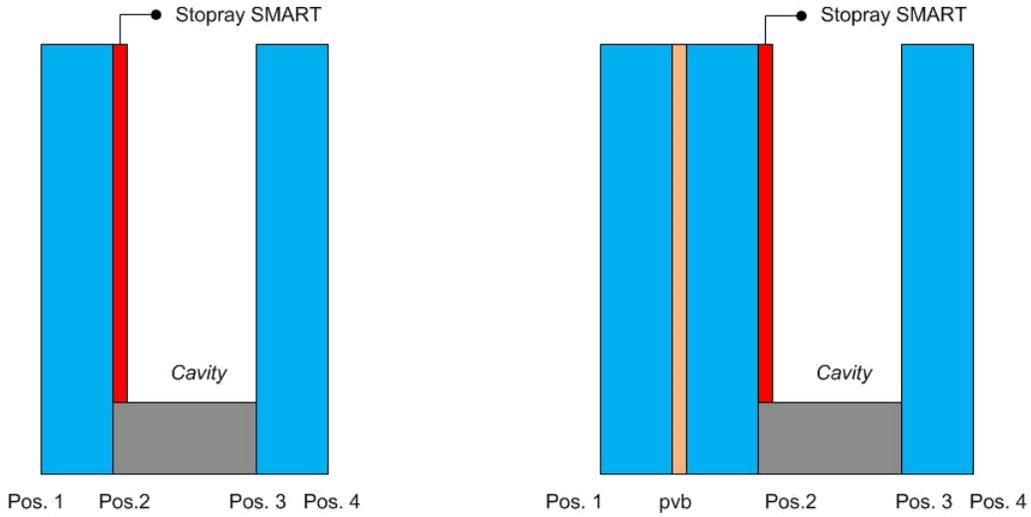
Drawing given for purpose of illustration.

Only sealants tested with Stopray SMART products which are referred to in this guide may be used without edge-deletion.

AGC recommends a mock-up to ensure the desired aesthetic and validate the static load for the sealant joint. For special applications like stepped insulating glazing with exposed coated surface (e.g. roofs, corners of Structural Glazing facades, etc.), a weather sealant is always required to protect the coating.

The calculation and dimensioning of the sealant joint is under responsibility of the manufacturer of the insulating glazing units.

The use of any other sealant, not tested with Stopray SMART by AGC, requires edge-deletion in any case.

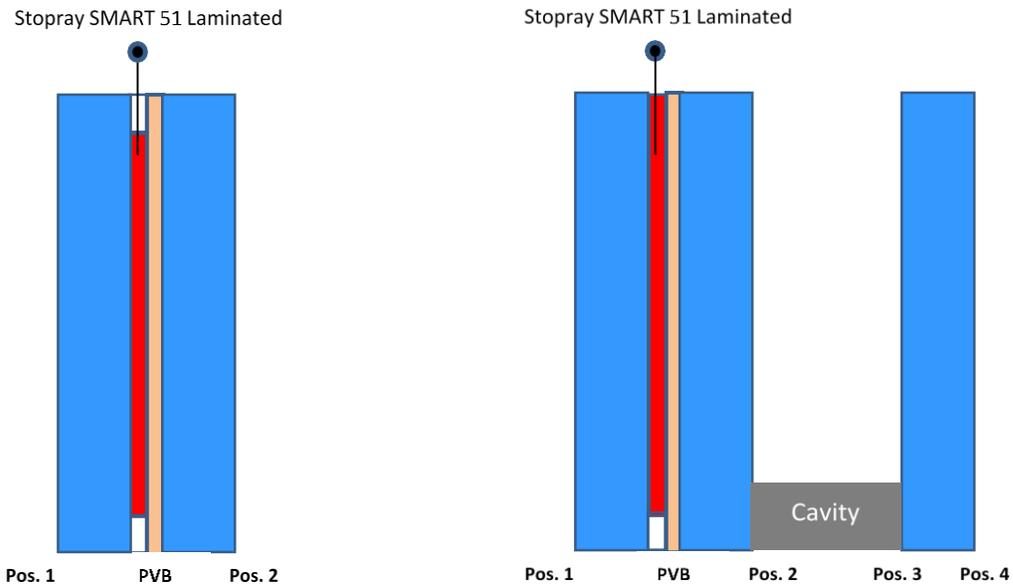


Drawing given for purpose of illustration.

