

# PRODUCT SPECIFICATION SHEET

## BELZONA 5811DW2

FN10124



### GENERAL INFORMATION

#### Product Description:

A two component solvent free system applied by brush or spray for protection of metallic and non-metallic surfaces operating under immersion conditions in contact with water and aqueous solutions when potable water approval is required.

#### Application Areas:

When mixed and applied as detailed in the Belzona Instructions for Use (IFU), the system is ideally suited for application to the following:

- Cooling tower pans
- Submersible pumps
- Water Boxes
- Manholes
- Internal and external pipework
- Steel and concrete piling
- Valves
- Fittings
- Tanks

### APPLICATION INFORMATION

#### Working Life

Will vary according to temperature. At 68°F (20°C) the usable life of mixed material is 30 minutes.

#### Coverage Rate

Applied at a thickness of 10 mil (250 microns) per coat, a theoretical coverage rate of 43 sq.ft(4 m<sup>2</sup>)/litre should be achieved.

Refer to Belzona IFU for guidance with regard to practical coverage rates.

#### Cure Time

The cure time is dependent on ambient temperature. Allow to cure for the times shown in the Belzona IFU before subjecting it to the conditions indicated.

#### Base Component

Appearance Viscous liquid  
Colour Cream or Grey  
Density 1.56 - 1.60 g/cm<sup>3</sup>

#### Solidifier Component

Appearance Clear mobile liquid  
Colour Dark brown  
Density 0.96 - 1.00 g/cm<sup>3</sup>

#### Mixed Properties

Mixing Ratio by Weight (Base : Solidifier) 4 : 1  
Mixing Ratio by Volume (Base : Solidifier) 2.5 : 1  
Mixed Density 1.39 - 1.43 g/cm<sup>3</sup>

*The above application information serves as introductory guide only. For full application details including the recommended application procedure/technique, refer to the Belzona IFU which is enclosed with each packaged product.*

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### ADHESION

#### Tensile Shear

When tested in accordance with ASTM D1002, using metal substrates, grit blasted to a 3-4 mil (75-100 micron) profile, typical values will be:

	Ambient Cure	Post Cure
Aluminum	1,730 psi (11.9MPa)	2,040 psi (14.1MPa)
Mild steel	2,020 psi (13.9MPa)	3,250 psi (22.4MPa)
Copper	1,650 psi (11.4MPa)	2,030 psi (14.0MPa)
Stainless steel	2,340 psi (16.1MPa)	2,900 psi (20.0MPa)

#### Pull Off Adhesion

When tested in accordance with ASTM D 4541/ ISO 4624, the pull off strength from grit blasted steel will be typically:

4,450 psi (30.7MPa)

### COMPRESSIVE PROPERTIES

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

	Compressive Strength	Proportional Limit	Youngs Modulus
68°F/20°C cure & test	67.2 MPa 9,748 psi	19.8 MPa 2,867 psi	842.0 MPa 1.22 x 10 <sup>5</sup> psi
212°F/100°C cure & 68°F/20°C test	66.9 MPa 9,706 psi	53.2 MPa 7,719 psi	1,241.4 MPa 1.80 x 10 <sup>5</sup> psi

### ELECTRICAL PROPERTIES

When tested in accordance with ASTM D149, method A, with voltage rise of 2kV/s, typical value will be:

Dielectric strength 42.7 kV/mm

### ELONGATION & TENSILE PROPERTIES

When determined in accordance with ASTM D638, typical values will be:

	Cure temperature
<b>Tensile Strength</b> 2,411 psi (16.62 MPa) 4,714 psi (32.50 MPa)	68°F (20°C) 212°F (100°C)
<b>Elongation</b> 3.20% 1.82%	68°F (20°C) 212°F (100°C)
<b>Young's Modulus</b> 2.02x10 <sup>5</sup> psi (1,392 MPa) 4.51x10 <sup>5</sup> psi (3,110 MPa)	68°F (20°C) 212°F (100°C)

### FLEXURAL STRENGTH

When tested to ASTM D790 typical values obtained will be:

2,360 psi (16.3MPa)	ambient cure
4,240 psi (29.2MPa)	post cure

### HARDNESS

#### Shore D & Barcol Hardness

The Shore D and Barcol hardness, when determined in accordance with ASTM D2240 and ASTM D2583, will typically be:

	Ambient cure (68°F/20°C)	Post cure (212°F/100°C)
Shore D	75	75
Barcol 935	52	71

#### Koenig Pendulum

When tested to ISO 1522 the Koenig damping time of the coating will typically be :

82 seconds	ambient cure
126 seconds	post cure



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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 5811DW2** 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.

### HEALTH AND SAFETY

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

### MANUFACTURER / SUPPLIER

Belzona Limited,  
Claro Road, Harrogate,  
HG1 4DS, UK

Belzona Inc.  
14300 NW 60<sup>th</sup> Ave,  
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### 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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