



# ADFAST

CONSTRUCTION MANUAL



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The tightness of the building envelope is one of the least costly factors in a construction project, but it can lead to high costs if the work is not done well. This can result in infiltration of water, air, or insects. Invisible mold at first can set in and create significant health problems.

For more than 30 years, Adfast has been offering a range of high quality sealants, adhesives, and polyurethane foams that meet the most stringent requirements in terms of performance. Adfast is concerned about the environment and the health of the users, so we put emphasis on products that have low toxicity and contain the lowest VOC levels possible according to industry standards. Many of our products are UL / Eco logo certified (UL2761 and UL2762). With an experienced technical team and a state-of-the-art laboratory, Adfast will be able to respond effectively to the requirements of the world of construction. This manual is intended as a reference tool to facilitate the work of architects, engineers, and contractors for construction or repair work in the industrial, commercial, institutional, or residential sector.

To ensure the success of your project, you will find in this manual informative for the most important concepts related to the building envelope:

- How to choose the right product
- Understand and incorporate the right joint design
- Verification of adhesion via our laboratory or on site
- Surface preparation and application procedures
- Document and ensure quality monitoring throughout the project

We will also review the main materials used in construction to determine the correct procedure to follow and the correct type of product to choose.

One of the many products used in waterproofing the building envelope is the silicone sealant. We will see why this product is gaining popularity versus organic sealants such as polyurethanes. Silicones are the sealants that provide the greatest durability among all the technologies available on the market. Adfast also offers structural silicones for two- or four-sided curtain walls.

Adfast offers a full range of insulating polyurethane foams for perimeter doors and windows that can be used in temperatures as low as  $-25^{\circ}\text{C}$  /  $-13^{\circ}\text{F}$ . These low-expansion foams remain flexible and have one of the highest percentages of closed cells on the market to equip your projects with high energy efficiency.

Adfast supplies other related products such as adhesives, hybrid sealants, latex sealants, and accessories that contribute to the successful completion of your work.

Our mission is to provide environmentally friendly products, participate in the sustainable development of the housing stock with high quality products and offer technical support to construction professionals.

**CONSTRUCTION  
PRODUCT RANGE**



# ADSEAL SILICONE SEALANT



**SEALANT · WATERPROOFING & RESTORATION INSTITUTE**

Issued to: ADFAST Corporation  
Product: Adseal DWS 4580

C719: Pass  Ext:+50% Comp:-50%

Substrate: Unprimed Glass, Unprimed Mortar and Unprimed Aluminum

Validation Date: 6/30/20 – 6/29/25

No. 4580-202063023 Copyright © 2020

**SEALANT VALIDATION**  
www.swrionline.org

## ADSEAL DWS 4580 SERIES (NEUTRAL CURE)

- Our most popular product. Ideal for movement and water proofing joints
- Meets ASTM C920, S, NS, class 50, use NT, M,G,A,O
- Meets ASTM C1184, for two sided structural glazing
- Can be used on the following substrates: aluminum, glass, masonry, some plastics, painted or non-painted metals and other substrates
- Compatible with most sealed glass units
- Excellent UV resistance
- Non-corrosive
- Low VOC, low odor
- Outdoor and indoor use
- Wide variety of colors
- Available packaging: 304ml cartridge and 400ml or 600ml sausage

### STANDARD COLORS

4581	4582	4585	458-92	458-34	458-62	458-11
4584	458-15	458-13	458-32	458-41	458-33	458-17
458-46	458-26	458-63	458-70	458-19	458-81	4587
458-47	458-21	458-23	458-37	458-24	458-57	458-36
458-54	458-45	4588	4589	458-67	458-39	458-38
458-30	458-20	458-48	458-44	458-22	458-75	458-84
4583						

**300+ available colors, including 13 metallics. View to [www.adfastcorp.com](http://www.adfastcorp.com)**

This document is for reference only and should not be used as a color matching tool. Please contact your local representative to obtain a sample color chart.

# ADSEAL SILICONE SEALANT



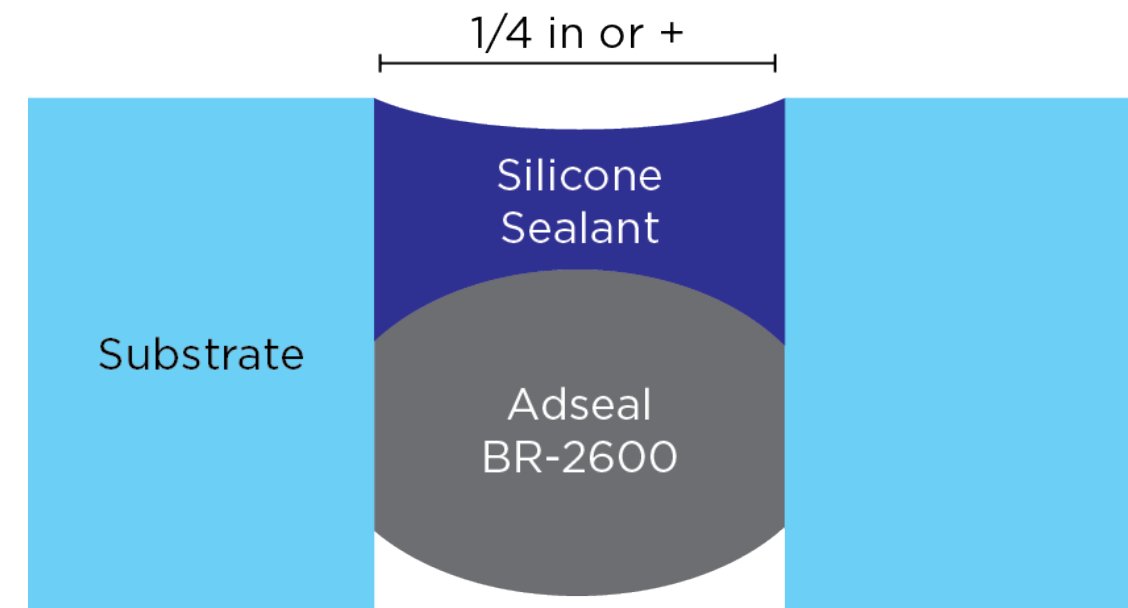
## ADSEAL LM 4600 SERIES (NEUTRAL CURE)

- Expansion joint sealant
- Meets ASTM C920, S, NS, class 100/50, use NT, M, G, A, O
- Meets ASTM C1382, EIFS (Exterior Insulation and Finish Systems)
- Excellent adhesion on masonry, anodized aluminum, painted metals, some plastics and glass
- Outdoor and indoor use
- Excellent UV resistance
- Non-corrosive
- Low VOC
- Wide variety of colors
- Available packaging: 304ml cartridge and 600ml sausage

**300+ available colors, including 13 metallics.**  
**View to [www.adfastcorp.com](http://www.adfastcorp.com)**

**Standard Colors: REFERENCE ADSEAL DWS 4580 SERIES page 3.**

## Expansion Joint



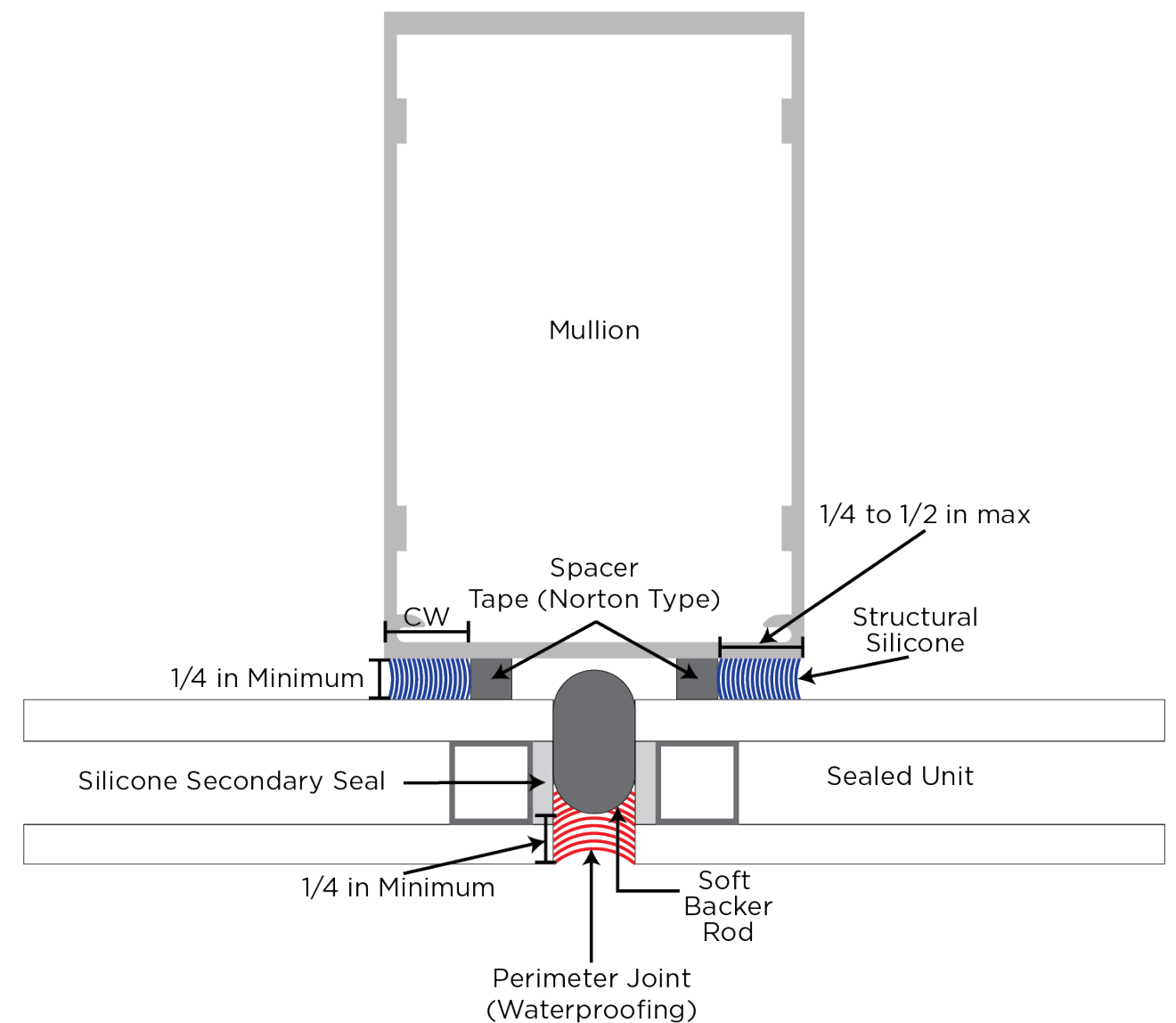
# ADSEAL SILICONE SEALANT



## ADSEAL STRUCTURAL 4940 SERIES (NEUTRAL CURE)

- Structural joints for 2 sided or 4 sided curtain walls and architectural panels
- Meets ASTM C920, S, NS, class 50, use NT, G,A,O
- Meets ASTM C1184
- Excellent adhesion on anodized aluminum and glass
- Outdoor and indoor use
- Excellent UV resistance
- Non-corrosive
- Low VOC, low odor
- Available colors : Black (4943), Anodized aluminum (4948). Special colors upon request
- Available packaging: 304ml cartridge and 600ml sausage

