

## Plumbers Roof & Gutter Grey

Technical Data Sheet

March 2002

### Product Information

#### **Description**

Z Bond Plumbers Roof & Gutter Grey is a one component, non-flowing, NEUTRAL cure, and MID modulus silicone sealant. It cures by absorption of atmospheric moisture to form a flexible and durable elastomeric sealant.

#### **Special Features**

Z Bond Plumbers Roof & Gutter Grey is a sealant for use in metal fabrication, rainwater goods and as a general construction sealant. It offers good adhesion to Zincolume<sup>®</sup>, painted and galvanised surfaces. The thixotropic nature of this product ensures that it will not slump in typical construction joints.

#### **Typical Uses**

- Rainwater goods,
- Fascias
- Perimeter seals between aluminium window frames and brick and masonry.

#### **One Part System**

Being one-part sealant Z Bond Plumbers Roof & Gutter Grey 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.

#### **Packaging**

The standard packaging for Z Bond Plumbers Roof & Gutter Grey is 300ml polyethylene cartridges. We can pack it into many different containers, please contact your local agent for details of minimum order size, lead-time and dispensing methods.

#### **Long Life Reliability**

Z BOND Plumbers Roof & Gutter Grey has excellent natural aging 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	9 Minutes	BS 5889
Tack Free Time	30 Minutes	ASTM C679
Tooling Time	10 Minutes	ASTM C679
Sag or Slump	Nil	BS5889



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### **Cured Properties**

Property	Mean Result Achieved	Test Method
Shore A Hardness	22	ASTM C 661
Modulus at 100% Elongation	0.4MPa	ASTM D 412
Tensile Strength	1.10MPa	ASTM D 412
Elongation at Rupture	630%	ASTM D 412
Peel Strength after UV through Glass	50N/25mm	BS5889
Dynamic Movement Capacity	± 20%	ASTM C 920
Accelerated Aging and Weathering	Excellent	ASTM C 792

### **Temperature**

	Minimum	Maximum
Application Temperature	-10°C	+40°C
Service Temperature	-50°C	+150°C

Application of the sealant at -10°C is permissible provided the surface to receive the silicone is dry and free of frost. The maximum service temperature listed is for transient temperatures; the silicone sealant will deteriorate if subjected to these temperatures on a continuous basis.

### **Effect on Water Quality**

Z Bond Plumbers Roof & Gutter meets the requirements of Australian Standard AS 4020-1994 "Products for use in contact with water intended for human consumption with regard to their effect on the quality of water". The Australian Water Quality Centre completed the testing to this standard.

### **Colours**

Grey

## **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 **Z BOND Plumbers Roof & Gutter Grey** is ± 20. The Data Sheet on Joint Design contains the formula for calculating the required joint width from the expected joint movement and the dynamic movement capability of the sealant.

The joint design must avoid three-sided adhesion.

The sealant depth for a weatherseal is normally half the joint width. The minimum acceptable joint depth is 6mm; therefore, if the required joint width is 6mm the depth is also 6mm.

### **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.

### **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 solvent such as Z Bond R-40, IPA or White Spirits. Typical substrates are glass, aluminium and Zinalume®. For porous surfaces such as concrete, abrade the surface to remove loose particles, release and curing agents. 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 the manufacturer or your distributor for more information.

### **Curing**

Z BOND Plumbers Roof & Gutter Grey cures by absorbing atmospheric moisture, it will skin over in 9 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 Rhodia Australia Pty. Ltd. 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 **Z BOND Plumbers Roof & Gutter Grey** is 9 months from the date of manufacture when stored below 25°C and below 50% relative humidity.

## **Limitations**

Z BOND Plumbers Roof & Gutter Grey 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)
- N. B. This product is suitable for some applications where the sealant is in contact with water for extended periods. Please contact Rhodia Australia Pty. Ltd. to confirm your design details before commencing such an application.
- Below Grade Applications
- Stone (We recommend the completion of a stain testing program before using any sealant on stone), and
- Horizontal walkways.
- This silicone is not paintable. If there is, a requirement to paint the sealant our recommendation is to use our Rhodorsil Multi Purpose silicone sealant or Z Bond Gap Filler acrylic sealant products. Follow both the sealant and paint manufacturers painting instructions carefully, when painting sealants.

## **Health and Safety**

**Z BOND Plumbers Roof & Gutter Grey** is not classified as Dangerous Good but is classified as a Hazardous Substance according to the ADG Code and Worksafe Australia respectively. The product however, should be used in accordance with good occupational, health and safety practices. May cause irritation if swallowed, moderately irritating to eyes. Repeated or prolonged skin contact may lead to irritation. High concentrations of vapour may irritate respiratory tract. Releases methylethylketoxime (meko) until fully cured.

Do not swallow and avoid contact with the skin as this may cause sensitisation. If contact with the eyes occurs, wash eyes with copious quantities of water and consult a doctor if irritation persists.

The Material Safety Data Sheet defining the known hazards and describing the appropriate safety precautions with respect to the product is available through Rhodia Australia Pty. Ltd.

## **Important Notice for Users**

***RHODIA'S SOLE WARRANTY IS THAT ITS PRODUCTS WILL MEET RHODIA'S THEN CURRENT SALES SPECIFICATIONS, WHICH ARE AVAILABLE THROUGH ITS COMMERCIAL AGENCY.***

We based the Information and data contained in this publication on our current knowledge of the product. The properties of individual batches of sealant may vary from the results published as mean results achieved, however our Quality Control System will ensure they are always within an acceptable tolerance of the published figures. As the application, use and processing of the product are beyond our control Rhodia disclaims any warranty for fitness for use or for a particular purpose. Rhodia Australia Pty. Ltd. provides a comprehensive testing service, in our Quality Control Laboratory. Where particular performance criteria are required we strongly recommend that a testing program be carried out, prior to the commencement of the project.

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

\* Z Bond is a registered trademark of RHODIA