

ADSEAL PRODUCTION 4550-ALK SERIES

NEUTRAL CURE SILICONE ADHESIVE SEALANT FOR PLASTICS AND METALS

DESCRIPTION

ADSEAL PRODUCTION 4550-ALK 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-ALK SERIES 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. Additionally, ADSEAL PRODUCTION 4550-ALK SERIES adheres well on alkaline materials, such as masonry.

ADSEAL PRODUCTION 4550-ALK SERIES CAN NOT BE PAINTED.

Due to its neutral vulcanization system, ADSEAL PRODUCTION 4550-ALK SERIES is used for caulking applications or when a faster working time is required. ADSEAL PRODUCTION 4550-ALK 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-ALK 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 CAN / CGSB standards 19.13-M87
- Meets ASTM C920, type S, NS grade, use NT, M, G, A, O.

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)

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PHYSICAL PROPERTIES

Uncured (23°C (73°F) 50% r.h.)	
Appearance	
Color	4551-ALK (translucent), 4552-ALK (white), 4553-ALK (black), 4555ALK (blue white), 4558-ALK (anodized aluminum) and 4559ALK (aluminum). Special colors upon request.
Density	1.02 – 1.06 (translucent version) 1.24 – 1.28 (colored version)
Extrusion rate (20 psi/diameter 5mm)	120 – 150 gr. / min. (translucent version) 100 – 150 gr. / min. (colored version)
Tack free time (ASTM C679)	6 – 10 minutes (translucent version) 10 – 15 minutes (colored version)
Rheological properties (ASTM C639)	0%
V.O.C.	< 40 g/L
Shelf life	12 months
Cured 21 days at 23°C/73°F – 50% R.H.	
Hardness (ASTM C661)	20 shore A (translucent) Shore A (color)
Maximum elongation (ASTM D412)	978% (translucent) 896% (color)
Ultimate tensile strength (ASTM D412)	201 psi (translucent) 218 psi (color)
Shear strength (ASTM C 961)	79 psi (translucent) 78 psi (color)

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
- Ventilation

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

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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 MK60095 have been applied if necessary. When using ADSEAL PRIMER MK60095, let the primer evaporate for 20 minutes prior to ADSEAL PRODUCTION 4550-ALK SERIES application.

METHOD OF USE

ADSEAL PRODUCTION 4550-ALK SERIES 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 PRODUCTION 4550-ALK 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.

***** 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

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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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