1.2. Stopray SMART 51 Laminated coating in contact with the pvb-interlayer of the laminated glass

Attention: Stopray SMART 51 Laminated has been developed with the sole purpose of being processed into contact with the pvb-interlayer of a laminated safety glass.

In this case there is no need for coating trim-off prior to assembly in an insulating glazing.



Drawing given for purpose of illustration.

Important remark:

From the façade-drawings and section blue-prints of the insulating glazing, it should be clearly deduced the function of the sealant joint. Thus allowing the choice for the correct sealing joint of an insulating glazing (also called secondary sealing).

Function of sealant joint	Application	Type of sealant joint		
		Silicone	Polyurethane	Polysulphide
4-Sides framed insulating glazing, no UV exposure on sealant joints	Insulating Glazing		●	●
4-Sides framed insulating glazing, no UV exposure on sealant joints, but temperature of sealant joint > 75°C	Insulating Glazing	●		
Insulating glazing, sealant joint has no structural function but is exposed to UV radiation	Insulating Glazing	●		
Insulating glazing used in a Structural Glazing façade and acts as a structural joint	Structural Glazing	●		

2. SILKSCREENING

2.1. Stopray SMART with silkscreen

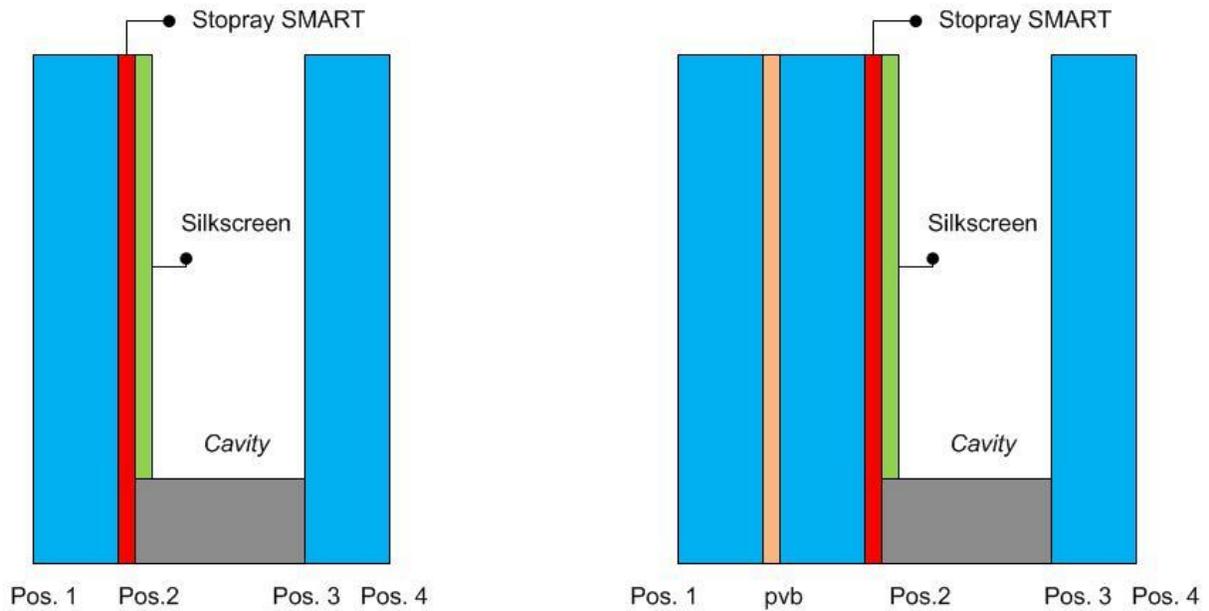
In case of a silkscreen on Stopray SMART, where the **silkscreen is in contact with the sealant joint**, the **edge-deletion of the coating is required prior to the application of the silkscreen**.

