

Recommendations for insulating glass production with Edgetech Super Spacer® according to EN1279

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1. Legal Disclaimer

This production recommendation is written to the best of our knowledge and belief and according to our current state of knowledge. It is based on the practical experience we have gained since the beginning of our activity. Nevertheless, it does not claim to be correct and complete. The practical experience of insulating glass manufacturers in their daily activities and especially the experience in certain applications, production methods and principles sometimes differs from ours, from which other courses of action and recommendations are derived. Against this background, we ask you to enrich this production recommendation with constructive feedback.

This manufacturing recommendation has no legally binding function. Nor can any right to possible damages or reparation or the resulting cost consequences be asserted or derived from it. Each application has its own and individual requirements, which are to be checked in each case and, if necessary, corrected. The responsibility for the manufactured insulating glass product remains with the insulating glass manufacturer and can in no case be transferred to the component supplier. The responsibility for controlling the function and quality of the incoming goods of the components also remains with the processor (insulating glass manufacturer). In any case, the compatibility and flawless functional interaction of the components used must be verified, either by means of tests carried out specifically or on the basis of the experience acquired by the insulating glass manufacturer. This is especially true for applications with products with different chemical compositions, such as glued glazing. Here, good project management of all parties involved is required in advance to check the compatibility of the components used. Therefore, no legally binding, only valid recommendation for action can be derived from this manufacturing recommendation, and anyone who uses the aforementioned products and machines to manufacture insulating glass does so at his or her own risk.



1. Spacer products and their different applications

Note: Care must be taken to ensure that the adhesive surfaces on the spacer are not contaminated with adhesion-reducing substances. In general, it is recommended to wear gloves when processing and handling Super Spacer® products.

a. Edgetech Super Spacer® Premium und Super Spacer® Premium Plus

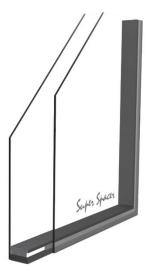
This is a spacer product made of rectangular silicone-based structural foam material, containing approx. 47% by weight desiccant 3Å zeolite, a multi-layer polymer barrier film on the back and two acrylic adhesive strips for adhesion to the glass. Profile height: 4.8 mm or 6.5 mm. According to EN1279, the product requires an external sealing stage made of hotmelt butyl, reactive hotmelt or comparable sealant.

This product can be applied either manually with a tool for manual application or automatically on flat glass panes by means of an application robot and processed into an insulating glass in an insulating glass line. The product is suitable for insulating glass production for framed applications.



b. Super Spacer® TriSeal™ (T-Spacer™) Premium Super Spacer® TriSeal™ (T-Spacer™) Premium Plus Super Spacer® TriSeal™ (T-Spacer™) SG

This is a T-shaped spacer profile made of silicone-based structural foam material, contains approx. 47% desiccant 3Å zeolite, a multi-layer polymer barrier film on the back, two acrylic adhesive strips for adhesion to the glass and two butyl extrusions in parallel. These can be pre-applied for manual processing (TriSeal™ version) or, in the case of automatic insulating glass production in an insulating glass line, applied to its corresponding side areas by means of the application robot (T-Spacer™ version) directly before the spacer profile is used. These butyl applications are intended for increased gas and moisture sealing. Profile height: 6.3 mm or 7.3 mm. The product is intended for the use of chemically curing 1-component or 2-component sealants based on polysulfide, polyurethane or silicone. It is also possible to use sealants based on MS polymer or modified PU. In any case, functionality (creep behavior, gas loss, Shore-A hardness) and



compatibility must be tested. Further information can be found in the product data sheet and in the Material Safety Datasheet. In general, a backing of at least 4 mm is recommended for 2-pane insulating glass for conventional insulating glass sealants (PU, PS), and at least 6 mm for silicones. For 3-pane insulating glass as well as large or heavy panes, more backing is recommended, unless other requirements already require a higher backing.

2. Securing the available water adsorption capacity of the desiccant

All Super Spacer® products are so-called flexible and prefabricated spacer products with integrated desiccant. The desiccant content used in the product must be protected from premature saturation. In spacer production, this is done through a defined short time in which the product is finished after the drying process, rolled on rolls and vacuum-sealed. At the time of delivery, the product has a maximum of the initial moisture



content confirmed in the supplied production certificates. In order to keep this as low as possible, the following recommendations are given.

