

# PRODUCT SPECIFICATION SHEET

## BELZONA 4411

FN10088



### GENERAL INFORMATION

#### Product Description:

A three-component system consisting of a colored thixotropic base, liquid solidifier, and aluminum oxide aggregate. The material is provided in two colors - Gray and Safety Yellow. The aggregate is dark gray or white. The system provides a durable non-slip surface on steel, concrete, quarry tile, or wood with excellent adhesion, wear and chemical resistance.

#### 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:

- Concrete floors, ramps or steps
- Quarry tile
- Terrazzo, kitchen and laboratory floors
- Shower and pool areas
- Chemical storage tank tops
- Metal ladder rungs
- Diamond plate walkways
- Aircraft wing walks
- Machinery and chemical work areas
- Loading docks and bays
- Warehouse forklift traffic
- Wooden decks
- Fiberglass boat decks
- Building entrances
- Incorporated decorative logos

### APPLICATION INFORMATION

#### Cure Time

Allow the system to solidify for the times shown in the Belzona IFU before subjecting it to the conditions indicated.

#### Coverage Rate

Depends on the choice and location of aggregate and nature of the substrate. As a practical guide, an 800 gm. unit will cover 13.7-25sq.ft. (1.25-2.30 m<sup>2</sup>).

#### Volume Capacity

43 cu.in. (713 cm<sup>3</sup>) per 800 gm unit.

#### Base Component

Appearance	Thixotropic liquid
Colour	Yellow or Gray
Gel Strength	>200 gcm
Specific Gravity	1.17 - 1.25
Sag Index (mixed)	Min. 40 mils (1 mm)

#### Solidifier Component

Appearance	Clear Liquid
Viscosity	1 - 2 poise at 77°F (25°C)
Specific Gravity	1.00

#### Aggregate Component

##### Belzona® 9211 (Supergrip)

Al <sub>2</sub> O <sub>3</sub> content typically	95.2%
Density	3.95g/cm <sup>3</sup>
Sieve analysis:	
12 mesh	100% passing
16 mesh	0-20% retained
18 mesh	min 45% retained
18-20 mesh	min 70% retained
25 mesh	max 3% passing

##### Belzona® 9221 (Surefoot White)

Al <sub>2</sub> O <sub>3</sub> content typically	95.2%
Density	3.94g/cm <sup>3</sup>
Sieve analysis:	
18 mesh	100% passing
25 mesh	0-25% retained
30 mesh	min 45% retained
30-35 mesh	min 65% retained
40 mesh	max 3% passing

#### Mixing Ratio

Base : Solidifier	
by weight	2.5 : 1
by Volume	2.0 : 1
Aggregate	As desired

*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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### ABRASION

#### Taber

When the resin system (no aggregate) is tested in accordance with ASTM D4060 with H10 wheels dry, 1kg load, typical loss per 1,000 cycles is:

124 mm<sup>3</sup>

### ADHESION

#### Tensile Shear

When tested in accordance with ASTM D1002 the tensile shear adhesion to grit blasted, mild steel is typically:

3,500 psi (24.1 MPa).

#### Pull Off (Positest)

When tested in accordance with ASTM D4541 typical adhesion values will be:

Dry concrete 930 psi (6.41 MPa)\*

Damp concrete 1040 psi (7.17 MPa)\*

Dry, grit blasted quarry tile 2330 psi (16.1 MPa)\*

Dry, grit blasted quarry tile after total water immersion 2110 psi (14.5 MPa)\*

\* Failure in the substrate material

### CHEMICAL RESISTANCE

Once fully cured, the material will demonstrate excellent resistance to a broad range of chemicals.

\* For a more detailed description of chemical resistance properties, refer to relevant Chemical Resistance chart.

### COLOR STABILITY

The color stability of the coating alone should show no more than very slight discoloration after 100 hours exposure to artificial weather conditions in the QUV Accelerated Weathering Tester. The use of the aggregate will extend color stability. Indoor color stability is excellent.

### COMPRESSIVE PROPERTIES

#### Compressive Strength

When tested in accordance with ASTM D695 typical values will be:

7,600 psi (52.4 MPa).

### FLEXURAL PROPERTIES

#### Flexural Strength

When tested in accordance with ASTM D790 typical values will be:

7,800 psi (53.8 MPa).

### HEAT RESISTANCE

#### Heat Distortion Temperature (HDT)

Tested to ASTM D648 (264 psi fiber stress) typical values will be:

109°F (43°C).

#### Heat Resistance

For many typical applications, the product is thermally stable to 392°F (200°C).

### IMPACT PROPERTIES

#### Izod Impact

The material, when tested in accordance with ISO 180 using notched test pieces is typically:

9.8 kJ/m<sup>2</sup>.

#### Falling Weight

When tested in accordance with ASTM D2794 typical impact strength values will be:

59 inch-lb (6.6Nm).

### SHELF LIFE

Separate base and solidifier components shall have a shelf life of 5 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:

U.S.D.A.  
GENERAL MOTORS  
FORD  
FLORIDA DEPARTMENT OF TRANSPORT  
PAPER BOARD INDUSTRIES CORPORATION

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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 4411** 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 Polymerics Ltd.  
Claro Road, Harrogate,  
HG1 4DS, UK

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