BELZONA 8111 Product Specification Sheet

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 4DS, 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/cm³

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 ¼ 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 in³ (710 cm³) per kg.

• Cure Time:
Will be reduced for thicker sections and extended for thinner applications. At a thickness of approximately ¼ 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/cm²)
Mahogany		1,000 psi (70 kgs/cm²)
Wood	)	In general greater than
Fiberglass	)	the cohesive strength
Asbestos	)	of the substrate.
Masonry	)	

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

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

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• Compressive Strength:
When tested in accordance with ASTM D695, typical values obtained will be 12,000 psi (844 kgs/cm²).

• 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 2.1×10^{14} ohm cm.

Surface Resistivity
Tested to ASTM D257 is typically 8.2×10^{14} ohm.

• Flexural Strength:
When tested to ASTM D790, typical values obtained will be 3,500 psi (246 kgs/cm²).

• 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

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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BELZONA®
Repair • Protect • Improve

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