3. Test desiccant activity

Quanex provides a desiccant activity test kit. This test kit includes material and instructions to determine desiccant activity. This test or the following method of moisture determination with the Sartorius MA150 or MA160 material moisture analyzer should be performed in the following situations:

- When opening the first carton of a new batch
- When reusing a reel from a previously opened package
- When using a reel from unopened packaging whose date of manufacture is more than 3 years ago

Super Spacer® material must pass this desiccant test before it can be used. This test can be repeated up to 2 times if it fails, and one layer of spacer material has been unrolled from the roll beforehand. Material that does not pass the test should be disposed off and either contact Edgetech Application Service or inform the production manager.

4. Temporary storage

a. Material on the roll

Super Spacer® is suitable for transport in vacuum-sealed, moisture-proof foil bags, if necessary with additional, reusable PET bags. The Super Spacer® material should be used without delay once it has been removed from the vacuum packaging. Unused material should be resealed in moisture-proof foil bags. The bags should be tightly closed with adhesive tape or cable ties and stored with a hand's width away from the floor and outer walls and not in damp areas.

b. Material in small packages (20m rolls)

Super Spacer® is also available in 20m rolls for consumption in small quantities (Super Spacer® Premium and Premium Plus only). These rolls are packed in vacuum-sealed foil bags. Unused Super Spacer® material should be packed back into these foil bags and either sealed or taped and stored away from the floor or damp areas.



5. Protection of desiccant activity

a. Manual production, roller stand with protective covers (illustration picture annex 6)

For temporary storage of the Super Spacer™ material during processing on manual processing tools, roll stands with protective covers should be used. These protective covers protect the spacer material from contamination and reduce moisture absorption into the material. These reel stands are available with one, two or four reel slots.

b. Additional protective measures

The opening in the protective cover, which is used to lead out the spacer material, should be closed if production is interrupted for more than 15 minutes and the material should be completely returned under the protective cover.

The rolls should be removed from the roll stand in the event of a longer interruption (e.g. overnight) and repacked in foil bags and cartons. Unused material should be resealed in moisture-proof foil bags. The bags should be tightly closed with tape or cable ties and stored away from the floor and wall and not in damp areas.

c. Storage with automatic application

Storage conditions for the material should be $75^{\circ}F$ / $24^{\circ}C \pm 10^{\circ}F$ / $6^{\circ}C$. This also applies to the use of an automatic applicator, in the storage cabinet. The humidity conditions should be < 10% rh. It is recommended to place an appropriate moisture meter with a clearly visible display in the spacer cabinet in such a way that it can be read from the outside through the closed door. It is also necessary to ensure that the supply of dried compressor air to the cabinet works independently of the power supply of the insulating glass line and around the clock 24 hours / 7 days a week.

d. Production delays

The insulating glass unit should be completely assembled after the spacer has been applied to the first pane of glass. Please do not store partially completed units for later completion. The outer sealant should be applied immediately after assembling and pressing the insulating glass pane.



6. Incoming goods inspection / material inspection according to EN1279 before the production of insulating glass

Required inspections and tests for certain designs of multi-pane insulating glass and for components of multi-pane insulating glass used here (especially Super Spacer® T-Spacer™ and TriSeal™, Super Spacer® Premium, Premium Plus may be mentioned separately, MIG System Type B4)

EN 1279-6, Annex A, Table A.1 — Inspections and tests required for certain designs of multi-pane insulating glass and for certain designs of components of multi-pane insulating glass

Inspection Table	A.3	A.4	A.5	A.6	A.7	A.8	A.9	A.10	A.11	A.12
MIG-System Typa	all	Gas-filled	Sec	ondary seal	Primary seal			Spacer		1
			cold	hot		starr hollow	hot applied ^b	Pre-made ^B	U-Profile	Metal Strips
B2	Х	WR	Х	Х	Х	Х				
B3	X	WR	WR	WR			Х			
B4	Х	WR	Х	X	WR			X		
B5	Х	WR	Х	X	WR				Х	
B6	Х									Х

X: mandatory, WR: if relevant

a For design types of multi-pane insulating glass, see EN 1279-1:2018, Annex B.

b If the hot-applied flexible spacer is also a prefabricated flexible spacer, both tables shall be used.



