

ADSEAL 4638**WEATHERSEAL SPECIALITY NEUTRAL CURE SILICONE SEALANT****DESCRIPTION**

ADSEAL 4638 is a one-component sealant/adhesive that cures 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, on vertical and horizontal surfaces. ADSEAL 4638 adheres to glass, most types of wood, clean metals, silicone resins, ceramics, vulcanized silicone, synthetic and natural fibers, and many painted surfaces (Validate with your representative) or certain plastics. ADSEAL 4638 has been developed for the railway industry. It can also be suitable for sealing transport vehicles.

ADSEAL 4638 CAN NOT BE PAINTED.

Due to its neutral vulcanization system, ADSEAL 4638 is used for caulking applications or when a faster working time is required. ADSEAL 4638 is also used for general sealing, caulking and electrical insulation applications. It does not give off any unpleasant odor during curing and will not oxidize the metal (discoloration of copper-based metals may occur when sealed tightly). Due to its curing system in contact with moisture, the depth of the bead should not exceed 13 mm (1/2"), otherwise the sealant cannot cure completely. For applications with a bead depth of more than 13 mm, we recommend a two components silicone. Minimum movement joint size should be 1/4" x 1/4". When completely cured, ADSEAL 4638 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).

SPECIFICATIONS

- Meets Federal Railroad Administration requirements ASTM C542
- Meets Federal Railroad Administration requirements ASTM E662
- Meets BOMBARDIER SMP 800-C requirements
- Meets CAN / CGSB standards 19.13-M87
- Meets ASTM C920, type S, NS grade, class 50, use NT, M, G, A, O.
- Meets the requirements of "U.S. Green Building Council® LEED® - NC Green Building Rating System for New Construction and Major Renovation Version 2.2, EQ Credit 4.1 (Indoor Environmental Quality-Low Emitting Materials: Adhesives and Sealants)
- Meets American Federal Specifications TT-S-1543A, class A and TT-S-00230C, class A, type II

LIMITATIONS

- 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 sealing horizontal traffic joints
- Not recommended for joint less than 1/4" or 6 mm. (width and depth)

ADSEAL 4638**WEATHERSEAL SPECIALITY NEUTRAL CURE SILICONE SEALANT****PHYSICAL PROPERTIES**

Uncured at 23°C (73°F) 50% R.H.	
Appearance	Paste
Color	Gray
Density	1.26 g/ml
V.O.C.	40.5 g/L
Extrusion rate (20 psi/diameter 5mm)	50 – 400 g/min
Tack free time (ASTM C679)	10 minutes
Rheological properties (ASTM C639)	No sagging
Shelf life	24 mois

Cured 21 days at 23°C (73°F) - 50% R.H.	
Hardness (ASTM D2240)	27 shore A
Elongation at break (ASTM D412)	619%
Maximum Tensile strength (ASTM D412)	164psi
Tensile strength at 100% elongation (ASTM D412)	60psi
Movement capability (ASTM C719)	± 50%
Lap shear (ASTM D724) die C	31 psi

APPLICATION

- HVAC
- Transportation vehicles
- Refrigerated counters
- Sealing electrical insulation units
- Household appliances
- Bonding hooks and nameplates without screws and plastic materials to metal
- Sealing of trailers and truck cabs
- Assemble and seal parts of household appliances
- Sealing cabins and marine windows

SURFACE PREPARATION

Surfaces must be free of dust, grease, frost, or any other contaminant. Clean surfaces with ADSEAL CLEANER 6003. Allow to evaporate for 20 minutes before applying ADSEAL 4638. For porous surfaces, mechanical cleaning may be necessary during repair work. In some cases, ADSEAL 4638 may require the use of a primer. If this is the case, use ADSEAL PRIMER. For the complete procedure and the type of primer to use, consult our [ADSEAL PRIMER Guide](#). The use of ADSEAL BACKER ROD is recommended for a movement joint. If there is insufficient space for the use of backer rod, we strongly suggest the use of non-stick tape.

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METHOD OF USE

ADSEAL 4638 is easy to apply with a conventional manual, electric or pneumatic applicator (do not exceed 45 psi 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 4638 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 Joint](#)

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 cure.

***** 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
- 400 ml and 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

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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.

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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