

ADSEAL DWS 4580 SERIES

WEATHERSEAL NEUTRAL CURE SILICONE ADHESIVE SEALANT

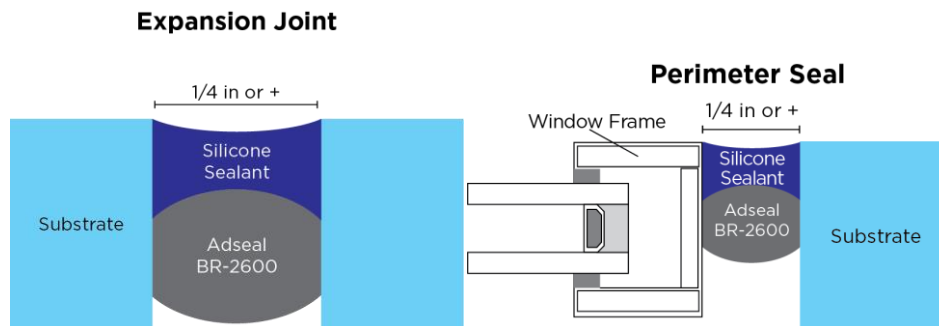
DESCRIPTION

ADSEAL DWS 4580 SERIES is a one-component sealant/adhesive that vulcanizes to a durable elastic rubber silicone in contact with ambient humidity. Due to its rheological and non-sagging characteristics, it can be applied above the head, over the joints and on surfaces of vertical and horizontal walls. ADSEAL DWS 4580 SERIES adheres to glass, most types of wood, clean metals, fiberglass, silicone resins, ceramics, vulcanized silicone, synthetic and natural fibers, and many painted surfaces (Validate with your representative) or certain plastics. Additionally, ADSEAL DWS 4580 SERIES adheres well on masonry. The use of a primer might be necessary. Always perform a test before starting work. ADSEAL DWS 4580 SERIES will not crack, degrade, lose volume, or change consistency if used within the parameters listed in the physical properties section.

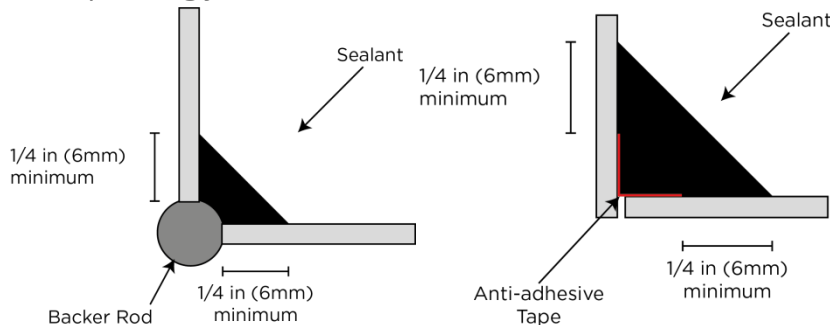
ADSEAL DWS 4580 SERIES CAN NOT BE PAINTED.

Due to its neutral vulcanization system, ADSEAL DWS 4580 SERIES is used for caulking applications or when a slower working time is required. ADSEAL DWS 4580 SERIES is also used for general sealing, caulking and electrical insulation applications. It does not give off any unpleasant odor during vulcanization and will not oxidize the metal (discoloration of copper-based metals may occur when sealed tightly). Due to its vulcanization system in contact with moisture, the depth of the bead should not exceed 13 mm (1/2"), otherwise the sealant cannot vulcanize completely. It is recommended to respect a 2:1 ratio (width / depth) bead as possible. For applications with a bead depth of more than 13 mm, we recommend a two components silicone. The minimum size of a movement or a waterproofing joint should be 1/4" x 1/4" as shown in the drawings below. When completely vulcanized, ADSEAL DWS 4580 SERIES is resistant to permanent temperatures of -40°C to 232°C (-40°F to 450°F) and intermittent temperatures of -51°C to 260°C (-60°F to 500°F).

Movement joints



Waterproofing joints



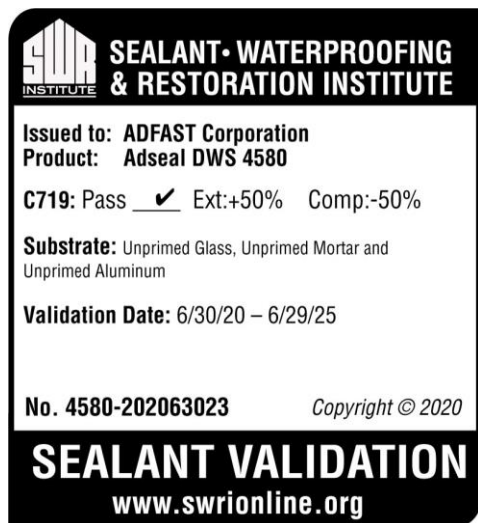
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When it is not possible to use a conventional backer rod (ADSEAL BACKER ROD), it is recommended to use an anti adhesive tape.