7. EN 1279-6, Annex A – Required inspections and tests for certain designs of multi-pane insulating glass and certain components

Table A.2 — Random sampling plan for completed multi-pane insulating glass (monitoring plan to be determined by the manufacturer) Lot or daily production	Number of test specimens for controls
2 to 15	2
16 to 25	3
26 to 90	5
91 to 150	8
151 to 500	13
501 to 1200	20
1201 to 9999	32

The above-mentioned quantities for the samples are to be taken into account depending on the production figures

Table	A.3. Section 2, Production	n Control			
Ref.	Material, inspection or testing	Recommended procedure (Decision made by manufacturer)	Request	Recommended frequency (Decision made by manufacturer)	Recording
3.3	Position of the spacer frame	Visual inspection	see system description	each multi-pane insulating glass	no
Table	A.3. Section 3, Product Co	ontrol			
1.2	Dimensions of the multi-pane insulating glass (length, width and total thickness, edge displacement), position of the spacer frame	Measurement	see applicable specifications	Random sampling plan (Tables A.2)	yes
1.6	Fogging (if there is no information on the volatile content of the corresponding components)	EN 1279-4:2018, Annex C (see corresponding test report in Annex 7)	No visible fogging	— once a year or more frequently, where relevant,— when changing relevant components	Yes
Table	A.4. Section 2, Production	Control		1	•
1.2	Closing the gas filling opening	Visual control	Gluing over the puncture site	Each manually filled multi-pane insulating glass	No
	A.5. Section 1, Material Codary sealant	ontrol			
1.3a	Adhesion to spacers	See Appendix J, description here in Appendix 3	J1.4	Each batch is a sample	Yes



Table A.5. Section 2, Production Control Secondary sealant					
1.2	Adhesion to glass and spacers	See Appendix J, description here in Appendix 4	J1.4	Each batch is a sample	Yes

Table A.10. Section 1, Material Control						
Space	er system					
1.1	Packaging and label	Visual inspection	see purchase specification	Each batch: 1	No	
1.2	Dimensions (length/width, shape)	Measurement	see factory certificate	Each batch: 1	no	
1.3	Hardness	Measurement, Appendix E Description here in Appendix 5	see factory certificate (Shore hardness 0)	Each batch: 1	yes	
1.4	Adhesion of the spacer to secondary sealant	Detention Examination, Appendix J, description here in Appendix 3	see purchase specification	Each batch: 2	yes	
1.5	Adhesion of the spacer to glass	Detention Examination, Appendix J Description here in Appendix 4	see purchase specification	Each batch: 2	yes	
1.6	Volatile content or fogging test	EN 1279-4:2018, Annex H or C test report here in Appendix 7 and 8	see corresponding test report	Each batch: 2	yes	
Table	A.10. Section 2, Producti	on Control			•	
1.1	Location in relation to the glass edge	Measurement	see product description	per layer and width of the spacer: 1	yes	
1.2	Water adsorption capacity	Appendix H, H.3 here in Appendix 1 and 2	see appendix	Each batch: 1	yes	
1.3	Cleanliness of the spacer	Visual inspection	No visible contamination	per layer and type: 1 frame	no	
1.4	Connections	Visual inspection	no openings	every IGU	no	
1.5	Adhesion of the spacer to the glass	Appendix J (peeling test) description here in Appendix 3	see appendix	per layer and width of the spacer: 1	no	



Table	Table A.10. Section 3, Product Control					
1.1	Exceedances of the	Visual inspection	see product	Random sampling	yes	
	absolute limit values	and	description	plan (Table A.2)		
		measurements				

According to EN1279-6 A.2 or A.3, if a manufacturing process is such that an inspection is not applicable or physically possible, the inspection can either be modified or ignored if it is properly documented. This applies, for example, to the adhesion test between sealant and spacer when polysulfide is used as a sealant. Similarly, the insulating glass manufacturer may use test methods other than those specified in Tables A1 and A2; e.g. for the adhesion test of the spacer to the glass described in EN1279-6 Annex J or the adhesion test of the spacer to the sealant. Here, for example, either a simple pull-off test of the spacer from the glass, or a pull-off test of the spacer from a sealant bed can be carried out.