### CURTAIN WALL



# ADSEAL SILICONE SEALANT



## ADSEAL PRODUCTION 4550 SERIES (NEUTRAL CURE)

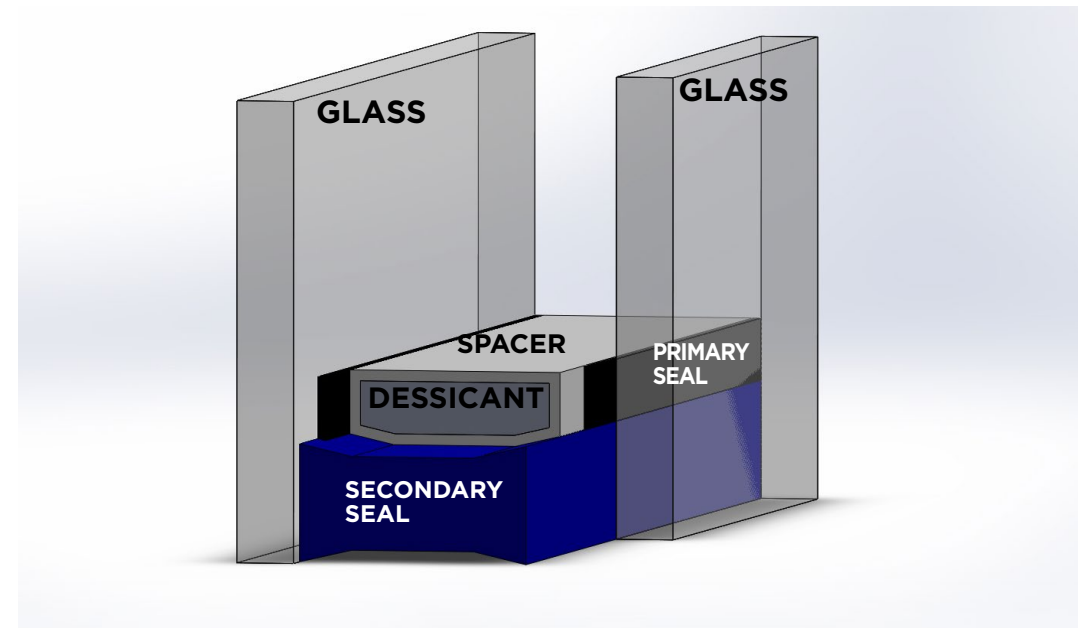


- Used by door and window industries for more than 25 years
- Meets ASTM C920, S, NS, class 50, use NT, M,G,A,O
- Meets ASTM E84 / UL723 (FSI : 0 and SDI : 20)
- Meets AAMA 802 and 805
- Excellent adhesion on a wide variety of substrates
- Door and window manufacturing, curtain wall
- Cold rooms, clean rooms and laboratories
- Mirror bonding
- Ventilation
- Excellent UV resistance
- Non-corrosive
- Low VOC, low odor
- Outdoor and indoor use
- Available colors: Translucent (4551), White (4552), Black (4553), Anodized aluminum (4558) and Aluminum (4559). Special colors upon request
- Available packaging: 304ml cartridge, 400ml or 600ml sausage, 5 gallons/18.9 L pail, 53 gallons/200 L drums

## ADSEAL IG 4500 SERIES (NEUTRAL CURE)



- Meets AAMA 802 et 805
- Ultra low migration
- Non-corrosive
- Compatible with most sealed units
- PVC, aluminum, hybrid, fiberglass, wood windows manufacturing
- Not paintable





# ADSEAL SILICONE SEALANT



## ADSEAL KITCHEN BATHROOM 4800 SERIES (ACETOXY)

- Mildew resistant
- Very good adhesion on many substrates
- For kitchen, shower and bath
- Glass partition
- Excellent UV resistance
- Does not yellow
- Outdoor and indoor use
- Low VOC
- Available colors: Translucent (4801), White (4802), Black (4803) and Aluminum (4809). Special colors upon request
- Available packaging: 304ml cartridge and 400ml or 600ml sausage
- Meets ASTM C920, S, NS, class 25, use NT, G,A,O



## ADSEAL HIGH TEMPERATURE 4706-3 (ACETOXY)

- High-temperature resistant ( Continuous 260°C [500°F]/Intermittent 315°C [600°F] )
- Meets ASTM C920, S, NS
- Used for sealing chimneys and fireplaces
- Excellent UV resistance
- Outdoor and indoor use
- Low VOC
- Color : Red
- Available packaging: 304ml cartridge

# ADSEAL HYBRID SEALANT



## ADSEAL DOORS AND WINDOWS, SIDING PAINTABLE 1940 SERIES

- Excellent adhesion on most siding substrates
- Meets ASTM C920, S, NS, class 50, use NT, M,G,A,O
- Very good elongation
- Easy application at low temperature
- Solvent free
- Isocyanate free
- Phthalate free
- Low VOC, low odor
- Excellent UV resistance
- Outdoor use
- Wide variety of colors

### STANDARD COLORS

1941	1942	1943	1945	194-13	194-14	194-15
194-16	194-17	194-18	194-19	194-20	194-21	194-22
194-23	194-24	194-25	194-26	194-27	194-28	194-29
194-30	194-31	194-32	194-33	194-36	194-37	194-38
194-39	194-46	194-47	194-52	194-55	194-57	194-63
194-66	194-88					

**47 available colors, view to [www.adfastcorp.com](http://www.adfastcorp.com).**

This document is for reference only and should not be used as a color matching tool. Please contact your local representative to obtain a sample color chart.



## ADSEAL HYBRID SEALANT



### ADSEAL GUTTER 1602

- Adheres to most known gutter brands
- Can be applied on wet surfaces
- Excellent UV resistance
- Solvent free
- Isocyanate free
- Phthalate free
- Low VOC, low odor
- Outdoor use
- Available color : White
- Available packaging : 295 ml cartridge



## LATEX ACRYLIC SEALANT



### ADSEAL CRACK FILLER 1070 SERIES

- Paintable
- Can be sanded
- Color: White (1072)
- Adhesion on gypsum, wood, laminated counter tops and ceramic
- Indoor use only
- Available packaging: 304ml cartridge



### ADSEAL DOORS AND WINDOWS 1090 SERIES

- Paintable
- Meets ASTM C834
- Flexible (siliconized)
- Adhesion to gypsum, wood, laminated counter tops and ceramic
- Indoor use only
- Available colors: Clear (1091) and White (1092)
- Available packaging : 304ml cartridge

# LOW EXPANSION POLYURETHANE INSULATION FOAM



## ADFOAM POLAR DOORS AND WINDOWS 1825

- Insulation of door and window perimeters
- Meets CAN/ULC S102 and ASTM E84
- Applicable up to -13°F (-25C)
- 70% to 80% closed cells
- Color: Champagne
- Available packaging: 870ml cans



## ADFOAM DOORS AND WINDOWS 1885-2

- Insulation of door and window perimeters
- Meets CAN/ULC S102 and ASTM E84
- Applicable up to 23°F (-5C)
- 70% to 80% closed cells
- Color: Blue
- Available packaging: 750ml cans



## ADFOAM PRO DOORS AND WINDOWS 1875

- Insulation of door and window perimeters
- Meets CAN/ULC S102 and ASTM E84
- Applicable up to 23°F (-5C)
- 70% to 80% closed cells
- Color: Champagne
- Available packaging: 600ml and 750ml cans

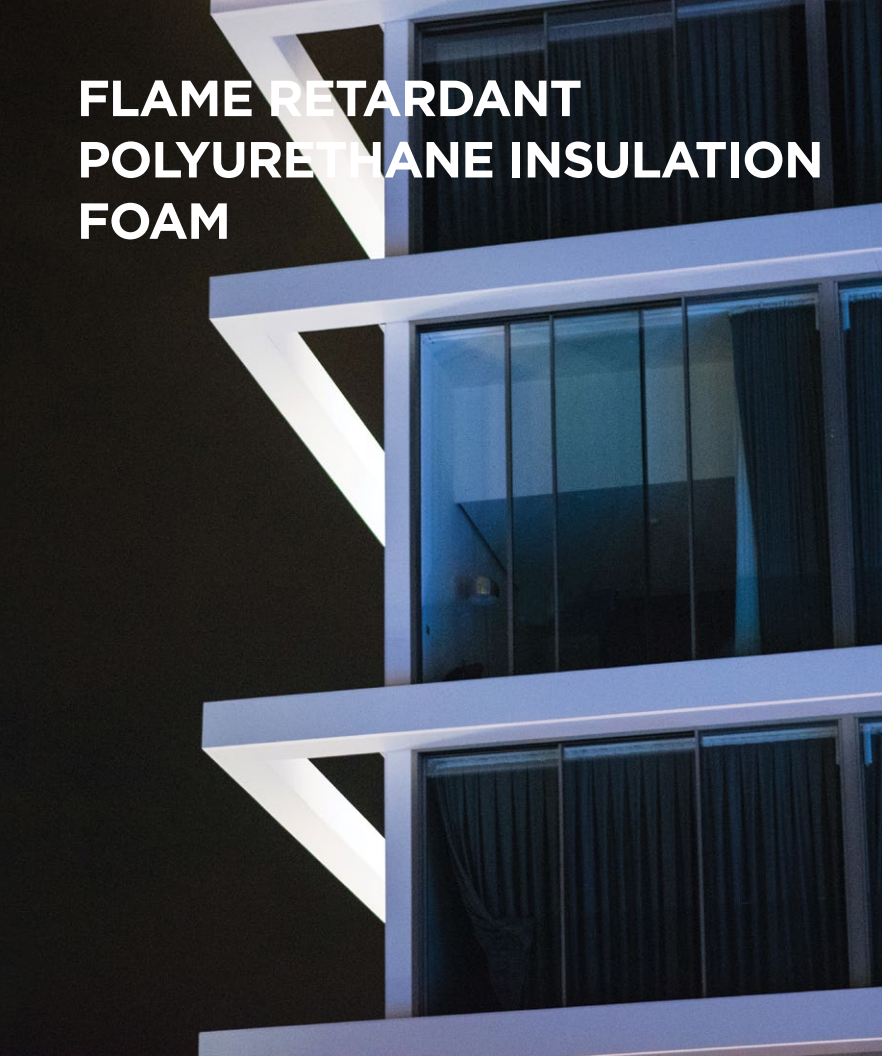
# LOW EXPANSION FLEXIBLE POLYURETHANE INSULATION FOAM



## ADFOAM FLEX 1865

- Elongation at break : 36% - 38%
- Very low V.O.C. : 2 g/L
- Compression Strength : 9.4 psi (10%)
- Tack free time : 4 - 8 minutes (diameter of 1 cm)
- Cutting time : 20 - 45 minutes (diameter of 1 cm)
- Application temperature : -2 ° C to 30 ° C
- Temperature resistance : -40 ° C to 80 ° C
- Yield : up to 45 liters depending on temperature and humidity
- Color : white

## FLAME RETARDANT POLYURETHANE INSULATION FOAM



### ADFOAM FIREBLOCK 1860

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- Delays the spread of the flame up to 4 hours
- Very low V.O.C. : 2 g/L
- Compression strength : 4.35 psi (10%)
- Tack free time : 4 - 10 minutes (1cm diameter)
- Cutting time : 30 - 45 minutes (diameter of 1 cm)
- Application temperature : 5 ° C to 30 ° C
- Temperature resistance : -40 ° C to 90 ° C
- Yield : up to 45 liters depending on temperature and humidity
- Color : red

## CONSTRUCTION ADHESIVE

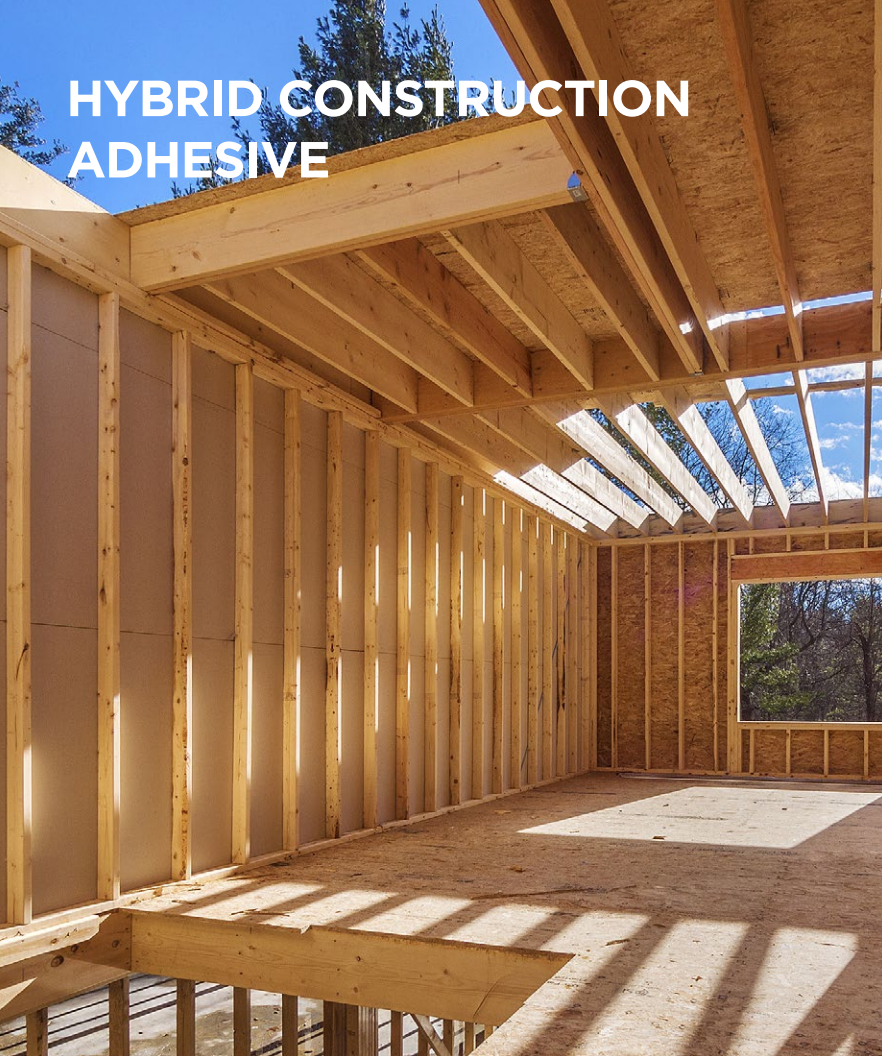


### ADFOAM BOND PLUS 1851

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- Mono-component
- Quick-drying, easy to use
- Economical
- Ideal for bonding rigid insulation panel (EPS or XPS)
- Can be used for indoor and outdoor bonding
- Does not form thermal bridges

