

ADSEAL PRODUCTION 4550 SERIES**NEUTRAL CURE SILICONE ADHESIVE SEALANT FOR PLASTICS AND METALS, ASTM E84****DESCRIPTION**

ADSEAL PRODUCTION 4550 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 PRODUCTION 4550 SERIES adheres to glass, mirror, gypsum, 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. Additionally, ADSEAL PRODUCTION 4550 SERIES adheres well to masonry. The use of a primer might be necessary. Always perform a test before starting work. Although ADSEAL PRODUCTION SERIES 4550 is dry after 24 hours (for a 1/8 " [3.2mm] bead), ADFAST requires that the product polymerize completely for 28 days at 23 °C (73 °F) 50% R.H. when used in food processing plants or in clean rooms (indirect contact).

ADSEAL PRODUCTION 4550 SERIES CAN NOT BE PAINTED.

Due to its neutral vulcanization system, ADSEAL PRODUCTION 4550 SERIES is used for caulking applications or when a faster working time is required. ADSEAL PRODUCTION 4550 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. 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 vulcanized, ADSEAL PRODUCTION 4550 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).

SPECIFICATIONS

- Meets ASTM C920, type S, NS grade, class 50, use NT, M, G, A, O.
- Meets AAMA 802.3, 803.3 and 805.2 standards
- 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
- CFIA accepted
- Meets ASTM E84 / UL 723 (flame spread index = 0 / smoke development index = 20)
- Meets Requirements of NFPA 90A & 90B

LIMITATIONS

- 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)

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PHYSICAL PROPERTIES

Uncured 23°C (73°F) - 50% R.H.	
Appearance	Pasty
Color	4551 (translucent), 4552 (white), 4553 (black), 4555 (blue white), 4558 (anodized aluminum) and 4559 (aluminum). Special colors upon request.
Density	1.04 g/ml (translucent) 1.26 g/ml (colors)
V.O.C. (SCAQMD Method)	40.5 g/L (3.4%)
Extrusion rate (20 psi/diameter 5mm)	50 – 400 g/min
Tack free time (ASTM C679)	15 minutes (translucent) 10 minutes (colors)
Curing time	7 to 14 days
Full adhesion	14 to 21 days
Rheological properties (ASTM C639)	No sagging
Shelf life	24 months

Cured 21 days at 23°C (73°F) - 50% R.H.	
Hardness (ASTM D2240)	13 – 21 shore A (translucent) 22 – 36 shore A (colors)
Elongation at break (ASTM D412)	774% (translucent) 619% (colors)
Maximum Tensile strength (ASTM D412)	115psi (translucent) 164psi (colors)
Tensile strength at 100% elongation (ASTM D412)	31psi (translucent) 60psi (colors)
Movement capability (ASTM C719)	± 50%

APPLICATION

Construction

- Interior and exterior fenestration, curtain walls and siding joints
- Bedding joints for sealed units
- Corner block (curtain wall)
- Expansion joints (masonry) (test with and without using primer before doing the complete work)
- Cold room
- Clean room
- Laboratory
- Ventilation
- Mirror

Industrial

- HVAC
- Transportation vehicles
- Refrigerated counters
- Manufactured doors and windows
- 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

ADSEAL PRODUCTION 4550 SERIES**NEUTRAL CURE SILICONE ADHESIVE SEALANT FOR PLASTICS AND METALS, ASTM E84****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](#).

METHOD OF USE

ADSEAL PRODUCTION 4550 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 PRODUCTION 4550 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.

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.

***** 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.

ADSEAL PRODUCTION 4550 SERIES**NEUTRAL CURE SILICONE ADHESIVE SEALANT FOR PLASTICS AND METALS, ASTM E84****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

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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