For silkscreen that is in contact with the sealant joint, the compatibility of the sealant joint, structural joints and weather seals with the used silkscreen (enamel) paint is under responsibility of the manufacturer of the insulating glazing units, and should be assessed in cooperation with the sealant supplier.

The calculation and dimensioning of the sealant joint is under responsibility of the manufacturer of the insulating glazing units.

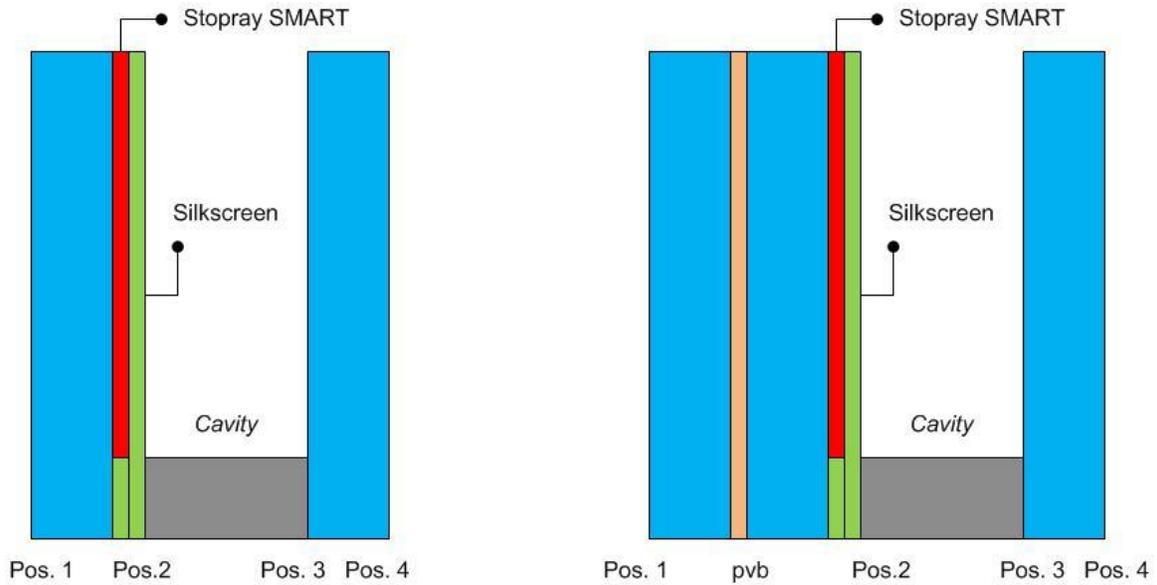
AGC recommends to assess the aesthetics by means of a mock-up sample.

2.1.1. Silkscreen NOT in contact with the sealant joint



Drawing given for purpose of illustration.

2.1.2. Silkscreen in contact with the sealant joint



Drawing given for purpose of illustration.

2.2. Stopray SMART 51 Laminated with silkscreen

The application of a silkscreen on a laminated safety glass Stopray SMART 51/33 is allowed, meaning:

- the coating Stopray SMART 51/33 is in contact with the pvb, with edge-deletion required
- interlayer the silkscreen is applied on pos. 2, facing the cavity.

Two cases are possible :

1) the silkscreen is in contact with the sealant joint: the compatibility of the sealant joint, structural joints and weather seals with the silkscreen is under responsibility of the manufacturer of the insulating glazing units, and should be assessed in cooperation with the sealant supplier.

2) no silkscreen in contact with the sealant joint: no assessment required.

AGC recommends to assess the aesthetics by means of a mock-up sample.

The calculation and dimensioning of the sealant joint is under responsibility of the manufacturer of the insulating glazing units.