8. Other recommendations

For production in the insulating glass line, the following points must be checked. With the exception of the machine recommendations, this also applies mutatis mutandis to the manual production of insulating glass.

a. Washing machine:

Washing water quality by measuring conductivity, manufacturer's recommendation of the washing machine for fresh water and return flow

Glass quality, seaming, edge deletion, cutting quality

b. Cleanliness of the workplace:

Open adhesive surfaces of glass, spacers, primary and secondary sealants are sensitive to dust. In the applicator, dust can accumulate on rollers, transport rollers and on surfaces and form lumps, smears and dirt. Avoidance helps to ensure quality.

c. Application robots in the insulating glass line:

The applicator in the insulating glass line requires regular maintenance and adjustment, prescribed or recommended by the manufacturer. This maintenance also includes the following checks and tests to ensure proper functioning:

- Settings, article recipes
- Does the butyl temperature meet the specifications of the butyl manufacturer
- Is the amount of butyl applied constant over the length and the same amount on both sides of the spacer
- Cutting sample of the corner cut: the cut edge is parallel to the spine and enough spacer material with foil remains for a tight corner

If partially used rolls are repacked, care must be taken to carefully seal the poly bags / Mylar bags. It is best to store in drying cabinets with dried compressor air.



d. Gas press in insulated glass line / manual gas filling:

The following machine checks should be carried out regularly:

- Maintenance status
- Parallelism of the plates
- Function of the gas filling device

After pressing, the following tests are required:

- Visual inspection of the pressing, also for uniformity
- Optical test of acrylic adhesive adhesion
- Measurement of gas content

It is recommended to set the pressing time as long as possible without increasing the cycle time.

For the adaptation of the internal cavity pressure to air pressure conditions, if the altitude of the production site differs significantly from the altitude of the later installation site, the Helantec ISO Altimeter device is recommended, for example.

When manually filling the insulating glass, pay attention to the manufacturer's instructions and recommendations for the gas filling devices. Any punctures must be closed with barrier film, which can be provided by Edgetech. Further information is provided via the application service.

e. Sealing the start/end corner:

Where the start and end of the spacer come together, the barrier film is interrupted. This joint, which is usually located in a corner, must be closed again with a barrier film. This can be done with the same barrier film that we provide according to the spacer widths. We recommend using PIB/Tape Strips. This is a barrier film in which a butyl application is applied in the middle of the adhesive surface, which closes the seam from glass side to glass side. These strips are also available through Edgetech sales.

f. Sealing of insulated glass unit:

The spacer must be positioned on the glass pane in such a way that there is sufficient space for the outer sealant between the spacer back and the edge of the glass. The position of the spacer must be uniform to the edge of the glass at all edges of the glass, and the spacer must be applied perpendicular to the glass.

When manually sealing insulating glass with Super Spacer® spacers, care must be taken to ensure that the sealant is applied evenly and sufficiently. Especially when sealing with hotmelt butyl, care must be taken to ensure professional sealing, sufficient backing, especially in the corners, good pressing of the glass package with the spacer and an application of the sealant without cold spots, air bubbles, etc. Further information is provided via the application service.



g. Stacking of the finished insulating glass:

Stacking should be carried out on frame strips that are not too soft. When packing, care must be taken to ensure that the panes are not pressed together on one side and harden in this position.

h. Insulating glass production with manual spacer application:

For the application of the spacer in manual production, a so-called manufacturing manual is provided.

i. Insulating glass production of curved panes:

Special features of the spacer application in curved insulating glass panes must be observed. Experience in handling the spacer system and insulating glass is required here. We can provide initial assistance through application training on site.



Annex 1 Desiccant Activity Test Kit

Desiccant Activity Test

Note: For customers who cannot / do not want to carry out a measurement of the initial load in the spacer with the heating scale, there is an alternative to measuring desiccant activity using the moisture indication card. This method is not as accurate as the heating scale measurement, but it does a good indication of an existing adsorption capacity in the desiccant of the spacer.

The following instructions are designed to help you properly determine the activity of the desiccant in your Super Spacer®



Use one of the glass vials provided by Edgetech Europe GmbH.



Use one of the included indication cards approved by Edgetech Europe GmbH. Expose the indicator to the room air until the measuring fields turn pink.

(NOTE: The indicator cards are reusable.)





Place the indicator card in the glass vial so that the label faces outwards towards the viewer. This makes it easier to read the card later.



