

## **ADSEAL 4638**

### **WEATHERSEAL SPECIALITY NEUTRAL CURE SILICONE SEALANT**

#### **DESCRIPTION**

ADSEAL 4638 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 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 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. For applications with a bead depth of more than 13 mm, we recommend a two component silicone. Minimum movement joint size should be 1/4" x 1/4". When completely vulcanized, 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-M82
- 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
- Joint less than 1/4 "(6 mm) wide and deep

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#### PHYSICAL PROPERTIES

Uncured (23°C (73°F) 50% r.h.)	
Appearance	Pasty
Color	Gray
Density	1.26 g/ml
V.O.C.	66.94 g/L
Extrusion rate (20 psi/diamètre 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)	164 psi
Tensile strength at 100% elongation (ASTM D412)	60 psi
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

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 BR-2600 is friction fitted properly and ADSEAL PRIMER MK60095 have been applied if necessary. When using ADSEAL PRIMER MK60095, let the primer evaporate for 20 minutes prior to ADSEAL 4638 application.

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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 joints.

#### **TEMPERATURE APPLICATION**

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.**

#### **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 lower than 25°C (77°F). 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**

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Always consult sds 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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