

## 1. PRODUCT NAME

**Belzona® 8111  
(Mouldable Wood)**

A versatile material for rebuilding, repairing and casting applications.

## 2. MANUFACTURER

**Belzona Inc.,**  
2000 N.W. 88th Court  
Miami, Florida 33172

**Belzona Polymerics Ltd.,**  
Claro Road, Harrogate,  
HG1 4AY, England.

## 3. PRODUCT DESCRIPTION

A two part material comprising a reactive fibrous wood powder and reactive liquid. The material has good adhesion to most rigid materials and in particular the material has excellent electrical properties and may be used as an electrical insulator.

### Applications

Windows  
Door frames  
Wooden steps  
Ramps  
Trailer bottoms  
Floors  
Gymnasium floors  
Furniture  
Fiberglass boats  
Fiberglass moldings  
Antique carvings  
Historical restorations  
Electrical insulation  
Electrical components

## 4. TECHNICAL DATA

### Fibrous Wood Powder

|                  |                        |
|------------------|------------------------|
| Appearance       | Fine, lump-free powder |
| Color            | Pale cream             |
| Specific Gravity | 2.0 - 2.1              |
| Odor             | None                   |

### Reactive Liquid Component

|            |                                  |
|------------|----------------------------------|
| Appearance | Clear to slightly hazy liquid    |
| Color      | Amber                            |
| Viscosity  | 4.75 - 7.75 Poise at 77°F (25°C) |
| Density    | 1.11 - 1.13 g/cm <sup>3</sup>    |

### Mixed Properties

There is no fixed mixing ratio, the fibrous wood powder component may be added in variable quantities to achieve any desired consistency.

A mixing ratio of 3 parts by weight of reactive liquid to 2 parts by weight of fibrous wood powder will produce a smooth paste. This paste will exhibit no slump at 1/4 inch (6 mm) thick film.

A mixing ratio of 3 parts by weight of reactive liquid to 1 part by weight of fibrous wood powder will produce a liquid-like consistency ideal for casting any desired shape.

### • Shelf Life:

Fibrous wood powder and reactive liquid will have a shelf life of at least 3 years when stored between 32°F (0°C) and 86°F (30°C).

### • Working Life:

The usable life of material after the commencement of mixing will vary with temperature.

|             |            |
|-------------|------------|
| 40°F (5°C)  | 20 minutes |
| 59°F (15°C) | 12 minutes |
| 77°F (25°C) | 8 minutes  |

### • Volume Capacity:

At mixing ratio of 3 parts reactive liquid to 2 parts fibrous wood powder the volume capacity of mixed material is 43.3 in.<sup>3</sup> (710 cm<sup>3</sup>) per kg.

### • 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 chart below before subjecting it to the conditions indicated.

## 5. PHYSICAL/MECHANICAL PROPERTIES

Determined after 7 days cure at 77°F (25°C).

### • Adhesion:

When tested to ASTM D1002 typical values will be:

|            |                                                                 |
|------------|-----------------------------------------------------------------|
| Metal      | 1,500 psi (105 kgs/cm <sup>2</sup> )                            |
| Mahogany   | 1,000 psi (70 kgs/cm <sup>2</sup> )                             |
| Wood       | In general greater than the cohesive strength of the substrate. |
| Fiberglass |                                                                 |
| Asbestos   |                                                                 |
| Masonry    |                                                                 |

### • Chemical Resistance:

The chemical resistance is excellent when compared to conventional wood fillers. For further details contact your local Belzona® Technical Consultant.

### • Compressive Strength:

When tested in accordance with ASTM D695, typical values obtained will be 12,000 psi (844 kgs/cm<sup>2</sup>).

### • Electrical Properties:

#### Dielectric Strength

Tested to ASTM D149 is typically 10.7 kv/mm.

#### Dielectric Constant

Tested to ASTM D150 is typically 4.2.

#### Loss Tangent

Tested to ASTM D150 is typically 0.047.

#### Volume Resistivity

Tested to ASTM D257 is typically 2.1 x 10<sup>14</sup> ohm cm.

#### Surface Resistivity

Tested to ASTM D257 is typically 8.2 x 10<sup>14</sup> ohm.

### CURE TIMES

| TEMPERATURE                    | 41°F (5°C) | 50°F (10°C) | 59°F (15°C) | 68°F (20°C) | 77°F (25°C) | 86°F (30°C) |
|--------------------------------|------------|-------------|-------------|-------------|-------------|-------------|
| Machining and/or light loading | 40 min     | 30 min      | 20 min      | 15 min      | 10 min      | 5 min       |
| Full mechanical loading        | 60 min     | 40 min      | 30 min      | 20 min      | 15 min      | 10 min      |

• **Flexural Strength:**

When tested to ASTM D790, typical values obtained will be 3,500 psi (246 kgs/cm<sup>2</sup>).

• **Hardness:**

The hardness of the material when tested to ASTM D2240 is typically 84 Shore D.

• **Heat Resistance:**

Thermally stable to 140°F (60°C) wet and 212°F (100°C) dry.

• **Shrinkage:**

The material has a volumetric shrinkage of approximately 1 - 1.5%.

**6. SURFACE PREPARATION AND APPLICATION PROCEDURES**

For proper technique, refer to the Belzona® Instructions For Use leaflet which is enclosed with each packaged product.

**7. AVAILABILITY AND COST**

Belzona® 8111 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.

**8. WARRANTY**

Belzona® guarantees this product will meet the performance claims stated herein when material is stored and used as instructed in the Belzona® Instructions 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, etc.). Since Belzona® has no control over the use of the product described herein, no warranty for any application can be given.

**9. TECHNICAL SERVICES**

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

**10. HEALTH AND SAFETY**

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

**11. APPROVALS/ ACCEPTANCES**

U.S.D.A.  
ELECTRICORP MARKETING

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**Belzona® 8111 - Product Specification Sheet (2)**