## HYBRID CONSTRUCTION ADHESIVE



## POLYURÉTHANE CONSTRUCTION ADHESIVE



### ADBOND EXTREME 5692

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- Isocyanate, phthalate and solvent free
- Good adhesion to wood, rigid insulating panels, glass, metals and masonry.
- Paintable
- Water resistant
- No shrinkage
- Low VOC, low odor
- Color : Gray
- Available packaging: 295ml cartridge and 600ml sausage

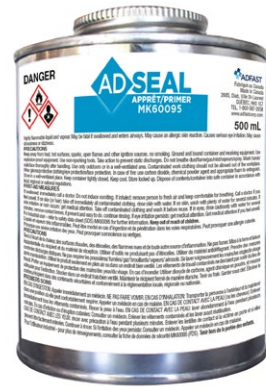


### ADBOND EX 5690

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- Adhesion on wood, rigid insulation boards (EPS, XPS, PIR et PU), glass, metals, masonry
- Interior and exterior
- Paintable
- Very good water resistance
- Low odor
- Color : tan
- Available packaging : 295 ml cartridge and 600ml sausage

## RELATED PRODUCTS



### ADSEAL PRIMER MK60095

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- Primer for more difficult to adhere surfaces
- Compatible with Adseal hybrid and silicone sealants
- Brush applied
- Good penetration to porous surfaces
- Fast evaporation
- Color : Clear
- Available packaging : 500ml can



### ADSEAL CLEANER 6003

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- 99.5% IPA
- Fast evaporation
- Leaves no greasy residue
- Color : Clear
- Available packaging : 470 mL, 4 liters, 10 liters, 18.9 liters and 200 liters



### ADFOAM CLEAN/500

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- Aerosol cleaner for polyurethane foam
- Available Packaging: 500ml can
- Color: Water clear





### ADSEAL BACKER ROD SR-2600

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- Soft, non gassing backer rod
- Compressible from 25% to 50%
- Compatible with ADSEAL Hybrid & Silicone sealants
- Available size : 3/8, 5/8, 7/8, 1-1/8, 1-1/2, 2 and 3 inches
- Color: Gray



### ADSEAL SETTING BLOCK

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- Pvc setting block for glass sealed units
- Size; 1-1/8 x 4 inches
- Thickness : 1/16, 1/8, 3/16, 1/4 and 3/8 inch
- Water drainage groove on: 3/16, 1/4 and 3/8 inches thickness
- Will not stain ADSEAL silicone when use in horizontal 2 sided or 4 sided silicone glazed curtain walls
- No oil migration compared to neoprene setting blocks
- Durometer: 83-85 (shore A)
- Color : Black

# ACCESSORIES

## ADSEAL TOOLING KIT



- Set of 7 pine sticks for the tooling of seals
- 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1 inch

Angle #1: 10mm angle (25/6")

Angle #1: 10mm angle (25/6")



Angle #2: 14mm angle (35/64")

Angle #3: 90 degrés

- BLUE SHAPING TOOL 4 angles

## COX AND POWERGUN CAULKING GUNS

- Manual 300ml cartridge



Power gun AP2001



CoxChilton 41004

- Manual 400ml and 600ml sausage



Adseal 600MG (600ml)



Adseal 400MG (400ml)

- Pneumatic 300ml cartridge /sausage 400ml and 600ml



Tyne 61001(300ml cartridge)



Trent 61006-20 (sausage 600ml)  
Trent 61006-400 (sausage 400ml)

## ADFOAM POLYURETHANE FOAM APPLICATORS



Adfoam Gun II



Adfoam Nozzle II



Adfoam / Gun Long

# ACCESSORIES

## CONES AND NOZZLES

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Nozzle/sausage



2N1007



2N1006



935-4 (45°)



Nozzle Kit / BJ  
(3 nozzles, 3 elbows and 1 sausage adaptor included)



D04 (Nozzle 7")



Adseal / 360° Nozzle

## HEAD OFFICE, LABORATORY AND PRODUCTION

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Order : servicein@adfastcorp.com



## RESEARCH AND DEVELOPMENT



Adfast invests a lot of time and money in finding new products that are more environmentally conscious and healthier for users.

Our team of chemists and chemical engineers work tirelessly on the development of new products to reduce the ecological footprint on the environment. In order to protect the health of our employees and increase our efficiency, we regularly review all our production processes.

For the development of new products we have laboratory equipment for small scale production that allows us to eliminate a lot of waste. Once the new product is made in the laboratory, we can transfer it to production on a larger scale for commercialization.

Adfast has the laboratory equipment to carry out tests according to the North American standards ASTM (American Society for Testing and Materials) necessary for the drafting of the most complete data sheets possible.



## QUALITY ASSURANCE



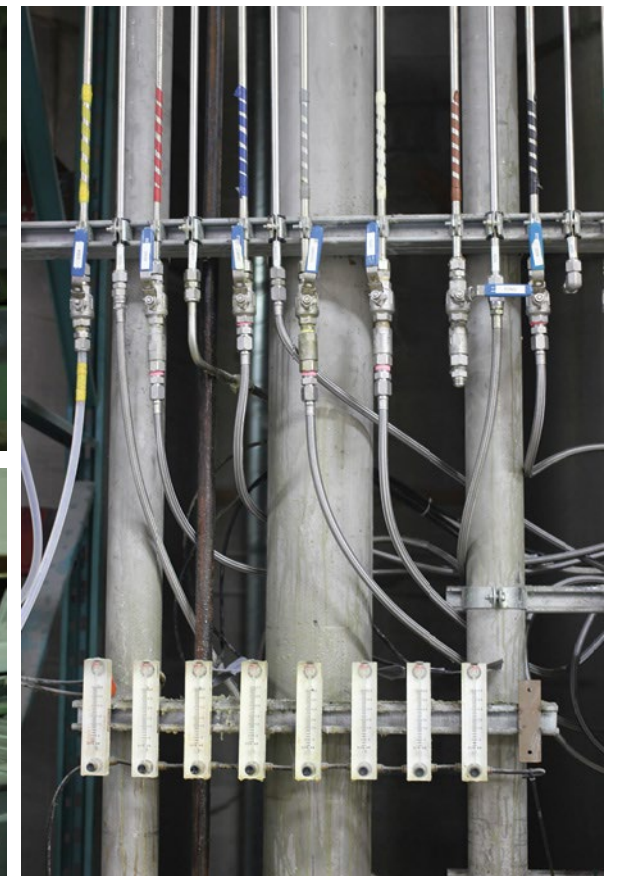
## MANUFACTURING PROCESSES



At Adfast, the quality of our products is paramount. Our quality management system adopts an ISO 9001 certified process improvement approach. Adfast policy is to identify and exceed the expectations of our customers by providing the best assembly technologies and faultless technical support. Thanks to the involvement of all our employees, our continuous improvement program enables us to be a better supplier for our clients, more profitable for our shareholders, and a better employer.

Each production batch is kept in quarantine in order to carry out the necessary quality tests before releasing the products

The production of our sealants, adhesives, and insulating polyurethane foams are done in batches that are completely automated which ensures reliability in the quality of products. The raw materials are on scales and pumped directly into mixing vessels. Subsequently the automated packaging is done in the different formats required.





With regard to the wide choice of colors of our sealants, Adfast has equipment that allows the production in small quantities. This equipment allows us to develop and produce custom colors in a very short time frame.

## TECHNICAL SUPPORT



With a team of experienced technical representatives, we will support you from the beginning to the end of your projects. Whether for lab or field tests, the Adfast team will meet your needs.

## SEALANTS

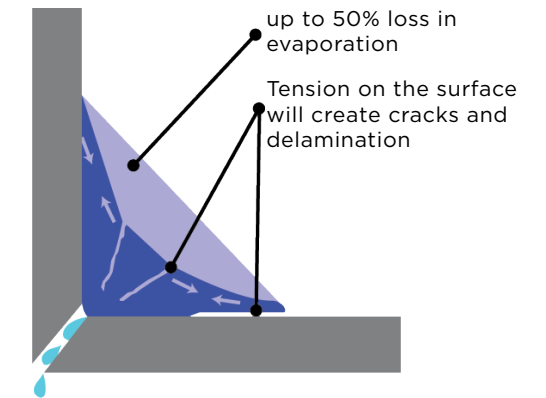
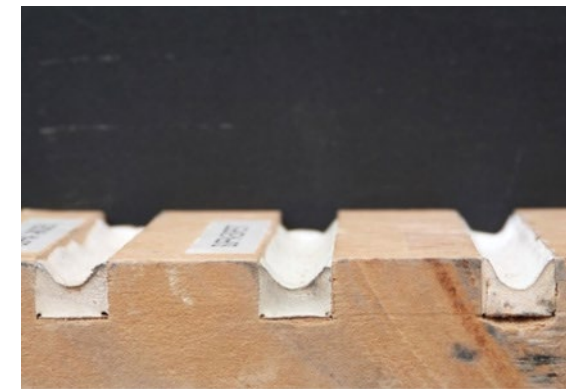
The role of a sealant is to prevent the infiltration of water, air, or insects inside a building. It is an integral part of the building envelope and contributes to its aesthetic appearance.

### FAMILIES OF SEALANTS

#### DRYING BY EVAPORATION OF SOLVENT OR WATER

- Thermoplastic (solvent based)
- Butyl (solvent based)
- Latex Acrylic (water based)

These sealants are subject to a greater or lesser volume loss depending on the percentage of solvent contained in each formulation. This results in a risk of delamination when shrinking as shown in the photos below.



