BELZONA 4141 Product Specification Sheet

1. PRODUCT NAME

Belzona® 4141 (Magma-Build)
For rebuilding damaged vertical or overhead concrete surfaces.

2. MANUFACTURER

Belzona Inc.,
2000 NW 88th Court,
Miami, Florida 33172.

Belzona Polymerics Ltd.,
Claro Road, Harrogate,
HG1 4DS, England.

3. PRODUCT DESCRIPTION

A two-component system consisting of a base aggregate and solidifier. Contains high molecular weight polymer, filled with low density, non-metallic aggregate. This material is a lightweight, non-porous concrete repair compound specifically designed for rebuilding severely damaged or worn vertical/overhead concrete surfaces. The product can be applied up to **5 inches** (12.7 cm) thick on a vertical surface and up to **3 inches** (7.6 cm) thick on an overhead surface with minimal support during application. Fixed shuttering or formwork are not required. Is ideal for both external or internal masonry. To ensure excellent adhesion to the substrate, a primer **Belzona® 4911** (Magma TX Conditioner), is used with the product.

Applications
Spalled concrete.
Refurbishment of decorative moldings.
Window sills.
Archways.
Walls.
Bridges.
Weathered stonework.
Cosmetic repairs.

4. TECHNICAL DATA

Base Aggregate Component

Appearance	Damp sand
Color	Gray or Stone
Density	0.80 g/cm³

Solidifier Component

Appearance	Clear mobile liquid
Color	Amber
Density	0.98 g/cm³

Mixing Ratio

(Base : Solidifier)	
by Weight	8 : 1
by Volume	13 : 1

Belzona® 4911 Base

Appearance	Thixotropic liquid
Color	Opaque
Sag Index	0.05 in. (1.27mm) minimum
Density	1.20 g/cm³

Belzona® 4911 Solidifier

Appearance	Liquid
Color	Clear
Viscosity	8 - 12 poise at 77°F (25°C)
Density	1.02 g/cm³

Belzona® 4911 Mixing Ratio

(Base : Solidifier)	
by Weight	5 : 2
by Volume	2 : 1

• ***Shelf Life:***
Separate base and solidifier components will have a shelf life of 5 years when stored between 32°F (0°C) and 86°F (30°C) .

• ***Working Life:***
Will vary according to temperature. At 77°F (25°C), use all mixed material within 20 minutes.

• ***Volume Capacity:***
The volume capacity of the system is approximately 671 in³ (11,000 cm³) per 8 kg unit.

• ***Cure Time:***
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 68°F(20°C).

• ***Abrasion Resistance:***
Taber
Using CS17 grinding wheels and 1 kg load tested dry, volume loss per 1,000 cycles is typically 0.03 in³ (530 mm³).

• ***Adhesion:***
Positest Dolly Pull-Off (ASTM D4541)
Dry concrete 680 psi (48 kg/cm²)*
Wet concrete 650 psi (46 kg/cm²)*
** Substrate failure*

• ***Chemical Resistance:***
The material offers good resistance to a broad range of chemicals. Please refer to Product Data Q505.

• ***Compressive Strength:***
Tested in accordance with ASTM D695 is typically 5,400 psi (380 kg/cm²).

• ***Flexural Strength:***
Tested in accordance with ASTM D790 is typically 2,450 psi (172 kg/cm²).

• ***Heat Distortion Temperature:***
Tested in accordance with ASTM D648 (264 psi fiber stress) is typically 113°F (45°C).

• ***Heat Resistance:***
For many typical applications, the product is thermally stable to 300°F (149°C) dry and 140°F (60°C) wet, and down to -40°F (-40°C).

CURE TIMES

Temperature	41°F (5°C)	59°F (15°C)	77°F (25°C)	86°F (30°C)
Dimensionally stable	10 hrs	4 hrs	2 hrs	1 hr
Full mechanical strength	3 days	1 day	12 hours	6 hrs
Full chemical resistance	12 days	6 days	3 days	1 day

• Izod Impact Strength:
Tested to ASTM D256 using notched test pieces is typically 1.02 kJ/m²).

• Sag Resistance:
At 68°F (20°C) material shows no signs of slump at 4 inches.

• Thermal Expansion:
Tested to ASTM E228 the coefficient of thermal expansion is typically 30 ppm/°C.

6. SURFACE PREPARATION AND APPLICATION PROCEDURES

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

7. AVAILABILITY AND COST

Belzona® 4141 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.

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.

Nothing in the foregoing statement shall exclude or limit any liability of Belzona to the extent such liability cannot by law be excluded or limited.

Copyright © 2011 Belzona International Limited. Belzona® is a registered trademark.

ISO 9001:2008
Q 09335
ISO 14001:2004
EMS 509612

Manufactured under an ISO 9000 Registered Quality Management System

BELZONA®
Repair • Protect • Improve

Printed in England Publication No. 156-3-11