Take a sample piece of the Super Spacer® to be tested and cut it to a width of approx. 4 mm to fill the glass vial. *(Please do not remove the protective film from the side adhesive surfaces)*





Fill the glass vial with the spacer pieces to the top and seal it completely with the plastic stopper.

(IMPORTANT: For a good result, only FRESH spacers should be used and this should be filled into the glass vial immediately.)



If the 10% indicator turns blue within an hour as shown in the image, the spacer can be considered good.

If the 10% indicator does not discolor in time, the test should be repeated with spacer material after two layers of the roll to be used have been unwound and discarded. If the result is not positive again after this second test, you should contact your Edgetech Application Service or inform your production manager.



Annex 2 Determination of moisture loading using a Sartorius MA 150 or MA-160 moisture analyzer

DE QS 004 WI – Heizwaage MA 160 (190-15min)

Please follow the manufacturer's instructions for the maintenance and calibration of the heating balance. Only through regular servicing and proper calibration can safe and efficient operation be ensured.

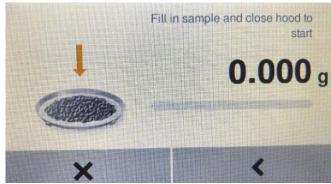
- 1. Required equipment and materials
- 10 15 cm laminated spacer sample
- Sartorius Moisture Analyzer MA 160
- Tweezers
- Cutter and/or Sample Cutter
- 2. The heating scale turns on automatically when the mains plug is plugged in. The manufacturer recommends a heating time of 30 minutes.
- 3. The scale is retrieved from standby mode by pressing the highlighted symbol.





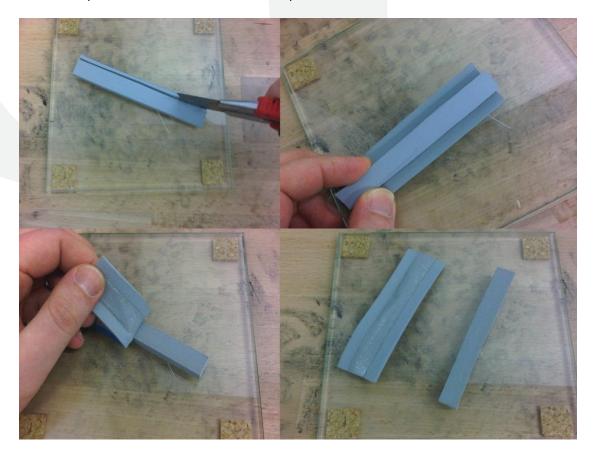
- 4. To start a measurement, press the start button
 The display now shows the steps required to prepare for the measurement.
- Open the lid
- If you haven't already done so, set the device to 190°C, standard drying and shutdown after time, 15 min.
- Place the weighing pan on and close the lid for taring
- Waiting for a standstill
- After tare, open the lid again







5. After the scale is ready for operation, the sample can now be prepared. Both acrylic sides of the test sample are cut off with a knife and the vapor barrier film is removed



6. The spacer is now placed on the heating scale for weight control. The target weight is 5 g +- 0.5 g. It can be shortened at the ends to achieve the target weight.





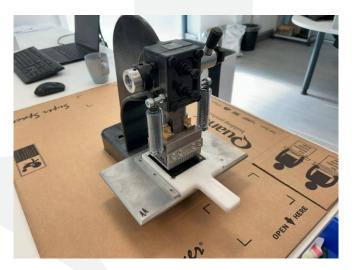
7. The weighed specimen should now be cut lengthwise with a knife so that approximately equal widths are obtained (for specimens with a width of 10 mm or more, the specimen is halved lengthwise, for specimens with a width of more than 16 mm, divided once in addition to the length, etc.) and then cut into widths of approx. 2 to 5 mm pieces. This can be done with a sharp knife or with a readymade pruning device.







8. The weighed sample can also be cut into uniform specimens with a sample punch. The sample punch and a detailed description of how to handle it can be obtained from the Edgetech Europe office.



9. The cut samples are distributed on the weighing tray, which is then repositioned on the heating scale with the tweezers.

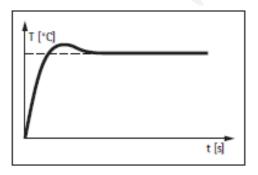




10. Lower the lid of the scale, which will start the measurement.



11. After reaching the set temperature of 190 degrees C, the scale now documents the weight loss of the sample.



12. The measurement now runs for 15 minutes and is then automatically stopped.

The result is displayed.