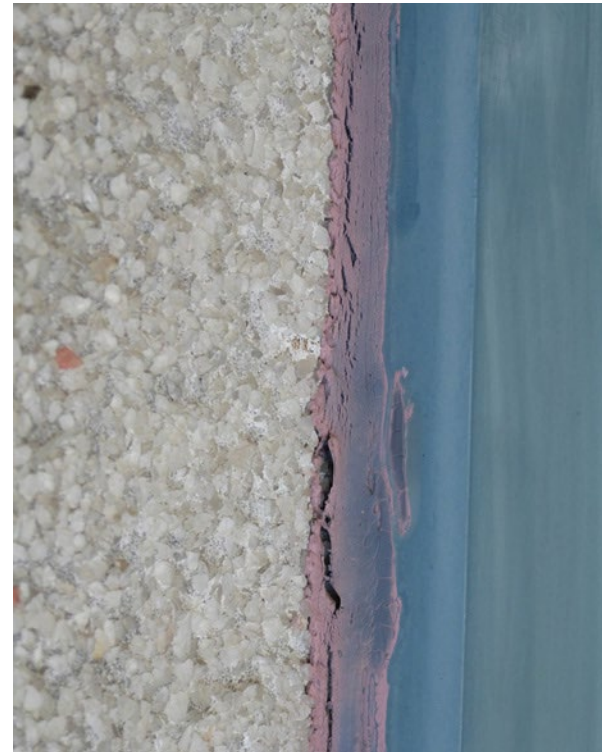
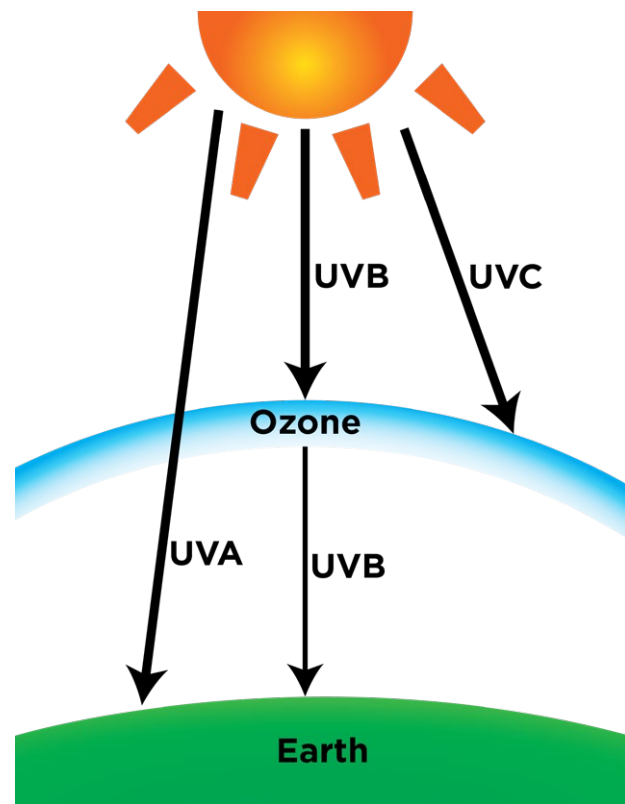
Thermoplastic sealants contain a lot of solvent (up to 50%). These sealants do not meet any requirements in terms of VOC. This phenomenon can also cause delamination and a risk of water infiltration.

Butyl sealants also contain solvent but less (5-10%). They are very messy and not always compatible with sealed units. Increasingly, window and curtain wall manufacturers are recommending a neutral vulcanizing silicone sealant for sealing corner plugs, other internal components that will be in contact with sealed units and for back bedding application.

#### DRYING BY MOISTURE

- Silicone
- Polyurethane
- Hybrid: MS (modified silane polymer) or STPE (silane terminated polyether)

Of all products with moisture drying, silicone is by far the most efficient and durable. Due to its inorganic composition, it is more resistant to UV rays than organic sealants such as polyurethane.



Silicone can be applied in cold weather (up to -40°C F for some formulations) and it does not remain tacky to the touch unlike polyurethane (ASTM C679). This causes an accumulation of dust that will adhere to the sealants, especially in new construction site. The color will be altered. For example, the Adseal Silicone Doors and Windows, 4580 Series Coatings becomes tack free after only 25 minutes.

Polyurethanes contain isocyanate, a toxic raw material. Multi-component polyurethanes are highly polluting products. It requires large amounts of solvent for cleaning tools and

Neutral curing silicone	3 hours maximum
Polyurethane	Can go up to 3 days

containers. In addition, they cause releases of toxic materials into the environment. They are less and less used.

However, silicone cannot be painted. If the sealant is to be painted then a hybrid sealant should be used. This may be the case when a wood siding is installed and the owner will want to repaint it in a few years. However, keep in mind that the paint may crack on the sealant because it is not as flexible and will not follow the movement of the sealant. Adfast recommends replacing the caulking after the siding is painted.

## ADSEAL SILICONES (NOT PAINTABLE)

Silicones are divided into two families :

### ACETOXY SILICONE (VINEGAR SMELL):

This family of silicone is used for kitchens, bathroom and glass partition. Our Adseal Kitchen Bathroom Series 4800 contains a fungicide that helps reduce the growth of mold. V.O.C. content is very low.

### NEUTRAL CURE SILICONE (LOW ODOR):

This silicone family is used in the vast majority of construction applications since it adheres to a wide variety of materials (see table below).

MATERIALS	ADHESION
Glass	5
Anodized Aluminum	5
Painted Aluminum *	4
Stainless Steel	4
Galvanized Steel	4
Unpainted Metals	4
Painted Metals *	4
Rigid PVC	5
Flexible PVC **	3
ABS **	3
Masonry (Including fiber-cement) **	5
Stone (Including granit, Marbre) **	4
Wood	5
Fiberglass	5
Acrylic coating **	3
Composites *	4
Polyethylene	1

5: Excellent

1: Poor

\* Adhesion test should be required

\*\*Adseal Primer MK60095 may be required. Must be tested

Neutral silicones are low in C.O.V. and have the longest life of any sealants on the market. Some grades are used as 2 or 4 sided curtain wall structural adhesive.

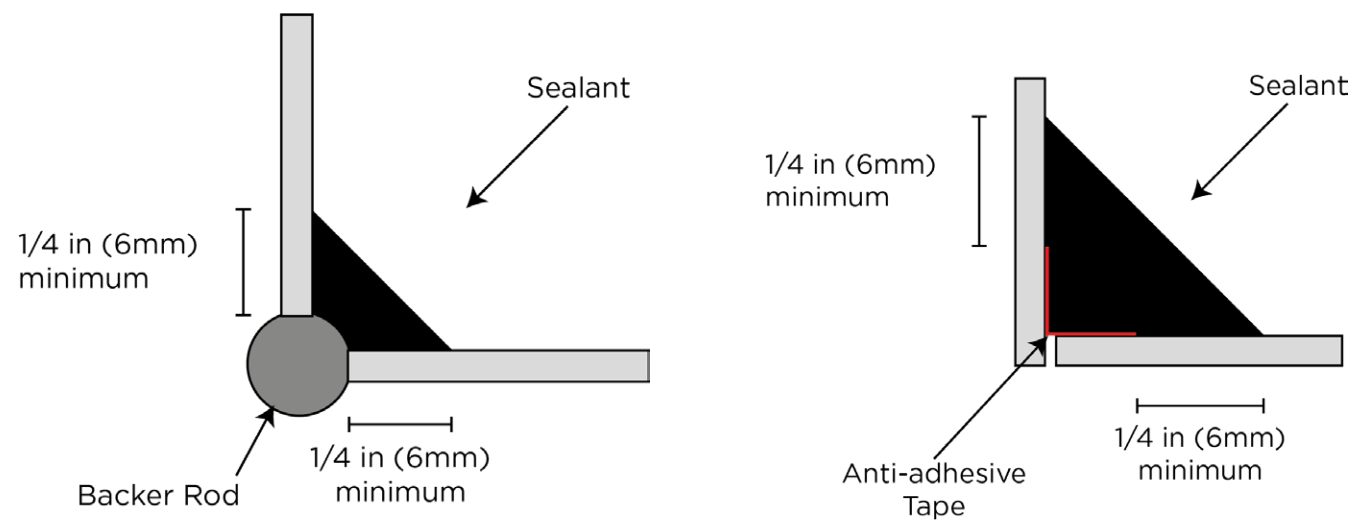
Neutral silicones are divided into 2 subcategories :

STRUCTURAL JOINT	PERIMETER JOINT
Adseal Structural 4940 series	Adseal DWS 4580 series
	Adseal Production 4550 series
	Adseal LM 4600
	Adseal FC 4570

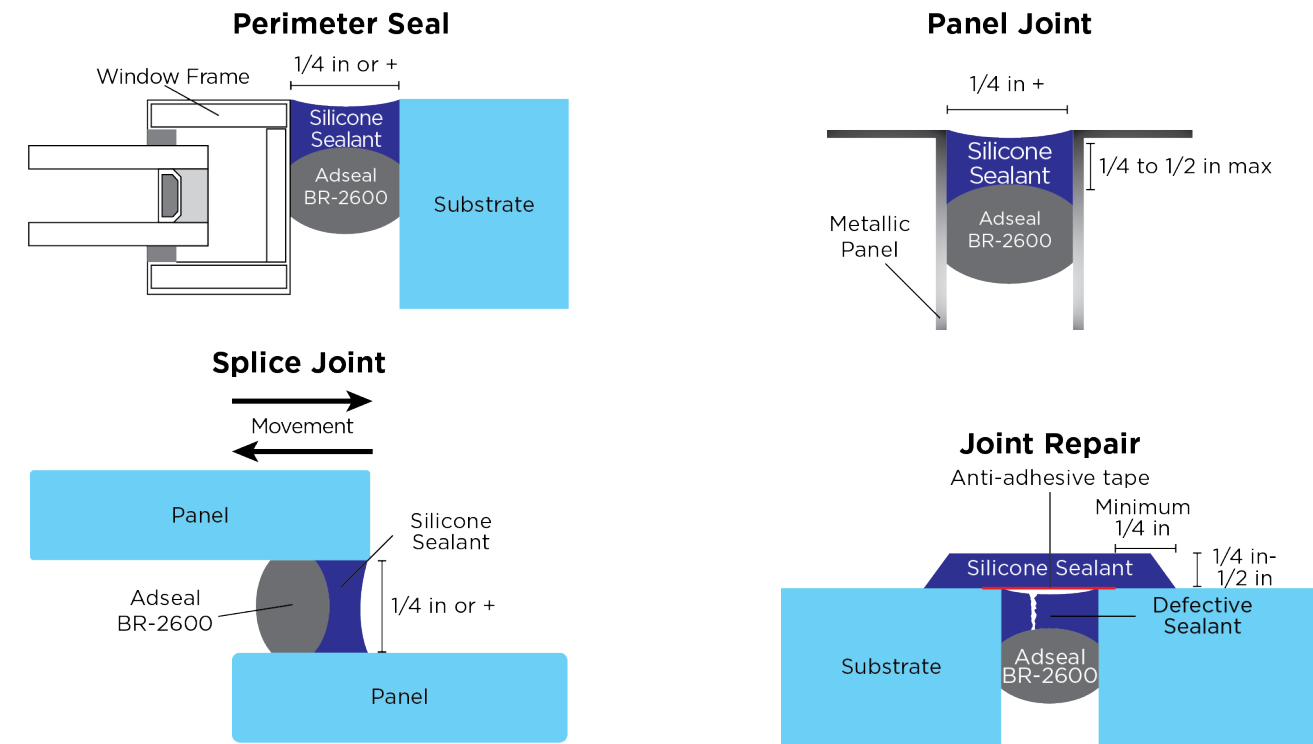
## JOINTS DESIGN

There are 3 types of joints: weatherproof, movement and structural Joints:

### WEATHERPROOF JOINT:

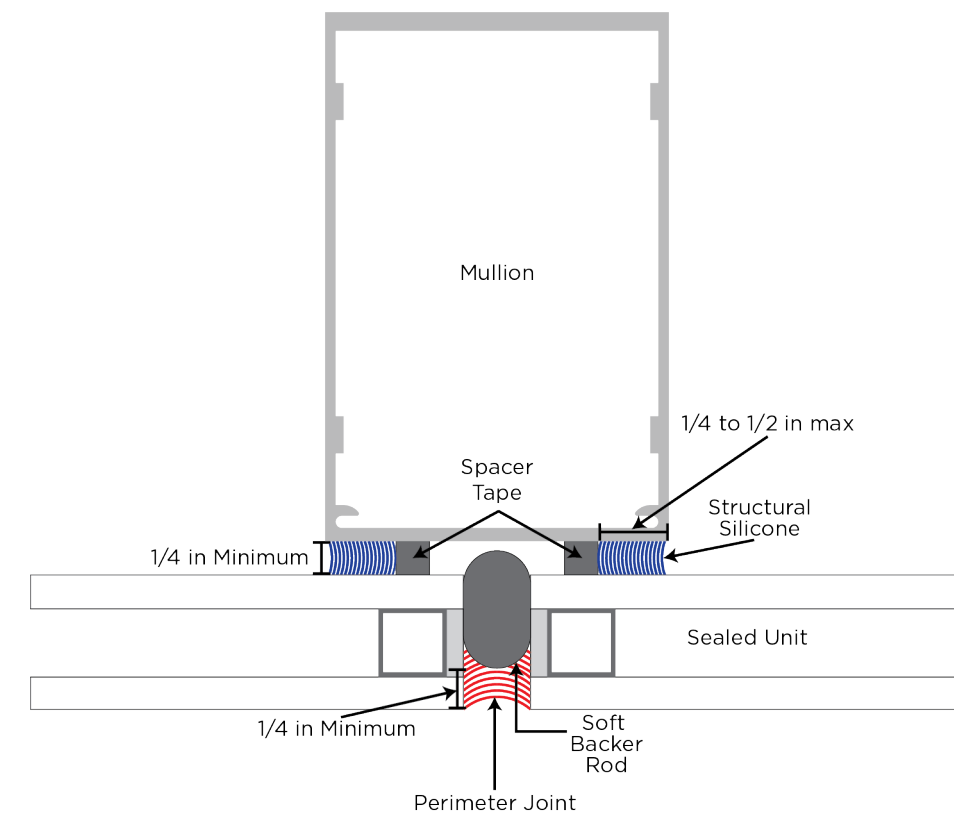


### MOVEMENT JOINTS:



**N.B.:** In the case where it is impossible to apply a backer rod then it is necessary to apply an anti-adhesive tape in order to prevent the adhesion on 3 points and thus to allow the joint an optimum movement.

