

# PRODUCT SPECIFICATION SHEET

## BELZONA 7111

FN10171



### GENERAL INFORMATION

#### Product Description:

Cost-effective, two-component, 100% solids compound designed for use as a chocking or grouting material to endure the physical and thermal shock common to marine and industrial environments. Exhibits excellent non-shrinking property, high impact and compressive strength.

#### 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:

- Diesel Engines
- Gas engines
- Pumps
- Generators
- Compressors
- Reduction Gears
- Bearing Blocks
- Crane rails
- Other machinery

### APPLICATION INFORMATION

#### Application Methods

Casting by pouring

#### Application Temperature

Application should ideally occur in the following ambient temperature range: 55°F (13°C) to 95°F(35°C)

#### Volume Capacity

Belzona® 7111 should be applied as a chocking or grouting compound in depths of ½ in to 4 in (12 mm to 100 mm).

The theoretical volume capacity will be 266 in<sup>3</sup> (4360 cm<sup>3</sup>) /6.95 kg unit.

#### Cure Time

Cure times will vary depending on the ambient conditions.

Temperature	Cure Times
60°F (15°C)	48 hours
68°F (20°C)	24 hours
86°F (30°C)	12 hours

#### Mixed Properties

Color: Orange, Grey  
Density: 1.51 g/cm<sup>3</sup>  
Gel Time (BS 5350-B5): 45 minutes (68°F/20°C)

#### Mixing Ratio by Weight (base : solidifier)

14.5 : 1

Refer to 7111 IFU (Section 5 Solidifier Ratio Guide) for thickness greater than 1½" (38 mm) and when the steel surface temperature is above 77°F (25°C).

#### Working Life

The working life will vary according to the temperature. At 77°F (25°C), the usable life of mixed material will typically be 30 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 which is enclosed with each packaged product.*

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### COMPRESSIVE PROPERTIES

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

<b>Compressive Yield Strength</b>	
14930 psi (102.9 MPa)	68°F (20°C) cure & test
<b>Compressive Modulus</b>	
5.75 x10 <sup>5</sup> psi (3964 MPa)	68°F (20°C) cure & test

When determined in accordance with BS EN ISO 604, typical values will be:

<b>Compressive Strength</b>	
30908 psi (213.1 MPa)	16 hours cure at 158°F (70°C)

### TENSILE PROPERTIES

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

<b>Tensile Strength</b>	
6410 psi (44.2 MPa)	68°F (20°C) cure & test

### FLEXURAL PROPERTIES

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

<b>Flexural Strength</b>	
9580 psi (66.1 MPa)	68°F (20°C) cure & test
<b>Flexural Modulus</b>	
9.94x10 <sup>5</sup> psi (6853 MPa)	68°F (20°C) cure & test

### SHEAR PROPERTIES

When determined in accordance with ASTM D732, typical values will be:

<b>Shear Strength</b>	
6590 psi (45.4 MPa)	68°F (20°C) cure & test

### 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:

Mild steel	3,570 psi (24.6 MPa)
Stainless steel	2,900 psi (20.0 MPa)

#### Pull Off Adhesion

The PosiTest dolly pull off strength, as determined in accordance with ASTM 4541, will typically be:

Mild steel	3,880 psi (26.8 MPa)
Concrete*	980 psi (6.8 MPa)

\*Cohesive failure of substrate

### HARDNESS

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

	68°F (20°C) cure
<b>Shore D</b>	89.5
<b>Barcol</b>	40*

\* Barcol Impressor Model No. 934-1 used for determination.

### IMPACT RESISTANCE

#### Izod Pendulum

Izod impact strength, when determined in accordance with ASTM D256, will typically be:

Un-notched: 0.75 J/cm	68°F (20°C) cure & test
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### FIRE RESISTANCE

When determined in accordance with ASTM D635:

Self-Extinguishing

### CURING LINEAR SHRINKAGE

Curing Linear Shrinkage, when determined in accordance with Lloyd's Register's Rules, Pt.2, Chapter 14, Section 3.9.2, typical values will be:

0.16%	cure at 73.5°F (23°C)
0.43%	cure at 53.2°F (11.8°C)
0.83%	cure at 122°F (50°C)

### SHELF LIFE

Separate base and solidifier components shall have a shelf life of 3 years from date of manufacture when stored in their original unopened containers between 32°F (0°C) and 86°F (30°C).

### APPROVALS/ACCEPTANCES

The material has received recognition from organizations worldwide including:



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### WARRANTY

Belzona guarantees 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 further guarantees that all its products are carefully manufactured to ensure the highest quality possible and tested strictly in accordance with universally recognised 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 7111** 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 Material Safety Data Sheets.

### MANUFACTURER

Belzona Polymeric Limited  
Claro Road  
Harrogate HG1 4DS  
United Kingdom

Belzona Inc.  
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Miami Lakes, FL, 33014  
USA

### 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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