

Product Information**Description**

Z Bond® 616 is a one component, non-flowing, neutral cure, mid modulus silicone sealant. It cures by absorption of atmospheric moisture to form a flexible and durable elastomeric sealant.

Special Features

Z Bond® 616 has been developed for use in glazing weatherseals. It offers good adhesion to glass, coated aluminium & steel frames and panels, fibreglass, masonry and concrete. Excellent resistance to UV, weathering, ozone, vibration, moisture and temperatures.

The thixotropic nature of this product ensures that it will not slump in typical construction joints.

Typical Uses

- Weatherseals between glass and aluminium.
- Back glazing between timber and glass.
- Perimeter seals between aluminium window frames and brick and masonry, and
- Air seals in concrete panels.
- General glazing and sealing applications.

10 Colours & Item Numbers.

- 661970 - Translucent
- 661870 - Matt Black
- 661890 - Light Grey
- 326038 - Dark Grey
- 661950 - Slate Grey
- 661980 - White
- 661920 - Off White
- 661930 - Primrose / Smooth Cream
- 661960 - Stone Beige
- 326216 - Sandstone

One Part System

Being a one-part sealant **Z Bond® 616** offers the confidence of consistent even cure. It also improves operator productivity, as time is not lost mixing the product, is easy to use in difficult locations, and can be applied out of a standard cartridge gun.

Long Life Reliability

Z BOND® 616 has excellent natural ageing stability. It will maintain its elastomeric joint sealant properties permanently, even under harsh conditions and temperature extremes.



Characteristics

System Properties

Property	Mean Result Achieved	Test Method
Skin Time	6-8 Minutes	BS 5889
Tack Free Time	25 Minutes	ASTM C679
Tooling Time	10 Minutes	ASTM C679
Sag or Slump	Nil	BS 5889

Cured Properties

Property	Mean Result Achieved	Test Method
Shore A Hardness	17	ASTM C 661
Modulus at 100% Elongation	0.40 MPa	ASTM D 412
Tensile Strength	1.5 MPa	ASTM D 412
Elongation at Rupture	670%	ASTM D 412
Peel Strength after UV through Glass	50N/25mm	BS5889
Dynamic Movement Capacity	±25%	ASTM C 920
Accelerated Aging and Weathering	Excellent	ASTM C 792

Temperature

	Minimum	Maximum
Application Temperature	-10°C	+40°C
Service Temperature	-50°C	+160°C

Application of the sealant at +5 °C is permissible provided the surface to receive the silicone is dry and free of frost. The maximum service temperature listed is for transient temperature: the silicone sealant will deteriorate if subjected to these temperatures on a continuous basis.

Packaging

The standard packaging for **ZBond® 616** is 300 & 410grm polyethylene cartridges.

Sealant Application

Joint Design

The sealant must be capable of withstanding the expected joint movement. To calculate the joint width, establish the expected movement (expansion, contraction and shear movement) that the joint is required to withstand. The dynamic movement capability of **ZBond®616** is ±25. The sealant depth for a weatherseal is normally half the joint width.

Back Up Material

Use a closed cell polyethylene-backing rod 25% larger than the joint width, to control the depth of the joint.

Compatibility with Adjacent Substrates

Silicones are not always compatible with plasticised sealants, such as butyls. Also some backing rods and glazing tapes contain bitumen or other agents that are incompatible with the silicone. The incompatibility may cause discolouration, poor sealant cure or long term degradation of the sealant. Always carry out compatibility tests where contact with potentially incompatible materials occurs.

(Bostik Aust offers this service).



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Application

Always ensure that the surfaces to be sealed are dry and free from oil, dirt and grease. Use the two-wipe process for impervious substrates. Ensure the cloths are clean and changed frequently, and use a suitable cleaner/solvent such as **ZBond®** R-40, IPA or 100% White Spirits. When extruding the sealant cut the nozzle to the desired width, cut the tip off the cartridge, and apply the sealant firmly to ensure good contact between the sealant and the substrate. Before the sealant has skinned, tool it off to ensure a good finish, and to improve the wetting out of the sealant to the substrate.

To achieve satisfactory adhesion a primer may be required for some substrates. Consult Bostik or your distributor for more information.

Curing

ZBOND® 616 cures by absorbing atmospheric moisture, it will skin over in 6-8 minutes and cure to a depth of 7mm in 7 days.

Design Support

Because of the importance of Surface Preparation, Sealant Application and Joint Design Bostik Australia provide specific Data Sheets on these topics. These data sheets are available free of charge, and we strongly recommend that you consult these sheets before commencing application of the sealant. We will also review shop or working details, test substrates, and associated materials for compatibility and adhesion, and make sealant recommendations when requested.

Storage and Shelf Life

Always store the sealant in a cool dry place. Ideal storage temperature is not more than 25°C. Prolonged storage at high temperatures may affect shelf life and ultimate performance. The shelf life of **ZBOND® 616** is 12 months from date of manufacture when stored below 25°C and below 50% relative humidity.

Limitations

ZBOND® 616 is **NOT** suitable for use in the following applications:-

- As the sealant requires atmospheric humidity to cure, it will not cure in totally confined spaces where it does not have access to atmospheric humidity.
- Aquariums
- Adhering Mirrors
- Structural Glazing
- Under Water Applications (including swimming pools subject to substrate). Refer to Bostik for these applications.
- Below Grade Applications
- All Stone's (We recommend the completion of a stain testing program before using any sealant on stone) Bostik 5CLM is recommended for marble, granite (after stain test).
- Horizontal walkways.
- Sealant may discolour copper & brass.
- Not recommended for use on polycarbonate sheeting.
- Do not clean or treat the sealant with materials, cleaning agents or solvents, that may affect or discolour the sealant, particularly during product curing.

This silicone is not paintable.

If there is a requirement to paint the sealant, our recommendation is to use our **ZBond®** Paintable silicone sealant or **ZBond®** Gap Filler acrylic sealant products. Follow both the sealant and paint manufacturers painting instructions carefully, when painting these sealants.



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2.2 Health and Safety

Full product safety information required for safe use is not included in this data sheet. Before handling, read the separate Material Safety Data Sheet (MSDS) and packaging for safe use. In case of product emergency refer to product labelling or MSDS and contact phone numbers. A copy of the product MSDS is available from Bostik or its distributors.

Important Notice for Users

Suggestions for use should not be taken as an inducement to infringe any particular patent.

*ZBond® is a registered trademark of Bostik Australia

The representations and recommendations regarding the products are based on tests which we believe to be reliable. However, no guarantee of their accuracy can be made because of the great range of field conditions and variations encountered in raw materials, manufacturing equipment and methods. Thus, the products are sold with a limited warranty only, and on the condition that purchasers will make their own tests to determine the suitability of the product for their particular purposes. Under no circumstances will Bostik Australia Pty Ltd be liable to anyone except for replacement of the products or refund of the purchase price.

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