### STRUCTURAL JOINTS (BLUE):





# APPLICATION PROCEDURE FOR SEALANTS MOVEMENT AND WATERPROOFING JOINTS

## 1. REPAIR WORK :

### 1.1 For porous surfaces

- Grind to completely remove the old sealant and any trace of surface contamination.
- Clean with solvent ADSEAL CLEANER 6003. It is important to wait approximately 20 minutes in order to allow the solvent to evaporate completely. Use the two-cloth method of cleaning with the first cloth moistened with cleaner and then wiping with the second clean, dry cloth before the solvent is evaporated. Change cloths regularly to avoid accumulation of dirt. Avoid soaking a soiled cloth in the clean solvent to avoid contaminating it. Choose white rags that do not keep dust and do not leave lint on substrates. Ensure that all surfaces that will be in contact with the sealant are thoroughly cleaned. Sealant should be applied within one hour of cleaning to avoid contamination of surfaces. If the application is made after more than one hour, repeat the cleaning. Avoid using detergents or other cleaning agents not specified by ADFAST.
- Apply ADSEAL PRIMER MK60095 primer one hour before sealant application to prevent primer contamination. Allow the primer to dry for about 20 minutes.
- Insert backer rod ADSEAL BR-2600. The backer rod should be 25% to 50% larger than the gap to be filled. In the case where it is impossible to use backer rod, please use a non-stick tape.
- Apply ADSEAL DWS 4580 SERIES.
- Shape the sealant bead with the appropriate tool. In order to facilitate the work, the shaping can be done with a solution of 5% clear dish soap and 95% water. Dip the ADSEAL TOOLING KIT into the solution. Avoid applying solution directly to the sealant. The use of this solution may reduce sealant adhesion if used in an abusive manner.

### 1.2 For non porous surfaces

- Completely remove old sealant.
- Clean with solvent ADSEAL CLEANER 6003. It is important to wait approximately 20 minutes in order to allow the solvent to evaporate completely. Use the two-cloth method of cleaning with the first cloth moistened with cleaner and then wiping with the second clean, dry cloth before the solvent is evaporated. Change cloths regularly to avoid accumulation of dirt. Avoid soaking a soiled cloth in the clean solvent to avoid contaminating it. Choose white rags that do not keep dust and do not leave lint on substrates. Ensure that all surfaces that will be in contact with the sealant are thoroughly cleaned. Sealant should be applied within one hour of cleaning to avoid contamination of surfaces. If the application is made after more than one hour, repeat the cleaning. Avoid using detergents or other cleaning agents not specified by ADFAST.
- If required apply ADSEAL PRIMER MK60095 primer one hour before sealant application to prevent primer contamination. Allow the primer to dry for about 20 minutes.
- Insert backer rod ADSEAL BR-2600. The backer rod should be 25% to 50% larger than the gap to be filled.
- Apply ADSEAL DWS 4580 SERIES.
- Shape the sealant bead with the appropriate tool. In order to facilitate the work, the shaping can be done with a solution of 5% clear dish soap and 95% water. Dip the ADSEAL TOOLING KIT into the solution. Avoid applying solution directly to the sealant. The use of this solution may reduce sealant adhesion if used in an abusive manner.

## 2. NEW CONSTRUCTION WORK :

### 2.1 For porous surfaces

- Mechanically remove any unwanted smear from mortar or other contaminants.
- Clean with solvent ADSEAL CLEANER 6003. It is important to wait approximately 20 minutes in order to allow the solvent to evaporate completely. Use the two-cloth method of cleaning with the first cloth moistened with cleaner and then wiping with the second clean, dry cloth before the solvent is evaporated. Change cloths regularly to avoid accumulation of dirt. Avoid soaking a soiled cloth in the clean solvent to avoid contaminating it. Choose white rags that do not keep dust and do not leave lint on substrates. Ensure that all surfaces that will be in contact with the sealant are thoroughly cleaned. Sealant should be applied within one hour of cleaning to avoid contamination of surfaces. If the application is made after more than one hour, repeat the cleaning. Avoid using detergents or other cleaning agents not specified by ADFAST.
- Apply ADSEAL PRIMER MK60095 primer one hour before sealant application to prevent primer contamination. Allow the primer to dry for about 20 minutes.
- Insert backer rod ADSEAL BR-2600. The backer rod should be 25% to 50% larger than the gap to be filled. In the case where it is impossible to use backer rod, please use a non-stick tape.

- Apply ADSEAL DWS 4580 SERIES.
- Shape the sealant bead with the appropriate tool. In order to facilitate the work, the shaping can be done with a solution of 5% clear dish soap and 95% water. Dip the ADSEAL TOOLING KIT into the solution. Avoid applying solution directly to the sealant. The use of this solution may reduce sealant adhesion if used in an abusive manner.

### 2.2 For non porous surfaces

- Clean with solvent ADSEAL CLEANER 6003. It is important to wait approximately 20 minutes in order to allow the solvent to evaporate completely. Use the two-cloth method of cleaning with the first cloth moistened with cleaner and then wiping with the second clean, dry cloth before the solvent is evaporated. Change cloths regularly to avoid accumulation of dirt. Avoid soaking a soiled cloth in the clean solvent to avoid contaminating it. Choose white rags that do not keep dust and do not leave lint on substrates. Ensure that all surfaces that will be in contact with the sealant are thoroughly cleaned. Sealant should be applied within one hour of cleaning to avoid contamination of surfaces. If the application is made after more than one hour, repeat the cleaning. Avoid using detergents or other cleaning agents not specified by ADFAST.
- If required apply ADSEAL PRIMER MK60095 primer one hour before sealant application to prevent primer contamination. Allow the primer to dry for about 20 minutes.
- Insert backer rod ADSEAL BR-2600. The backer rod should be 25% to 50% larger than the gap to be filled.
- Apply ADSEAL DWS 4580 SERIES.
- Shape the sealant bead with the appropriate tool. In order to facilitate the work, the shaping can be done with a solution of 5% clear dish soap and 95% water. Dip the ADSEAL TOOLING KIT into the solution. Avoid applying solution directly to the sealant. The use of this solution may reduce sealant adhesion if used in an abusive manner.

**IMPORTANT: GIVEN THE VARIETY OF PAINT AVAILABLE IN THE MARKET, IT IS PREFERRED TO PERFORM AN ADHESION TEST BEFORE BEGINNING WORK.**

**JOINT SURFACE CONTACT MUST BE AT LEAST 1/4”.**

## APPLICATION TEMPERATURE

Sealants from the Adseal product line can be applied throughout the year, even in winter, unlike organic sealants such as polyurethanes, thermoplastics or any solvent-based adhesives or sealants. Never apply sealant in weather conditions where condensation or precipitation exists such as rainfall, freezing rain, snow or intense fog. Make sure the surface is free of frost. The temperature of the silicone sealant must be the same as the substrates. Avoid applying a warm sealant to a cold surface. The lower the temperature, the longer the sealant will take to vulcanize.

**\*\*\* Beware of large fluctuations in temperature especially below freezing point. For example, when temperatures reach well below freezing point in a short period of time, the substrates may have a large elongation/compression movement. The sealant will not have enough time to form a fairly thick skin, which in some cases, may cause a breakage or wrinkling at the joint. If such phenomenon occurs, proceed with an adhesion test.**

# CONSTRUCTION SITE TEST

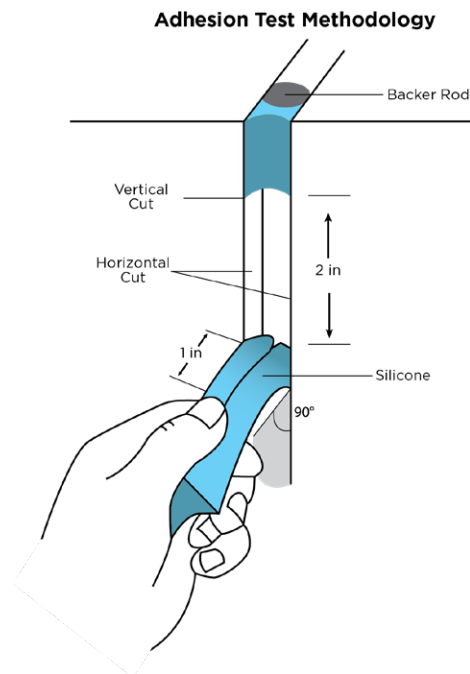
## WATERPROOFING TEST

This test can be done the same day of sealant application (minimum 4 hours). It is done by an external engineering firm at the request and expense of the customer.



## ADHESION TEST

An adhesion test can be done after 7 days of curing. For best results, an adhesion test should be prepared between 21 and 28 days after application. This test must be done before work begins in order to define the procedure related to the project. Ideally, the adhesion test should be done randomly throughout the project to detect any anomalies.



Pull the tab. The sealant should demonstrate a cohesive adhesion or an elongation of two to three times the initial length



Repairing the adhesion test: Completely remove the sealant from the test area and apply fresh sealant as described in sections 1.1, 1.2, 2.1 and 2.2

# MATERIALS COMPATIBILITY WITH SILICONE

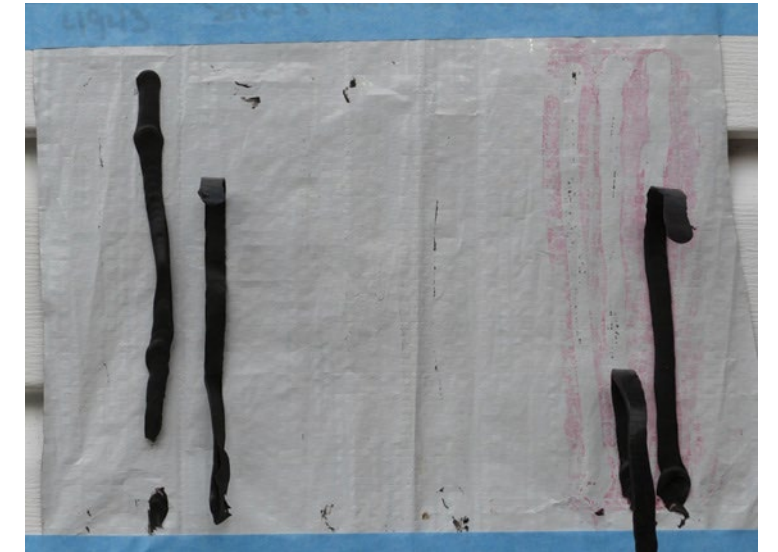
It is essential to check the compatibility of the materials with the sealants and this before any start of construction project. The next chapter deals with the different materials to be wary of.

## MEMBRANES

The membranes are often composed of a polyethylene plastic part. This polyethylene receives a corona treatment. This electrical treatment consists in reducing the surface tension in order to favor the adhesion of the printing ink and therefore the adhesion of the sealant. The problem with this treatment is that it is effective for a period of 3 to 6 months. If the application of the sealant is done during this period, then it will be effective. If this period is exceeded, there will be a risk of delamination.