If the weight loss (= the proportion of moisture in weight) is less than or equal to 1.7%, then the product can be used without restrictions.

If the value is greater than 1.7%, then contact the Edgetech Application Service. The first measure in such a case is to unroll one layer from the roll with the spacer and repeat the measurement with a sample from this next layer.

- 13. The weighing pan is emptied. If no further measurements are taken, the device can be switched off.

 If further measurements are to be taken, the weighing pan is put back on, press Enter, wait for the display to stop, press Enter to set the tare weight of the tray again.
 - Proceed to point 4 of this guide



Annex 3 EN1279-6:2018 Annex J, illustrated description of the test procedure Adhesion of the secondary sealant to the spacer (preliminary, better description is in progress)

Adhesion test of sealant and spacer

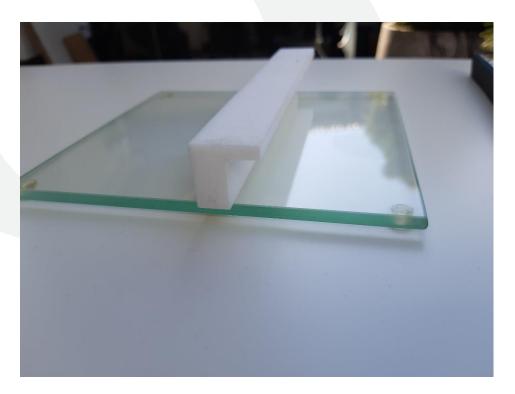
The spacer is a flexible, pre-formed spacer with an integrated desiccant.

Recommended equipment for the test:

- A normal, cleaned float glass pane
- A piece of spacer cut off from the roll
- A Teflon profile
- A putty knife to spread the sealant and remove the excess sealant
- A knife for cutting the spacer profile to length
- Sealant based on PU or silicone, or hotmelt butyl





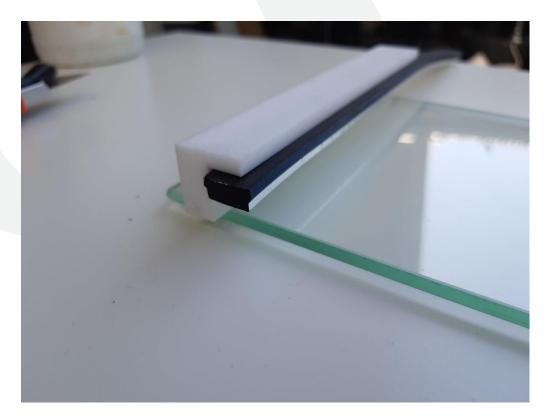


A plastic profile, preferably non-adhesive such as Teflon, nylon or similar as shown in the picture above, is placed on the glass pane.

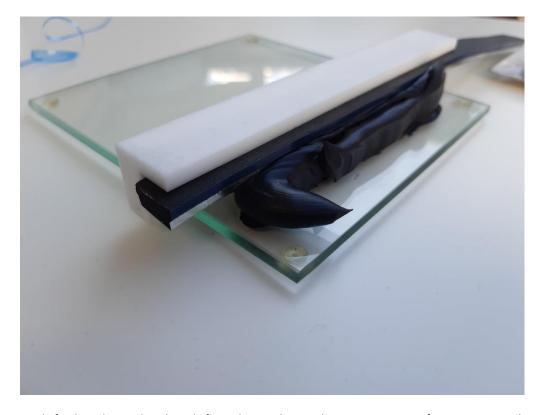


Take the spacer, cut it about 15 cm longer than the Teflon profile. Remove the protective film of the acrylic adhesive on the spacer on one side. With this side you glue the spacer, with the foam side to the narrow edge of the Teflon profile as shown.





Place the Teflon profile on the glass with the spacer as shown. The plastic profile can be fixed to the glass with a clamp.



Apply fresh sealant either directly from the nozzle into the arrangement or first onto a spatula or similar, and then insert it directly and without delay into the arrangement in the gap between the glass pane and the silver back of the spacer. Apply more sealant than is needed to fill the gap.





