



# ZBond® 616

## Glass/Glazing Construction Silicone Sealant

Date: 15<sup>th</sup> May 2017

### YOUR SMART ADVANTAGES

- ZBond 616 has been developed for use in glazing weather seal. 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.

### DESCRIPTION

ZBond® 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.

### USES

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

### APPLICATION INSTRUCTIONS

#### Application Method

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, 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 provides 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.

#### One Part System

Being a one-part sealant ZBond® 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

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

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.

#### 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 Bostik 616 is  $\pm 25\%$ . The sealant depth for a weather seal 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 Australia offers this service)

#### PRODUCT CHARACTERISTICS

Skin Time (BS 5889) 6-8 minutes

Tack Free Time (ASTM C679) 25 minutes

Tooling Time (ASTM C679) 10 minutes

Sag or Slump (BS 5889) nil

Product code

300gm cartridge

Translucent 30840570

410gm cartridge

Matt Black 30840564

Light Grey 30840565

Dark Grey 30840220

Slate Grey 30840568

White 30840571

Off White 30840566

Primrose/Smooth Cream 30840567

Stone Beige 30840569

Sandstone 30840221

#### TYPICAL PERFORMANCE DATA (approx.)

Shore A Hardness (ASTM C661) 22

100% Modulus (ASTM D412) 0.3 MPa

Tensile Strength (ASTM D412) 1.5MPa

Elongation (ASTM D412) 550%

Peel Strength after UV through Glass (BS5889) 50N/25mm

Dynamic Movement Capacity (ASTM C920) ±25%

Accelerated Aging and Weathering (ASTM C792) Excellent

Application Temperature +10°C to +40°C

Service Temperature -50°C to +160°C

#### STORAGE & 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 stones (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® Gap Filler acrylic sealant products. Follow both the sealant and paint manufacturers painting instructions carefully, when painting these sealants.

**For emergency information contact the Poisons Information Centre, phone 131 126 or the Emergency Response Service, phone 1800 033 111.**

BOSTIK HOTLINE

Smart help 1800 898 551



This datasheet is for the general help of users. It is provided in good faith. The data is current and accurate to the best of our knowledge. Differing materials, substrates, environments, site conditions, and product storage, handling and application may affect results. Users should carry out tests to decide the product's suitability for purpose. This data sheet and the properties of the product may change without notice. Users, suppliers and retailers should check that the data sheets they have are the latest. To the maximum extent permitted by law, Bostik disclaims all warranties in relation to manufacture and use of the product. Bostik is not liable for representations made by users, suppliers or retailers about the product. Bostik is not liable for any loss or damage resulting from incorrect, careless, or negligent use or storage of the product, including use of out of date product. Any liability arising from use of the product is limited to the replacement or purchase price of the product. Bostik does not exclude rights and remedies that cannot be excluded by legislation, for example under the Australian Consumer Law (ACL). Sale of the product by Bostik is subject to the Bostik Australia Proprietary Limited Conditions and Terms of Sale. For more information on Bostik, products, and conditions of use and sale visit [www.bostik.com/au](http://www.bostik.com/au)