With Corona Treatment



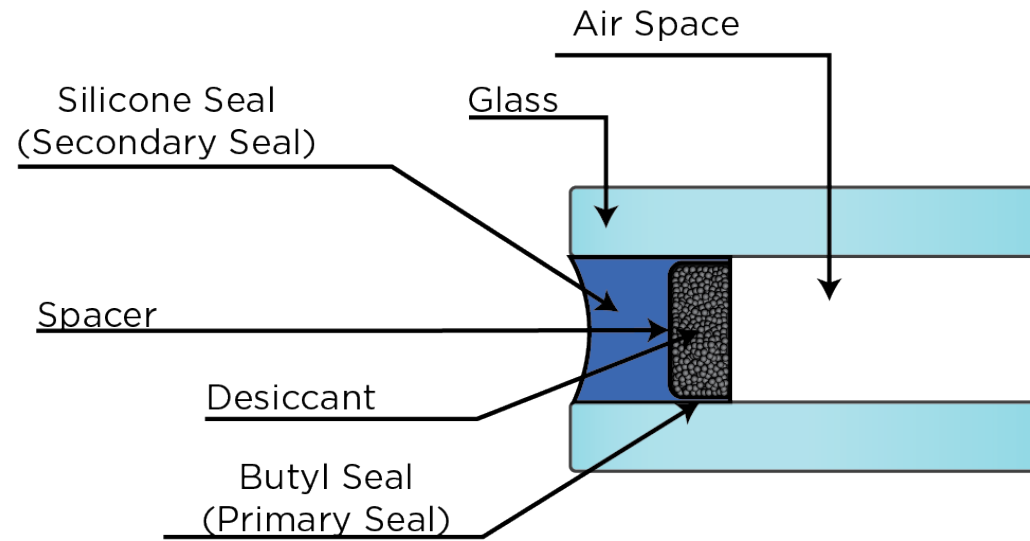
Without Corona Treatment

There are on the market membranes made with other types of plastics. Neutral cure silicones stick very well on these membranes.



## INSULATED GLASS

The sealant / adhesive that holds the two glasses together in a sealed unit can be made of silicone, polysulfide or polyurethane. It is important to check the compatibility of the products that will be in contact with these different adhesive sealants. Adseal neutral silicones are compatible with all these products. Some products are not compatible and can unseal units. There will be moisture infiltration between the two glasses and the unit will become fogged.



**Important: In the case of 2- or 4-sided structural curtain walls, the secondary seal must be made of silicone to ensure the integrity of the system.**

## SETTING BLOCKS

The setting blocks reduce the risk of thermal breakage of sealed units. They are made of neoprene, epdm, PVC or silicone. Neoprene and EPDM are rubbers that contain oils that can migrate when exposed to heat and thus stain the sealants.

This phenomenon does not occur with PVC or silicone. Adfast has a range of PVC seat pad, Adseal SB 20-XXX compatible with Adseal neutral silicones.



## BACKER RODS

There exists on the market flexible and firm backer rods. During the installation especially with the firm backer rods, it is necessary to be careful not to pierce the skin which covers it. This can result in degassing and cause bubbles in the sealants (see photos on the right). In the case of a flexible seal this phenomenon does not occur. On the other hand the backer rod will lose waterproofing and will absorb water if the skin is damaged. Never use a sharp tool to insert the backer rod at the desired location to avoid piercing the skin of the bottom of the joint.



## NON-STRUCTURAL APPLICATION

For non-structural application our products Adseal DWS 4580 series (more than 100 colors), Adseal LM 4600 series (more than 100 colors), Adseal Production 4550 Series or Adseal FC 4570 series are all indicated and available in a wide variety of Colors.

They adhere to materials commonly used in construction such as painted steel, painted and anodized aluminum, masonry, stone, granite, glass, PVC, acrylic coatings, copper, stainless steel, galvanized steel, fiberglass and many others.

In some cases, the use of the Adseal Primer MK60095 may be necessary. Please check with our technical department.



**4580-4600 SERIES**  
Standard colors

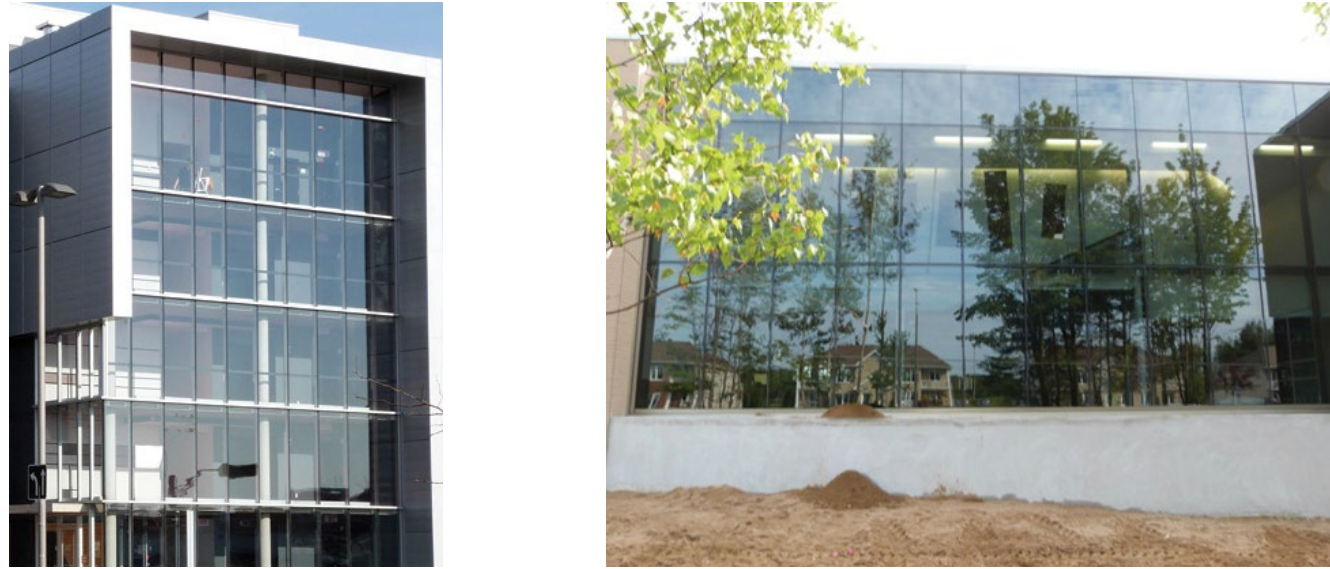
4581	4582	4583	4584	4585	4586	4587	4588
TRANSLUCENT	WHITE	ICE WHITE	PURE WHITE	VANILLA	ALUMINUM	ANTIQUE IVORY	
4589	4590	4591	4592	4593	4594	4595	4596
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4597	4598	4599	4600	4601	4602	4603	4604
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4605	4606	4607	4608	4609	4610	4611	4612
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4613	4614	4615	4616	4617	4618	4619	4620
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4621	4622	4623	4624	4625	4626	4627	4628
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4629	4630	4631	4632	4633	4634	4635	4636
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4637	4638	4639	4640	4641	4642	4643	4644
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4645	4646	4647	4648	4649	4650	4651	4652
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4653	4654	4655	4656	4657	4658	4659	4660
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4661	4662	4663	4664	4665	4666	4667	4668
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4669	4670	4671	4672	4673	4674	4675	4676
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4677	4678	4679	4680	4681	4682	4683	4684
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4685	4686	4687	4688	4689	4690	4691	4692
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4693	4694	4695	4696	4697	4698	4699	4700
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4701	4702	4703	4704	4705	4706	4707	4708
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4709	4710	4711	4712	4713	4714	4715	4716
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4717	4718	4719	4720	4721	4722	4723	4724
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4725	4726	4727	4728	4729	4730	4731	4732
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4733	4734	4735	4736	4737	4738	4739	4740
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4741	4742	4743	4744	4745	4746	4747	4748
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4749	4750	4751	4752	4753	4754	4755	4756
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4757	4758	4759	4760	4761	4762	4763	4764
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4765	4766	4767	4768	4769	4770	4771	4772
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4773	4774	4775	4776	4777	4778	4779	4780
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4781	4782	4783	4784	4785	4786	4787	4788
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4789	4790	4791	4792	4793	4794	4795	4796
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4797	4798	4799	4800	4801	4802	4803	4804
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4805	4806	4807	4808	4809	4810	4811	4812
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4813	4814	4815	4816	4817	4818	4819	4820
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4821	4822	4823	4824	4825	4826	4827	4828
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4829	4830	4831	4832	4833	4834	4835	4836
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4837	4838	4839	4840	4841	4842	4843	4844
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4845	4846	4847	4848	4849	4850	4851	4852
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4853	4854	4855	4856	4857	4858	4859	4860
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4861	4862	4863	4864	4865	4866	4867	4868
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4869	4870	4871	4872	4873	4874	4875	4876
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4877	4878	4879	4880	4881	4882	4883	4884
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4885	4886	4887	4888	4889	4890	4891	4892
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY
4893	4894	4895	4896	4897	4898	4899	4900
IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY	IVORY

This document is for reference only and should not be used as a color matching tool. Please contact your local representative to obtain a sample color chart.

## STRUCTURAL APPLICATION

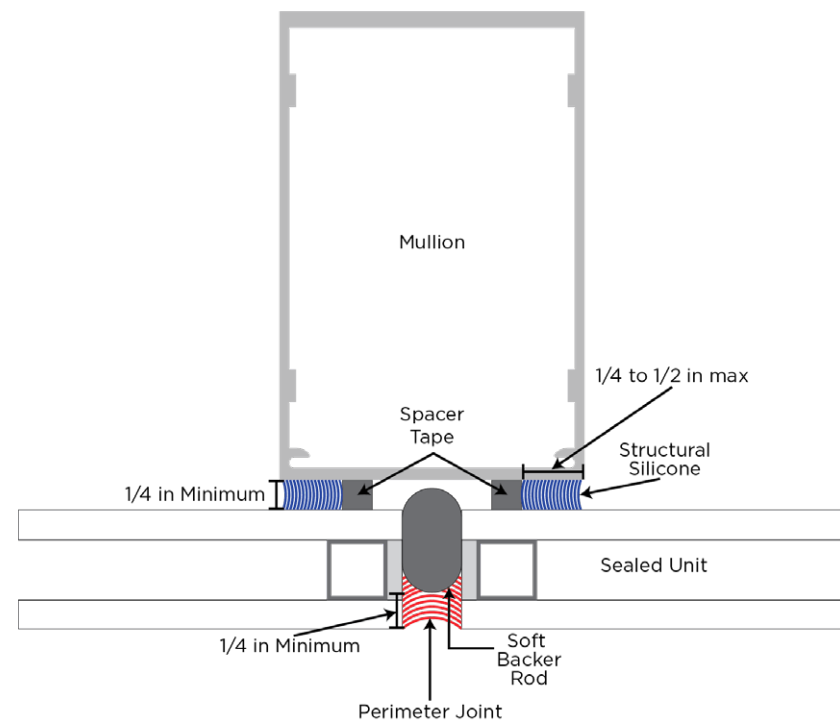
For Structural Applications Adfast recommends the Adseal Structural 4940 Series. It adheres primarily to metals, such as anodized aluminum, glass and many other materials.

It is ideal for two- or four-sided structural curtain walls, architectural panels or any other application requiring structural strength.



In the case of a curtain wall, the Adseal Structural 4940 series is used between the aluminum structure and the glass. For the perimeter seal of sealed units we recommend Adseal silicones for movement and sealing joints. There are several types of structural curtain walls on the market. Refer to the respective mounting methods of the different manufacturers.

## DESIGN AND DIMENSION OF STRUCTURAL JOINTS



The design of structural joints varies depending on the type of curtain wall. The contact surfaces (thickness / width) between the aluminum mullion and the glass vary according to the nature of the project, the surrounding wind loads and the dimensions of the glass. The minimum thickness of the joint must be 6mm (1/4”).

The required contact area is determined by the following calculation method:

**CW** = contact width (inches or millimeters)

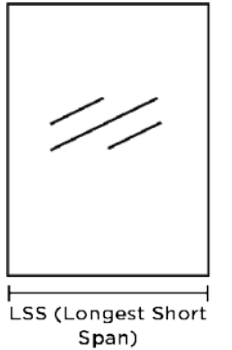
**DWL** = design wind load (pressure in PSF or kPa).

**LSS** = Longest short span (Largest piece of glass; short side)

(as shown on figure 2)

**SDS** = Sealant design stress

- Dynamic (wind) loading:  $\leq 20$  psi (138 kPa)
- Permanent (dead) loading :  $\leq 1$  psi (7 kPa)



**Figure 2**

$$CW = \frac{DWL \text{ (PSF)} \times LSS \text{ (Ft)}}{SDS \times 24}$$

$$CW = \frac{DWL \text{ (kPa)} \times LSS \text{ (mm)}}{SDS \times 2}$$

Alternative calculation methods can also be used.