On the one hand, use the filler to press the sealant well between the spacer and the glass plate so that as few air bubbles as possible remain in the sealant, and remove any protruding sealant to the side of the spacer. This makes it possible to always have a consistent, replicable test of liability.



After 24 hours of curing the sealant, remove the Teflon profile from the spacer.





On the side where the spacer protrudes from the sealant, cut a few millimeters into the sealant without cutting into the spacer to produce a predetermined breaking point in the sealant.

Then pull the spacer away from the sealant vertically at about 90°.

If the spacer breaks off, pull on the other end of the spacer. Watch the spacer as it is pulled out of the sealant.

The test is passed under the following conditions (For sealants that must have sufficient adhesion to the spacer, e.g. polyurethane, silicone or hotmelt butyl):

- 1) If the spacer can be removed from the sealant and at least approx. 50% of the surface is covered with sealant residues (cohesive fracture pattern).
- 2) If the spacer breaks off when trying to pull it out of the sealant.
- 3) If the spacer barrier film remains bonded to the sealant, but the foam part comes loose and a visible foam residue in the adhesive remains on the barrier film.

If the spacer with the sealant can be removed from glass without leaving any residue, it can be assumed that the glass has not been sufficiently cleaned. Then the glass washing process must be examined (checking water, additives and machine) and the test must be repeated.



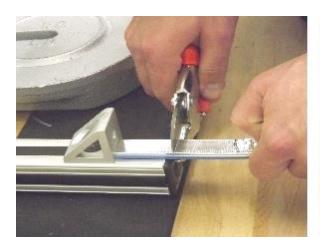
Annex 4 EN1279-6:2021 Annex J, illustrated description of the test procedure Adhesion of the spacer to glass

DE QS 005 WI - Glastest (All-In-One-Test)

Note: The tool to perform the test can be obtained from the Edgetech office.

Objective: The purpose of this work instruction is to provide a description of the glass test to test the adhesion, shear resistance and surface wetting of the acrylic adhesive, as well as the parallelism or geometry of the applied spacer.

- 1. Necessary materials
 - Two 4.5 cm and two 9.5 cm spacer pieces (28 cm total)
 - Two glass panes measuring 7.5 cm x 12.7 cm and 3 mm thick
 - Spacer Contract Aid
 - Glass Test Setup
 - Glass cleaners and wipes
- 2. Cleaning glass panes
- 3. Cutting the spacer pieces using the markings on the glass test setup





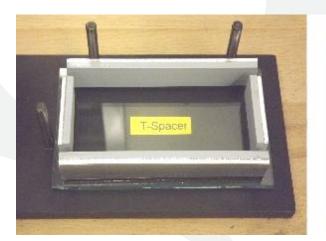
4. With the help of the spacer application aid, the spacer pieces are applied to the first glass pane with the vapour barrier facing outwards.





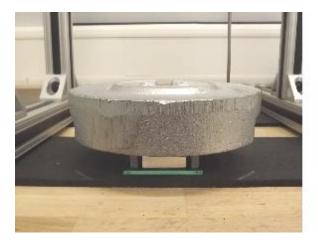


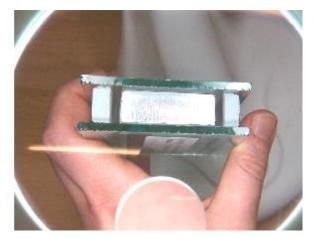
5. The first glass pane is now placed on the orientation rods and the second glass pane is placed on top.





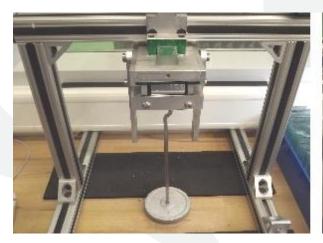
6. The 20 lb (approx. 9.07 kg) weight is placed on the sample disc for 30 seconds. It is important to make sure that the spacer has not been applied crookedly and that the acrylic adhesive shows good wetting on the glass surface (contact point becomes darker if well wetted). If the spacer is not applied vertically, check whether this is caused by too much inclination (antiparallelism) of the spacer shoulders.



