



World leaders in the conservation of man-made resources and the environment

# PRODUCT SPECIFICATION SHEET

## BELZONA® 4221

### 1. PRODUCT NAME

#### **Belzona® 4221 (Magma-Seal)**

A protective waterproofing coating for concrete, brick, masonry and stucco surfaces which prevents water seepage through porous structures.

### 2. MANUFACTURER

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

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

### 3. PRODUCT DESCRIPTION

A two component acrylic polymer modified hydraulic cement formulated to provide a protective waterproof coating. The material is easily brushable and will waterproof the substrate. The unique balance of organic and inorganic constituents allows a molecular reaction to take place resulting in optimum adhesion, resilience, flexibility, toughness, durability and weatherability. The material fills small holes, surface cracks, imperfections, honeycombs, rough or otherwise defective areas in concrete structures. Permanently seals aged brick, block, cast-in-place and precast concrete above or below ground.

#### Applications

Concrete  
Brick  
Masonry  
Stucco  
Walls  
Basements  
Cellars  
Tanks  
Pipes  
Tunnels  
Sumps  
Grain Pits  
Elevator Pits

### 4. TECHNICAL DATA

#### Base Component

|            |                |
|------------|----------------|
| Appearance | Powder         |
| Color      | White or Gray  |
| Odour      | Little or none |

#### Solidifier Component

|                  |                |
|------------------|----------------|
| Appearance       | Liquid         |
| Color            | Amber          |
| Odour            | Little or none |
| Specific gravity | 1.06           |

#### Mixing Ratio

If stored in sealed container between 41°F (5°C) and 86°F (30°C) the material will have a guaranteed minimum shelf life of 2 years.

#### • **Shelf Life:**

If stored in sealed container between 41°F (5°C) and 86°F (30°C) the material will have a guaranteed minimum shelf life of 2 years.

#### • **Working Life:**

The useable life of mixed material is a minimum of one hour at 68°F (20°C). Keep mixed materials stirred during application.

#### • **Coverage Rates:**

A 20 kg unit will cover 140 - 150 sq.ft. (13 - 14 sq.m.) per coat at a film thickness of 25 mils (0,625 mm) per coat.

#### • **Overcoating Time:**

Apply a second coat once the first coat has become touch dry (approximately 6 - 8 hours). If more than 24 hours elapse before application of the second coat, wet the surface prior to application.

### 5. PHYSICAL / MECHANICAL PROPERTIES

Determined after 28 days cure at 77°F (25°C).

#### • **Abrasion Resistance:**

##### Taber

The Taber abrasion resistance with 1 kg load is typically:  
CS17 Wheels (Dry) 96 mm<sup>3</sup>  
loss per 1000 cycles

#### • **Chemical Resistance:**

**Belzona® 4221** is not formulated as a chemical resistant tank lining material. It will withstand dilute acids and alkalis (less than 5%) and is totally unaffected by organic chemicals such as xylene, gasoline, ethyl alcohol and skydrol. For environments other than very mild chemical exposure, the cured **Belzona® 4221** should be overcoated with a suitable chemical resistant Belzona® coating such as **Belzona® 4311**.

#### • **Compressive Strength:**

The compressive strength of the material when tested to ASTM D695 is typically 3700 psi (260 kgs/cm<sup>2</sup>).

#### • **Flexural Strength:**

The flexural strength of the material when tested to ASTM D790 is typically 1160 psi (81,5 kgs/cm<sup>2</sup>).

#### • **Tensile Strength:**

The tensile strength of the material when tested in accordance with ASTM D1002 is typically 690 psi (48,5 kgs/cm<sup>2</sup>).

## 6. SURFACE PREPARATION AND APPLICATION PROCEDURES

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

## 7. AVAILABILITY AND COST

**Belzona® 4221** 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.

**Belzona Polymerics Ltd.,**  
Claro Road,  
Harrogate, HG1 4AY,  
England.  
Tel: +44 (0) 1423 567641  
Fax: +44 (0) 1423 505967  
E-Mail: belzona@belzona.co.uk



BS EN ISO 9002 : 1994  
Certificate No. Q/09335



[www.belzona.com](http://www.belzona.com)

**Belzona Inc.,**  
2000 N.W. 88 Court,  
Miami, Florida 33172,  
U.S.A.  
Tel: +1 (305) 594 4994  
Fax: +1 (305) 599 1140  
E-Mail: belzona@belzona.com

Copyright © 2002 by Belzona International Limited. All rights reserved. Certain portions of this work copyright © 1996-2001 by Belzona International Limited. No part of this work covered by the copyrights hereon may be reproduced or used in any form or by any means - graphic, electronic or mechanical including photocopying, recording, taping or information storage and retrieval systems - without written permission of the publisher.

Belzona® is a registered trademark

Printed in England 11/02 UK

Private and Confidential - For Internal Use Only



**Belzona® 4221 - Product Specification Sheet (2)**