They must be made by a qualified engineer based on ASTM C1401 (Guide for Structural Sealant Glazing).

**Important: it is important to follow the surface preparation and application procedures contained in our data sheet.**

## FOOD, PHARMACEUTICAL AND VENTILATION APPLICATION

Adseal Production série 4550 est utilisé depuis plus de 20 ans dans les projets alimentaires ou pharmaceutiques. Il possède un pouvoir adhésif puissant sur plusieurs matériaux tel que l'acier inoxydable, certains plastiques, acier peint et autres. Il ne dégage que très peu d'odeur contrairement aux silicones acetoxy (odeur de vinaigre). De par sa technologie à vulcanisation neutre il est non corrosif.



It is recommended to wait 28 days of drying at 23°C / 73°F - 50% hr. before starting any food or pharmaceutical production.

For ventilation applications, Adseal Production 4550 Series meets ASTM E84 (UL723) with a flame spread rating of 0 and a smoke development rating of 20.



## APPLICATIONS KITCHEN, BATHROOM AND GLASS PARTITIONS

Adseal Kitchen and Bathroom Series 4800 is ideal for renovations or new builds that require an anti-mildew product.



The translucent version can be used for the construction of glass partitions inside or outside because it does not yellow.



This product is not recommended for plastic or masonry surfaces. In some cases, the use of the Adseal Primer MK60095 may be necessary. Please check with our technical department.

## SEALANTS COVERAGE TABLE ADSEAL SILICONE AND HYBRID

SIZE OF THE JOINT IN INCHES (DEPTH / WIDTH)	COVERAGE IN LINEAR FEET	
	304ML CARTRIDGE	600ML SAUSAGE
3/16 x 1/4	33	65
3/16 x 3/8	23	44
3/16 x 1/2	16	32.5
3/16 x 5/8	13	26.4
3/16 x 3/4	11	21.3
1/4 x 1/4	25	48.7
1/4 x 3/8	16	32.5
1/4 x 1/2	12	24.3
1/4 x 5/8	10	19.3
1/4 x 3/4	8.3	16.2
1/4 x 1	6.2	12.1
3/8 x 3/8	11	21.3
3/8 x 1/2	8.3	16.2
3/8 x 5/8	6.6	13.2
3/8 x 3/4	5.5	11.2
3/8 x 1	4.1	8
3/8 x 1.5	2.7	5.4
3/8 x 2	2	4
3/8 x 3	1.4	2.6
1/2 x 1/2	6.2	12
1/2 x 5/8	5	9.8
1/2 x 3/4	4.1	8.1
1/2 x 1	3.1	6.2
1/2 x 1.5	2	4
1/2 x 2	1.5	3
1/2 x 3	1	1.9

## RELATED PRODUCTS

### ADSEAL PRIMER MK60095

Apply the primer, with a brush cloth or by spray.

Compatible with our silicone and hybrid Adseal sealants

Necessary in the case of application on masonry, acrylic coating and other applications where used materials are more difficult to bond. Check with our technical department for more information.

Covering power

Thickness / Width	Linear feet
2 mm x 13 mm	2000
2 mm x 19 mm	1330

### ADSEAL CLEANER 6003

This 99.5% isopropyl alcohol cleaner is ideal for cleaning all materials. It does not leave a greasy film and evaporates quickly. Follow the instructions in the application procedure for sealants movement and waterproofing joints. This product is among the least toxic solvents known on the market.

### BACKER RODS ADSEAL BR-2600

Made of bi-cellular extruded polyethylene foam, it is compatible with our silicone and hybrid Adseal sealants. It meets the ASTM C1330 type B standard.

Available in the following diameters:

DIAMETER	BOX SIZE	DETAILS	RECOMMENDED JOINT WIDTH
3/8" (10 mm)	18.5" x 18.5" x 15"	2100' / box, 2 spools / box	3/16" to 1/4"
5/8" (16 mm)	19" x 19" x 30"	1550' / box, 2 spools / box	3/8" to 1/2"
7/8" (22 mm)	19" x 19" x 30"	850' / box, 1 spool / box	1/2" to 3/4"
1-1/8" (29 mm)	19" x 19" x 30"	500' / box, 1 spool / box	3/4" to 7/8"
1-1/2" (38 mm)	13.5" x 13.5" x 73"	396' / box, 6 pieces	7/8" x 1-1/4"
2" (51 mm)	13.5" x 13.5" x 73"	228' / box, 6 pieces	1-1/4" to 1-1/2"
2-1/2" (63 mm)	13.5" x 13.5" x 73"	144' / box, 6 pieces	1-1/2" to 2"
3" (76 mm)	13.5" x 13.5" x 73"	102' / box, 6 pieces	2" to 2-1/2"
4" (102 mm)	13.5" x 13.5" x 73"	54' / box, 6 pieces	2-1/2" x 3"

## SETTING BLOCKS ADSEAL SB 20-XXX

These setting blocks are made of PVC with a durometer of 83-85 (shore A). They will not stain the Adseal neutral silicones.

Available in 5 thicknesses

PRODUCT CODE	DIMENSION (THICKNESS/WIDTH/LENGTH)	QUANTITY PER BOX
20-62.5 x 1.125	1/16" x 1.125" x 4"	1500
20-125 x 1.125	1/8" x 1.125" x 4"	750
20-187 x 1.125	3/16" x 1.125" x 4"	700
20-250 x 1.125	1/4" x 1.125" x 4"	500
20-375 x 1.125	3/8" x 1.125" x 4"	300

## ADSEAL TOOLING KIT

Set of pine sticks for shaping sealant joints. Use with a solution of 5% clear dish soap and 95% water.



## OTHER SEALANTS

### ADSEAL HYBRID SEALANTS (PAINTABLE)

Adseal Hybrid sealers have been developed as an alternative to polyurethanes in order to have a product that can be painted, that reduces the ecological footprint for the environment and is less toxic to users' health. They contain no solvents, isocyanates or phthalates which are toxic products.

They are compatible with most water-based paints and some solvent-based paints. Always pre-test to confirm compatibility.

Unlike polyurethanes that cannot be applied at temperatures below 0°C without being preheated, hybrid sealants can be applied very well at temperatures down to -17°C. It is not recommended to apply a hot product on a cold surface. The sealant and substrate should be at the same temperature before application.

In some cases, the use of the Adseal Primer MK60095 may be necessary.

### ADSEAL DOORS AND WINDOWS SIDING PAINTABLE 1940 SERIES

Adseal Hybrid Sealant Doors and Windows Sidings Paintable 1940 series is designed for use with paint applications. Most water-based paints are compatible with the 1940 Series Adseal Hybrid Sealant Doors and Windows Siding Paintable For all other types of paint, a try is required.

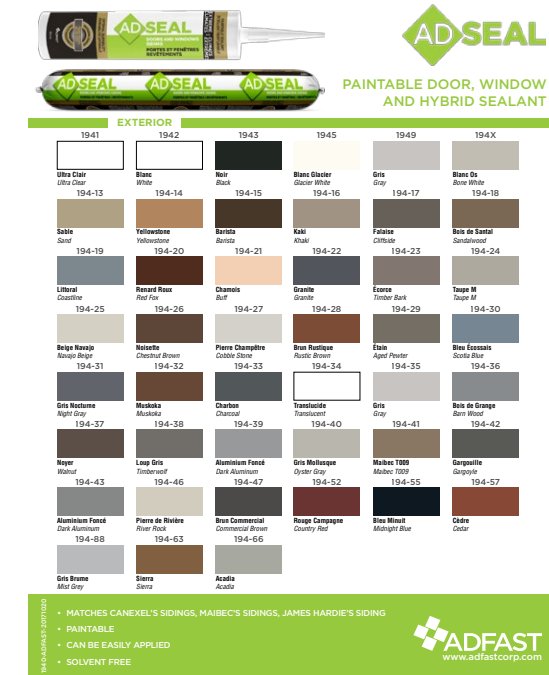
This product has mainly been developed for wood or composite coatings such as Canexel, Maybec and others that may require painting. It is important to understand that, given the greatest flexibility of the sealant, there may be a slight crack in the paint that will not be able to follow the movement.

In some cases, the use of the Adseal Primer MK60095 may be necessary. Please check with our technical department.

Adseal Doors and Windows Siding Paintable 1940 series is offered in a wide variety of colors.

### ADSEAL GUTTER 1602

Adseal Gutter Sealant 1602 is designed to adhere to all major brands of gutters on the market.



It adheres very well to wet surfaces. Very flexible with an elongation at break of 536%. (ASTM D412). In addition it is easy to apply even in winter.

Before application surfaces must be cleaned with Adseal Cleaner 6003 to remove all traces of dust, grease or other contaminants. Let Adseal Cleaner 6003 evaporate for 20 minutes before applying the Gutter Adseal 1602.

### LATEX ACRYLIC SEALANT (PAINTABLE)

These sealants are designed for interior applications only. Their resistance to water is limited.

### ADSEAL CRACK FILLER 1070 SERIES

This interior sealant adheres to wood, gypsum and some plastics. Rigid enough to be sanded. Use mainly to fill gaps around moldings, countertops or other, caused by imperfections of gypsum before painting. Before application surfaces must be cleaned with Adseal Cleaner 6003 to remove all traces of dust, grease or other contaminants. Allow Adseal Cleaner 6003 to evaporate for 20 minutes before applying Adseal Crack Filler 1070 series. May require multiple layers due to shrinkage caused by water evaporation.

## ADSEAL DOORS WINDOWS AND MOLDINGS 1090 SERIES

Flexible inside sealant adhering to wood, gypsum and some plastics. For painted or unpainted applications. Before application surfaces must be cleaned with Adseal Cleaner 6003 to remove all traces of dust, grease or other contaminants. Allow the Adseal Cleaner 6003 to evaporate for 20 minutes before applying the Adseal Doors Windows Moldings 1090 series. Meets ASTM C834. May require several layers of shrinkage caused by evaporation of water.

## POLYURETHANE INSULATING FOAM

### ROLE

Adfoam polyurethane foams are designed for the insulation of doors and windows or other interstices. In addition, it provides watertightness and acoustic insulation. These are low expansion foams to prevent any warping of door and window frames. They cure with ambient humidity. The hotter the weather, the faster they will cure.

### IMPORTANT FEATURES

**1) Percentage of closed cells:** the higher the percentage, the greater the insulating factor. Otherwise it will be acoustic insulation that will perform better. It is very rare to see one-component foams with more than 80% of closed cells.

**2) Fire resistance:** some foams on the market are very easy to ignite. The important thing is to have a flame retardant foam so as not to spread the fire. Adfoam insulating foams insulation meets CAN / ULC S102 (FDI: 30 / SDI: 50) and ASTM E84 (FDI: 15 / SDI 30) standards. These tests are carried out by UL and carries the reference R26654. In addition, our new Adfoam Fireblock 1860 insulation foam has a fire resistance up to 4 hours. Adfoam Fireblock 1860 is particularly used for electrical and plumbing penetrations in wall, ceiling or floor.

**3) Flexibility:** the more flexible a foam, the more it will be able to follow the movement of different materials. In the opposite case it will be necessary to be careful because a delamination on one of the substrates will be able to be created. This will result in loss of insulation and sealing. Our new Adfoam Flex 1865 foam (white color) offers an elongation at break of 36% to 38%.

**4) Shrinkage:** Some foams on the market tend to shrink during vulcanization.

**5) Post expansion:** for the insulation of doors and windows, we are looking for a polyurethane foam with no post expansion to avoid any distortion of doors and windows.

**6) Application temperature:** some foams on the market can be applied up to -25°C Adfoam 1825 (champagne color). It is best to use this foam between 0°C and -25°C. For any temperature above 0°C we suggest Adfoam 1875 polyurethane foams (champagne color) or Adfoam 1885-2 (blue color).

### APPLICATION

- 1) Shake the can well before each application.
- 2) The colder the can is, the lower the pressure will be reduced.
- 3) Adjust the pressure using the regulator on the applicator gun.
- 4) Fill the cavity between 50 and 60% to avoid overflow.
- 5) The foam degrades when exposed to UV rays. Apply the appropriate Adseal sealant when there is skin on the foam or it can be cut.