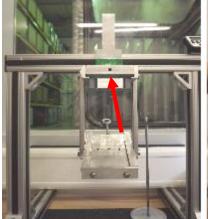


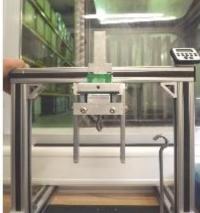


7. The glass test setup is assembled with the manufactured sample pane, as shown in the figure on the left and below.



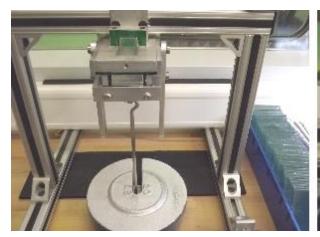








8. The weight is attached for 30 seconds, as shown below, to test the adhesion of the acrylic adhesive







9. This is followed by the shear test. The setup is shown in the illustrations below, with the weight for 30 seconds also attached.





10. The sample disc is labeled and packed in a bag for archiving (example of the sticker)





Annex 5 EN1279-6:2018 Annex E, illustrated description of the test procedure Hardness measurement of the spacer

Objective: It explains how to measure a sample correctly with the Shore-O dial gauge in order to obtain the most accurate value possible.

Performance: The operator takes an approx. 20 cm long sample piece of the spacer.

1. The test sample is placed under the test device with the foam side up and aligned in the middle.



For measurement, the apparatus is lowered onto the specimen by pressing the side lever until <u>the</u> <u>red line is just covered</u>. Due to the lowering, a manual force must not be exerted on the test specimen under any circumstances.







3. After 10 - 15 seconds, the result is read on the dial gauge. This measurement is carried out at a total of 3 different locations and the results are averaged. The set point is ≥57 shore0. The measured value is entered in the WPK documentation.



Annex 6 Picture Double-Reel Stand

Double Reel Stand

Equipment solutions

The Edgetech Double Reel Stand is designed to meet your specific glass shop needs including:

- Two reel stations with central support require minimal floor space
- · Sealed enclosure for temporary desiccant protection
- · Spacer reel supported on hardened steel pins
- · Reel slot protection to minimize moisture exposure
- · See-through cover to monitor spacer levels
- Only one liner stripper is necessary







Annex 7 EN1279-4:2018 or EN1279-6 Annex C Fogging Test Report

Nachweis

Überprüfung des Foggingverhaltens von Mehrscheiben-Isolierglas

Prüfbericht Nr. 17-000862-PR01 (PB-H01-09-de-01)



Auftraggeber Edgetech Europe GmbH

Gladbacher Str. 23 52525 Heinsberg Deutschland

Produkt	Mehrscheiben-Isolierglas
Bezeichnung	Super Spacer T-Spacer Premium
Außenmaß (B x H) in mm	352 x 502
Aufbau in mm	4/12/4
Abstandhalter	Basis Silikonschaum, Super Spacer T-Spacer Premium, Fa. Edgetech
Bauteil im SZR	-/-
Besonderheiten	-/-

Grundlagen

EN 1279-6; 2002-07; Glas im Bauwesen, Mehrscheiben-Isolierglas, Teil 6: Produktionskontrolle und periodische Prüfungen, Anhang C, Foggingtest

Verwendungshinweise

Dieser Prüfbericht dient zum Nachweis des Foggingverhaltens von Einbauten im Scheibenzwischenraum von Mehrscheiben-Isolierglas

Gültigkeit

Die genannten Daten und Ergebnisse beziehen sich ausschließlich auf den geprüften und beschriebenen Probekörper.

Die Prüfung des Foggingverhaltens ermöglicht keine Aussage über weitere leistungsund qualitätsbestimmenden Eigenschaften.

Das Mehrscheiben-Isolierglas-System mit dem Abstandhalter:

Super Spacer T-Spacer Premium

zeigt kein Fogging bei der Prüfung nach DIN EN 1279-6, Anhang C

Veröffentlichungshinweise

Es gilt das ift-Merkblatt "Bedingungen und Hinweise zur Benutzung von ift-Prüfdokumentationen".

Das Deckblatt kann als Kurzfassung verwendet werden.

Inhalt

Der Nachweis umfasst insgesamt 5 Seiten

- 1 Gegenstand
- 2 Durchführung
- 3 Einzelergebnisse

ift Rosenheim 17.07.2017

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Annex 8 EN1279-4:2018 or EN1279-6 Annex C Fogging Test Report

The test report ift 18-001431-PR02 (PB-H01-09-de-01) also contains a report on the passed fogging test according to ift guideline VE-07/3 2018-01 at elevated temperature.