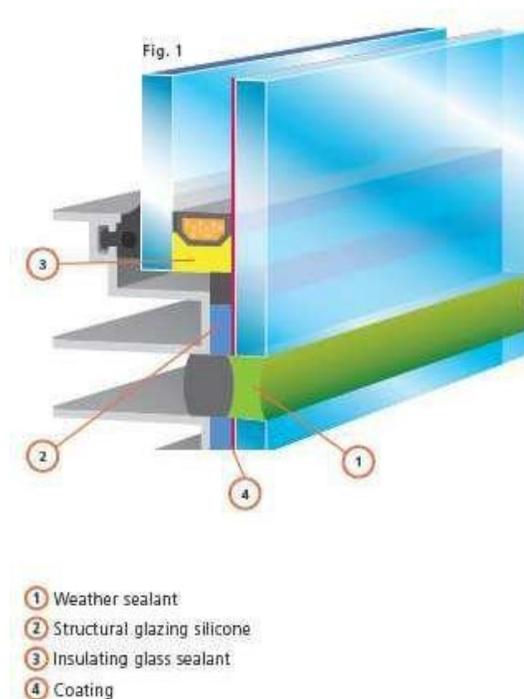
3. STRUCTURAL GLAZING

Structural Glazing is a curtain-wall technique consisting in bonding glass to a building's structural aluminum or stainless steel framework. Structural Glazing allows opaque and/or transparent in-fill materials to be bonded to a building structure where glazing and weather sealant only are visible from exterior side.

Structural Glazing is a specific technique that requires special calculations.

AGC recommends its customers to contact AGC's Technical Advisory Service (TAS) for technical inquiries (www.agc-tas.com). Calculation of the structural sealant joint is under responsibility of the glazier in cooperation with the sealant supplier.

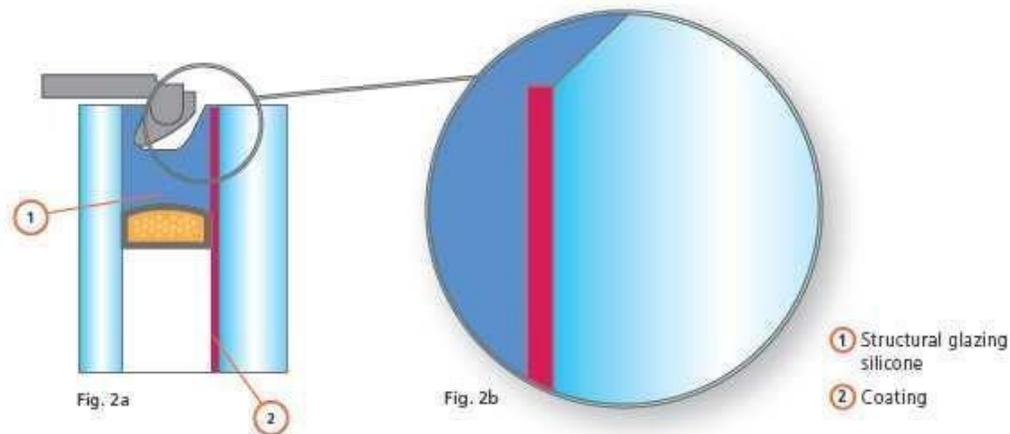
In Structural Glazing, the glass elements are bonded onto the structural framework using Structural Silicone Glues, especially developed for the application of Structural Glazing (Fig. 1).



For the so called 'stepped insulating glazed units' or insulating glazing with 'integrated mechanical fixings in the sealant joint', two points have to be respected:

Weather Sealant Joint: it is the responsibility of the glass processor and/or curtain waller to protect the Stopray SMART coating by means of a weather sealant against environmental elements (dust, moisture, ...). Therefore, the gap between two adjacent insulating glazed units is sealed using a silicone weather sealant.

