

# PRODUCT SPECIFICATION SHEET

## BELZONA 5711

FN10212



### GENERAL INFORMATION

#### Product Description:

A high performance, two component, solvent free system for the repair of erosion and impact damage on the leading edge of wind turbine blades. For use in repair situations or Original Equipment Manufacture (OEM). **Belzona 5711** is optimised for ease of application and rapid cure. **Belzona 5711** is designed to be used in combination with **Belzona 5721** to provide long lasting protection against rain erosion and impact damage.

### APPLICATION INFORMATION

#### Application Methods

Applicator  
Former

#### Application Temperature

Application should occur in the following ambient temperature range:  
5 °C/41 °F to 40 °C/104 °F.

#### Volume Capacity

254 cm<sup>3</sup> (15.5 cu.in)/400 g cartridge.

#### Cure Time

The cure time is dependent on ambient conditions. At 20 °C, the product will be sandable/hard dry after 60 minutes. Allow to cure for the times shown in the Belzona IFU before subjecting it to the conditions indicated.

#### Base Component

Appearance Thixotropic paste  
Colour Grey  
Density 1.73 - 1.75 g/cm<sup>3</sup>

#### Solidifier Component

Appearance Thixotropic paste  
Colour White  
Density 1.23 - 1.25 g/cm<sup>3</sup>

#### Mixed Properties

Appearance: Thixotropic paste  
Colour: Light Grey  
Density 1.57 g/cm<sup>3</sup>  
Slump resistance: >6mm/0.25 in  
VOC content (ASTM D2369 / EPA ref. 24): 0.05% / 0.71 g/L

#### Mix Ratio

Mixing Ratio by Weight (Base : Solidifier) 2.8 : 1  
Mixing Ratio by Volume (Base : Solidifier) 2 : 1

#### Overcoat Window

Overcoat times will be dependent on ambient conditions. At 20 °C and 50% humidity, the minimum overcoat time will be 30 minutes. The maximum overcoat time will be 24 hours. Consult the Belzona IFU for specific details.

#### Working Life

The working life will vary depending on ambient conditions. At 20 °C/68 °F and 50% relative humidity, the usable life of mixed material will typically be 12 minutes. Consult the Belzona IFU for specific details.

*The above application information serves as introductory guide only.  
For full application details including the recommended application procedure/technique, refer to the Belzona IFU.*

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### ABRASION

#### Taber

The Taber abrasion resistance determined in accordance with ASTM D4060 with 1 kg load is typically:

#### CS17 Wheels (Dry)

17 mm<sup>3</sup> loss per 1,000 cycles                      20 °C/68 °F cure & test

### ADHESION

#### Pull off Adhesion

The PosiTest Dolly Pull Off strength on GRP composite, as determined in accordance with ASTM D4541 and ISO 4624, will typically be:

10.6 MPa / 1,540 psi\*                                      20 °C/68 °F cure & test

*\*Cohesive failure of GRP composite*

The PosiTest Dolly Pull Off strength on 10 mm thick grit blasted mild steel, as determined in accordance with ASTM D4541 and ISO 4624, will typically be:

28.6 MPa / 4,149 psi\*                                      20 °C/68 °F cure & test

*\*Cohesive failure of Belzona 5711*

#### Tensile Shear Adhesion

The tensile shear adhesion on grit blasted mild steel, as determined in accordance with ASTM D1002, will typically be:

19.62 MPa / 2,845 psi                                      20 °C/68 °F cure & test

#### Cleavage Adhesion

The cleavage adhesion on grit blasted mild steel, as determined in accordance with ASTM D1062, will typically be:

257 N/mm / 1,468 pli                                      20 °C/68 °F cure & test

### COMPRESSIVE PROPERTIES

When determined in accordance with ASTM D695, typical values will be:

#### Compressive Yield Strength

54.09 MPa / 7,845 psi                                      20 °C/68 °F cure & test

#### Compressive Modulus

1,111 MPa / 1.61 x 10<sup>5</sup> psi                                      20 °C/68 °F cure & test

### FLEXURAL PROPERTIES

When determined in accordance with ASTM D790, typical values will be:

#### Flexural Strength

49.5 MPa / 7,179 psi                                      20 °C/68 °F cure & test

#### Flexural Modulus

3,835 MPa / 5.56 x 10<sup>5</sup> psi                                      20 °C/68 °F cure & test

### HARDNESS

#### Shore D

The Shore D hardness of the material tested to ASTM D2240 is typically:

84    20 °C/68 °F cure & test

#### Barcol (Model 935)

The Barcol hardness of the material tested to ASTM D2583 is typically:

80    20 °C/68 °F cure & test

### HEAT RESISTANCE

#### Heat Distortion Temperature (HDT)

When determined in accordance with ASTM D648, the HDT will typically be:

59 °C / 138 °F    20 °C/68 °F cure & test

### IMPACT STRENGTH

#### Izod Impact

When tested in accordance with ASTM D256, the reverse notched impact strength will typically be:

6.52 kJ/m<sup>2</sup>    20 °C/68 °F cure & test

### SHELF LIFE

**Belzona 5711** shall have a shelf life of 3 years from date of manufacture when stored in the original unopened foil sachets between 5 °C (41 °F) and 30 °C (86 °F).

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### WARRANTY

This product will meet the performance claims stated herein when material is stored and used as instructed in the Belzona Information For Use leaflet. Belzona ensures that all its products are carefully manufactured to ensure the highest quality possible and are tested strictly in accordance with universally recognized standards (ASTM, ANSI, BS, DIN, ISO, etc.). Since Belzona has no control over the use of the product described herein, no warranty for any application can be given.

### AVAILABILITY AND COST

**Belzona 5711** is available from a network of Belzona Distributors throughout the world for prompt delivery to the application site. For information, consult the Belzona Distributor in your area.

### MANUFACTURER / SUPPLIER

Belzona Polymerics Ltd.  
Claro Road, Harrogate,  
HG1 4DS, UK

Belzona Inc.  
14300 N.W. 60th Ave.  
Miami Lakes, FL, 33014, USA

### HEALTH AND SAFETY

Prior to using this material, please consult the relevant Safety Data Sheets.

### TECHNICAL SERVICE

Complete technical assistance is available and includes fully trained Technical Consultants, technical service personnel and fully staffed research, development, and quality control laboratories.

The technical data contained herein is based on the results of long term tests carried out in our laboratories and to the best of our knowledge is true and accurate on the date of publication. It is however subject to change without prior notice and the user should contact Belzona to verify the technical data is correct before specifying or ordering. No guarantee of accuracy is given or implied. We assume no responsibility for rates of coverage, performance or injury resulting from use. Liability, if any, is limited to the replacement of products. No other warranty or guarantee of any kind is made by Belzona, express or implied, whether statutory, by operation of law or otherwise, including merchantability or fitness for a particular purpose.

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