

# PRODUCT SPECIFICATION SHEET

## BELZONA 1811

FN10039



### GENERAL INFORMATION

**Product Description:**

A two component system for repairing and protecting surfaces against abrasive attack. The product is based on high molecular weight polymers and oligomers incorporating abrasion resistant ceramic aggregates. This material may be applied from 1/4 inch (6 mm) to unlimited thickness onto horizontal or vertical surfaces.

**Application Areas:**

The system protects the substrate from abrasive attack and is ideally suited for application to:

- Pipe bends
- Wear plates
- Chutes and hoppers
- Centrifuges
- Deflector screens
- Mixing bowls

### APPLICATION INFORMATION

**Working Life**

Will vary according to temperature. At 68°F (20°C) the usable life of mixed material is 60 minutes.

**Cure Time**

Will be reduced for thicker sections and extended for thinner applications. At a thickness of approximately 1/4 in. (6 mm), allow to solidify for the times shown in the Belzona IFU before subjecting it to the conditions indicated.

**Coverage Rate**

Each 1 kg applied at 1/4 inch (6 mm) thickness will cover approximately 0.82 sq.ft. (0.077 sq.m.).

**Volume Capacity**

28 cu.ins. (459 cc) per kg.  
56 cu.ins. (917 cc) per 2kg unit.  
560 cu.ins. (9.17 litre) per 20kg unit.

**Base Component**

Appearance Granular thixotropic paste  
Color Black  
Density 2.25 - 2.65 g/cm<sup>3</sup>

**Solidifier Component**

Appearance Thixotropic gel  
Color Red  
Density 1.08 - 1.12 g/cm<sup>3</sup>

**Mixed Properties**

Mixing Ratio by Weight (Base : Solidifier) 8.5 : 1  
Mixing Ratio by Volume (Base : Solidifier) 4 : 1  
Mixed Density 2.18 g/cm<sup>3</sup>  
Useable Life at 68°F (20°C) 60 mins  
at 41°F (5°C) 180 mins  
Tack Free Time at 68°F (20°C) 3 hours  
at 41°F (5°C) 8 hours  
Slump Resistance nil at 0.5 inch (12.7 mm)

*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

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

H10 Wheels (Wet)	57 mm <sup>3</sup> loss per 1000 cycles
CS17 Wheels (Dry)	7 mm <sup>3</sup> loss per 1000 cycles

### ADHESION

#### Tensile Shear

When tested in accordance with ASTM D1002, using degreased strips, grit blasted to a 3-4 mil profile, typical values will be:

2,400 psi (169 kg/cm<sup>2</sup>)

### CHEMICAL RESISTANCE

While specifically designed for dry heat abrasion resistance, exhibits excellent chemical resistance to most commonly found chemical substances including inorganic acids and bases.

### COMPRESSIVE PROPERTIES

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

#### Compressive Yield Strength

11,300 psi (794 kg/cm<sup>2</sup>)

### FLEXURAL PROPERTIES

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

#### Flexural Strength

5,400 psi (380 kg/cm<sup>2</sup>)

### HEAT RESISTANCE

#### Heat Distortion Temperature (HDT)

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

120°F (49°C)

#### Dry Heat Resistance

The indicated degradation temperature in air based on Differential Scanning Calorimetry (DSC) operated in accordance with ISO11357 is typically 392°F (200°C).

For many applications the product is suitable down to -40°F (-40°C).

For many typical applications of dry abrasion, the product is suitable up to 300°F (150°C).

### SHELF LIFE

Separate base and solidifier components shall have a shelf life of at least 5 years when stored between 32°F (0°C) and 86°F (30°C).

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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 1811** 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 Polymerics Ltd.  
Claro Road, Harrogate,  
HG1 4DS, UK

Belzona Inc.  
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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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ISO 9001:2008  
Q 09335  
ISO 14001:2004  
EMS 509612

Manufactured under an ISO 9000  
Registered Quality Management System