Cover the exposed Stopray SMART coated surface: the coating in the sealant joint or on the stepped part is to be covered by a silicone weather sealant. The sealant has to cover the coated surface until the front end of the glass substrate. The bevel (edge working) helps to protect the coating effectively against moisture. The figures below (Fig. 2a and 2b) show an example when the insulating glass is supported in the spacer by mechanical fixing and the secondary sealant has a structural function. We recommend to always fill the edge after assembling the insulating glass unit.



4. SEALANT COMPATIBILITY TABLE

AGC provides a limited warranty to Stopray SMART products and does not provide any warranty regarding further processing or end product, which remains under full responsibility of the processor and/or curtain waller.

Important:

Only sealants tested with Stopray SMART products (*excludes Stopray SMART 51 laminated – edge deletion is required*) which are referred to in this guide may be used without edge-deletion. The use of any other sealant requires edge-deletion in any case.

Table 1 here below shows compatible insulating glass sealants, structural glazing silicones, and weather sealants for Stopray® SMART 51/33, Stopray SMART 30/20, and Stopray SMART 32T.

Legend Table 1:

◆	Tested
-	Not tested, or not approved
(1)	Supported by ETAG-002 certification – <i>applicable only for edge-deletion free</i>

Table 1: compatible insulating glass sealants, structural glazing silicones, and weather sealants for Stopray SMART 51/33, Stopray SMART 30/20, and Stopray SMART 32T

Sealant ID	Type	Application	SMART 51/33	SMART 30/20	SMART 32T
Dow Corning					
DC993	Silicone	Structural glazing	(1) ◆	◆	-
DC982	Silicone	Insulated glass	◆	◆	◆
DC895	Silicone	Structural glazing	-	-	-
DC3362	Silicone	Insulated glass	(1) ◆	◆	◆
DC3362 HD	Silicone	Insulated Glass	(1) ◆	(1) ◆	-
DC3793	Silicone	Insulated glass	◆	◆	-
DC756	Silicone	Weather sealant	-	-	-
DC768	Silicone	Weather sealant	-	-	-
DC791	Silicone	Weather sealant	◆	◆	-
DC791T (with primer)	Silicone	Weather sealant	◆	◆	-
Fenzi					
Thiover	Polysulphide	Insulated glass	◆	◆	-
Thiover F1	Polysulphide	Insulated glass	◆	◆	-
Kömmerling					
GD 677	Polyurethane	Insulated glass	◆	◆	-
GD 116	Polysulphide	Insulated glass	◆	◆	-
PS 200	Polysulphide	Insulated glass	◆	◆	-
SIKA					
SG500	Silicone	Structural Glazing	(1) ◆	◆	-
IG25	Silicone	Insulated glass	◆	◆	-
IG25HM+	Silicone	Insulated glass	(1) ◆	◆	-
Tremco					
JS 442	Polyurethane	Insulated glass	◆	◆	-
Proglaze II	Silicone	Structural Glazing	(1) ◆	◆	-
JS562	Silicone	Structural Glazing	(1) ◆	◆	-

Table 2: compatible PVBs for Stopray SMART 51/33

Sealant ID	Type	Application	SMART 51/33	SMART 30/22	SSMART 32T	SMART 51/33 Laminated
Eastman						
Saflex RB Clear	PVB	Interlayer	-	-	-	◆
Kuraray						
Clear B500 / J grade	PVB	Interlayer	-	-	-	◆

5. DISCLAIMER

The proper protection of the Stopray® Smart coatings is always under the responsibility from the processor and curtain waller.

It is the responsibility of the processor to inspect the processed coated glass adequately before and after each step of fabrication and prior to installation. Failure to apply all professional standards, customary instructions and processing instructions written in this processing guide and related links will automatically void any warranty regarding coated glass of AGC. We advise the processor to undertake some preliminary trials with the typical glass compositions for the project prior to any further commitment with his customer. The processor is solely responsible for the quality of the final product.

In case of needs, AGC's Technical Advisory Service (TAS) is available to supply additional product or process information.