SPECIFICATIONS

- Meets ASTM C1184 for two-sided structural glazing
- Meets ASTM C920, type S, NS grade, class 50 (excluding translucent version 4581), use NT, M, G, A, O.
- Meets AAMA 802 and 805 standards
- Meets American Federal Specifications TT-S-1543A, class A and TT-S-00230C, class A, type II
- CFIA accepted
- V.O.C. emission **UL 1000612730-2046923**: CDPH/EHLB/Standard Method V1.2 (January 2017) "Standard Method for Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" (aka CA Section 01350). Reference LEED V4



LIMITATIONS

- Not design for structural applications on painted surfaces.
- Structural adhesion to bare metal or surfaces subject to corrosion.
- Not designed for permanent immersion joints
- Where the sealant is encapsulated and does not have access to ambient humidity
- In contact with strongly acidic or alkaline products
- Not designed for traffic joints
- Not recommended for joint less than 1/4 " or 6 mm. (width and depth)

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PHYSICAL PROPERTIES

Uncured at 23°C (73°F) 50% R.H	
Appearance	Pasty
Color	Available in a wide variety of colors (special colors upon request)
Density	1.03g/ml (translucent) 1.29 g/ml (color)
V.O.C. (SCAQMD Method)	44.5 g/L (3.9%)
Extrusion rate (50 psi/diameter 5mm) – color	75 – 300 g/min
Extrusion rate (20 psi/diameter 5mm) – translucent	75 – 200 g/min
Tack free time (ASTM C679)	25 – 30 minutes
Rheological properties (ASTM C639)	No sagging
Curing time	7 to 14 days
Full adhesion	14 to 21 days
Shelf life	24 months

Cured 21 days at 23°C (73°F) / 50% R.H.)	
Hardness (shore A) (ASTM D2240)	28 (translucent) 30 (color)
Elongation at break (ASTM D412)	1125% (translucent) 1009% (color)
Maximum Tensile strength (ASTM D412)	195psi (translucent) 197psi (color)
Tensile strength at 100% elongation (ASTM D412)	27psi (translucent) 57psi (color)
Tear Strength Die C (ASTM D624)	30 lb/in
Stain or color change (ASTM C510)	None
Tensile adhesion strength at 25% elongation (ATSM C1135)	44psi
Tensile adhesion strength at 50% elongation (ASTM C1135)	60psi
Maximum elongation (ASTM C1135)	263%
Maximum tensile adhesion strength (ASTM C1135)	95psi
Peel strength (ASTM C794)	24 lb/in
Movement capability (ASTM C719)	± 50% (excluding translucent version 4581)
Staining on porous surfaces (ASTM C1248)	None on granite, marble, limestone, brick, and cement
Lap Shear (ASTM D1002)	90psi (translucent) 111psi (color)

APPLICATION

Construction

- Interior and exterior fenestration, curtain walls and siding joints
- Bedding joints for sealed units

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- Corner block (curtain wall)
- Expansion joints (masonry) (test with and without using primer before doing the complete work)
- Anodized aluminum structural joints for 2-sided curtain walls
- Cold room
- Clean room
- Ventilation
- Fiber cement siding

Industrial

- HVAC
- Transportation vehicles
- Refrigerated counters
- Manufactured doors and windows
- Sealing electrical insulation units
- Bonding the cylinder head gaskets of refrigeration and heating units
- Bonding hooks and nameplates without screws and plastic materials to metal
- Sealing of trailers and truck cabs
- Assemble and seal parts of household appliances
- Anti-slipcover
- Sealing cabins and marine windows

SURFACE PREPARATION

Surface must be free of dust, oil, grease, frost, or any other contaminant. On porous surface, first use mechanical tool such as grinder to remove old sealant or any other contaminant. Use ADSEAL CLEANER 6003 to clean all surfaces. Let it evaporate 20 minutes before sealant application. Ensure that the backer rod ADSEAL BACKER ROD is friction fitted properly and ADSEAL PRIMER have been applied if necessary. For the complete procedure and the type of primer to use, consult our [ADSEAL PRIMER Guide](#).

When ADSEAL DWS 4580 SERIES is use in a horizontal 2-sided or 4-sided curtain wall as a perimeter joint sealant always use ADSEAL SETTING BLOCK to avoid sealant color contamination. For more details consult the technical document: [Application Procedure for Sealant Movement and Waterproofing Joint](#)

METHOD OF USE

ADSEAL DWS 4580 SERIES is easy to apply with a conventional manual, electric or pneumatic applicator (do not exceed 45psi for a cartridge). Shape the sealant bead with the ADSEAL TOOLING KIT before skin formation. 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. Uncured sealant can be clean with a solvent such as mineral spirit. Bead surface contact should be at least 1/4". ADSEAL DWS 4580 SERIES can be applied at temperatures as low as -20°F (-29°C). For more details consult the technical document: Application procedure for sealant movement and waterproofing joints.

ADSEAL DWS 4580 SERIES**WEATHERSEAL NEUTRAL CURE SILICONE ADHESIVE SEALANT****APPLICATION TEMPERATURE (MOVEMENT DURING CURING)**

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.

***** Cure of the sealant occurs from the surface down and if the joint is moving during cure, due to large fluctuations in ambient temperature, there will be expansion and contraction of the material creating a risk of cracking or wrinkling / swelling at the surface of the joint.**

To reduce this impact, it is recommended to:

- Use an open cell polyurethane backer rod to accelerate the curing of the sealant.
- Install the sealant at the average daily temperature to reduce daily movement.
- Ensure that the joint depth does not exceed a ratio of 2:1 or 12 mm (1/2") maximum.
- The use of a primer can accelerates the development of the adhesion. Although not necessarily recommended, this step can help establish the success of the project if there is excessive movement of the joint during cure.

PACKAGING

- 304ml cartridge
- 600ml sausage
- Pail
- Drum

STORAGE

Store the sealant in closed original packaging. Store in dry premises at a temperature between 8°C (46°F) and 25°C (77°F). High humidity and storage below or above these temperatures will shorten shelf life. Expiration date is indicated on each container. Storage beyond the date specified on the container does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality insurance reasons. Contact our technical service.

CAUTION

Always consult SDS (Safety Data Sheet) before using the product. Apply usual hygienic rules. Always test the product on your application before use. For industrial use only. For more information, please contact your technical representative.

ADSEAL DWS 4580 SERIES**WEATHERSEAL NEUTRAL CURE SILICONE ADHESIVE SEALANT****IMPORTANT****READ CAREFULLY**

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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