### SURFACE PREPARATION

Before application surfaces must be cleaned with Adseal Cleaner 6003 to remove all traces of dust, grease or other contaminants. Allow the Adseal Cleaner 6003 to evaporate for 20 minutes before applying the foam.

### CLEANING OF OVERFLOWS AND TOOLS.

Clean all residues or overflow with Adfoam Cleaner 500 before the Adfoam forms a film.

Always check the compatibility between the cleaner and the substrates to be cleaned in order to avoid any damage.

NB: Avoid cleaning the gun between each application. The gun can remain on the can until 1 month between applications. After 1 month without using the gun, clean using sufficient Adfoam Cleanser Clean / 500.

## ADBOND CONSTRUCTION ADHESIVE

Adfast offers two different construction adhesive technologies. The first one is an adhesive use a hybrid technology without solvent, isocyanate or phthalate. They do not stain the skin They are more flexible even in the cold, easier to clean and do not freeze. Very good adhesion to wood, glass, some plastic, metals and masonry. In addition they offer very good resistance to UV rays. They can be painted. These are adhesives with a very low odor. The second technology is a polyurethane adhesive with very fast adhesion, high Strength, paintable and very good water resistance.

### ADBOND EXTREME 5692

Our first generation construction adhesive.

Very good adhesion on several materials.

Very good tensile strength (ASTM D412: 257 psi).

Excellent elongation (ASTM D412: 267%).



## ADBOND EX 5690

Polyurethane construction adhesive.

Superior adhesion on multiple materials.

Excellent shear force in several condition.

### SURFACE PREPARATION

Before application surfaces must be cleaned with Adseal Cleaner 6003 to remove all traces of dust, grease or other contaminants. Allow the Adseal Cleaner 6003 to evaporate for 20 minutes.

In some cases, the use of the Adseal Primer MK60095 may be necessary. Please check with our technical department.

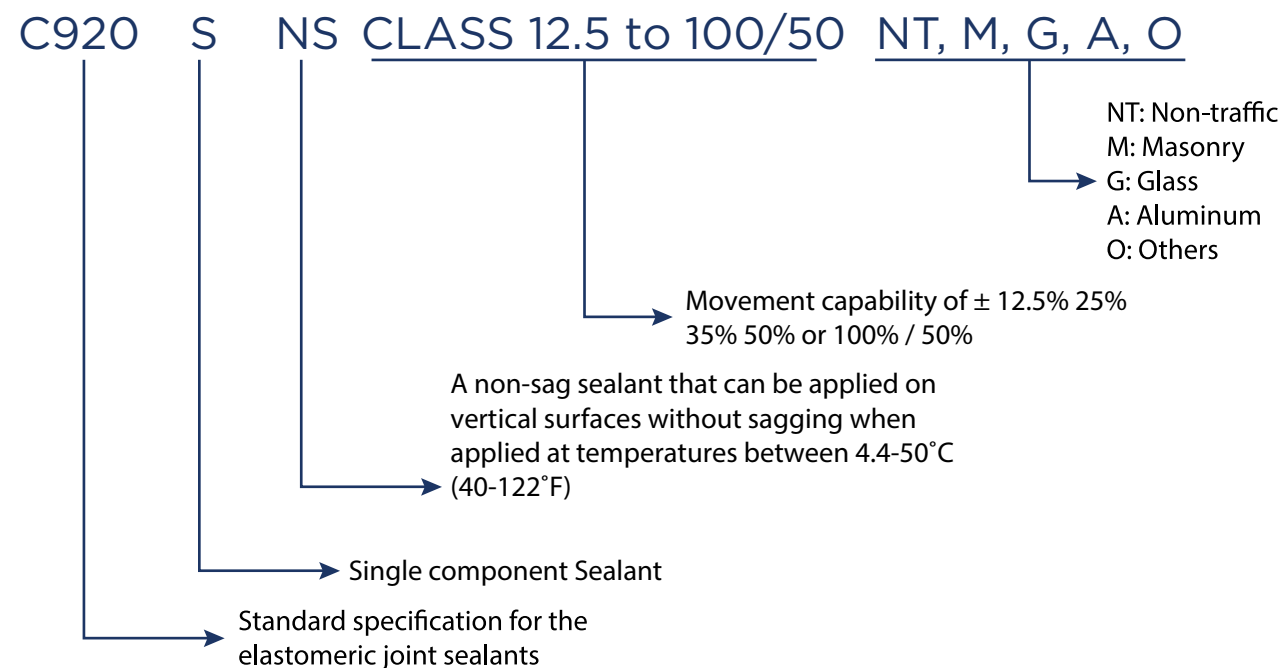
## ASTM STANDARDS (AMERICAN SOCIETY FOR TESTING AND MATERIALS)

Standardized test method for North America. This method helps to compare different sealants between them. This standard is necessary for the writing of technical sheets. We will see in this section some examples of ASTM standards.

### ASTM C920

An elastomeric sealant with its specifications such as rheology, class (cyclic movement), materials on which it adheres, etc.

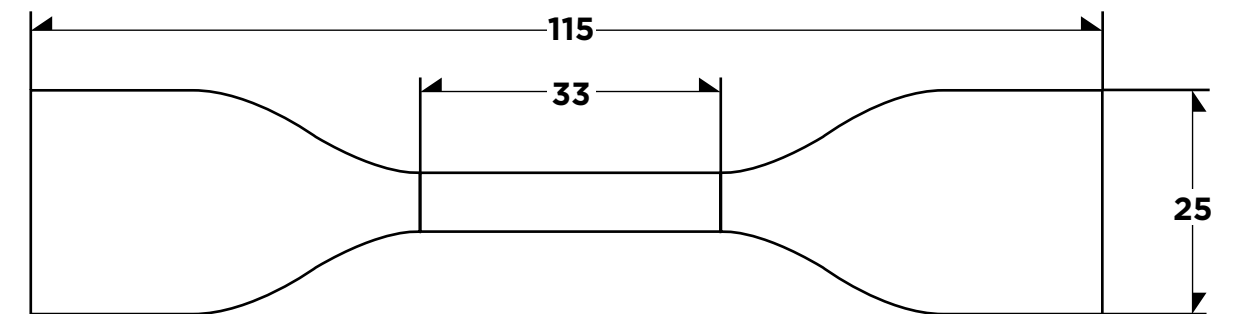
### ASTM Standard example for elastomeric sealants



### ASTM D412

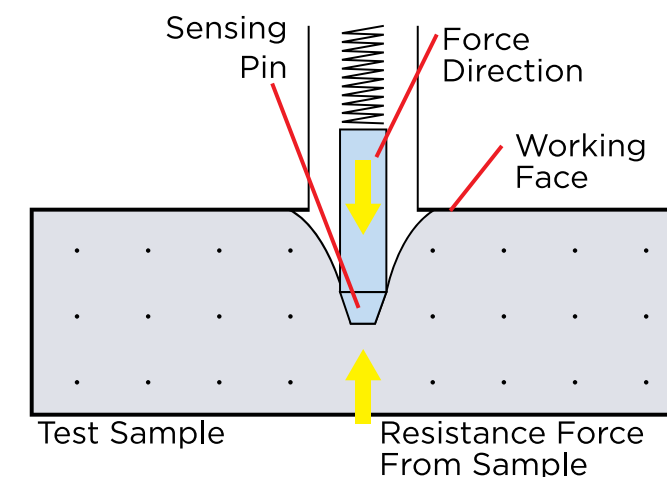
Standard test methods for vulcanized rubber and thermoplastic elastomers. This method gives us the following data:

- Elongation at break (%)
- Tensile strength at different% elongation
- Tensile strength at break



### ASTM D2240 OR C661

Standard method of hardness testing of vulcanized material. In the case of elastomers this data is based on the "shore A" scale. For harder materials such as structural adhesives (epoxy) or plastic we generally use the "shore D" scale. In the case of an elastomeric sealant such as silicone this data tells us the modulus of the silicone. If the number is low then we will have a low modulus silicone. There are low, medium and high modulus silicones. In general, a low modulus silicone will be used as caulking for movement joints while a high modulus silicone will be used for structural curtain walls.



## ASTM C794

Standard peel test method for elastomeric sealant. This method is used to determine the strength and characteristics of the peel properties of a sealant. The value provides a measure of the ability of the sealant to maintain a bond with the substrate. This test is by far one of the most severe.



## ASTM C719 (ALSO NAMED HOCKMAN CYCLE)



Standard method of adhesive and cohesive testing of an elastomeric sealant under elongation and compression (cyclic motion). This method gives us a percentage of elongation and compression that determines the class of an elastomeric sealant.

Normally this method has 10 elongation / compression cycles.

Class 12.5 = ± 12.5% elongation / compression

Class 25 = ± 25% elongation / compression

Class 35 = ± 35% or ± 40% compression elongation

Class 50 = ± 50% elongation / compression

Class 100/50 = 100% elongation / 50% compression

## COMPARATIVE TABLE

### PERIMETER JOINT

ASTM STANDARDS	ADSEAL DWS 4580 SERIES	DOW CORNING CWS	TREMCO SPECTREM 3
C679 Tack-free time	25 à 30 minutes at 23°C (73°F) 50% R.H.	3 - 6 hours at 50% R.H.	2 hours
C639 Rheological (Flow)	None	None	n/d
D 2240 / C661 hardness (shore A)	30	25 (±5)	15
D 412 Elongation at break	1009%	550%	n/d
D 412 Ultimate tensile strength	197 psi	180 psi	155 psi
D 412 Tensile strength at 100% elongation	57 psi	n/d	55 psi
C 510 Staining and color change	None	None	None
C 1135 Tensile strength at 25% elongation	44 psi	n/d	n/d
C 1135 Tensile strength at 50% elongation	60 psi	n/d	n/d
C 1135 Elongation at break	263%	n/d	n/d
C 1135 Ultimate tensile strength	95 psi	n/d	n/d
C 794 Peel strength	24 pli	20 - 28 pli	25 - 30 pli
C 719 Cyclic movement	± 50%	± 35%	± 50%
C 1248 Staining of Porous Substrate	None on granit, marbre, limestone, bricks and mortar	n/d	None (white marble)
Color	20 standards / more than 80 colors available on demand	11 standards / colors available on demand	16

## STRUCTURAL JOINT

ASTM SPECS	ADSEAL STRUCTURAL 4940 SERIES	DOW CORNING 795	TREMCO SPECTREM 2
Structural ASTM C1184	Yes 2 and 4 sided	Yes	Yes (2 sides only)
C679 Tack free time	5 - 10 minutes at 23°C (73°F) 50% R.H.	3 hours at 50% R.H.	20 - 40 minutes
C639 Rheological properties	4 hours at 3°C (37°F) = 0% 4 hours at 50°C (122°F) = 0%	0.1"	0" - 0.03"
D 2240 / C661 Hardness (shore A)	37 - 40	35	37 - 40
D 412 elongation at break	n/a	n/d	235% - 260%
D 412 ultimate tensile strength	n/a	n/d	220 - 230 psi
D 412 modulus at 100%	n/a	n/d	55 psi
C 510 Staining and color change	n/a	n/d	n/d
C 1135 tensile adhesion at 25% elongation	88 psi	45 psi	n/d
C 1135 tensile adhesion at 50% elongation	105 psi	60 psi	n/d
C 1135 elongation at break	263%	n/d	261%
C 1135 ultimate tensile adhesion	168 psi	n/d	123 psi
C 794 peel strength	34 pli	32 pli	16 - 22 pli
C 719 Movement capability	± 50%	± 50%	± 50%
C 1248 staining of porous substrates	None on granit, marble, limestone , brick et cement	None on granit, marble, limestone , brick et cement	None (tested on white marble only)
Colors	3 standard special colors upon request	14	10

**BASED ON THE DATA COLLECTED ON THE RESPECTIVE MANUFACTURERS' TECHNICAL DATA SHEETS AND/OR WEB SITE AND/OR INDEPENDENT LABORATORY.**

### IMPORTANT

The information and recommendations contained herein are derived from our research and information from other reliable sources. This data applies only to our products and not when used with other products. We believe in the reliability of our information. However, no guarantee is offered to that effect. It is the responsibility of the buyer to verify this data according to their own operating conditions to ensure that they conform to the purpose for which the product is intended, even before using it.

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