

# Belzona 4141

FN 10226

(MAGMA-BUILD)



## INSTRUCTIONS FOR USE

### 1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

Any surface to which **Belzona® 4141** is to be applied must be clean, firm and dry. Wash old concrete down with detergent to remove oil, grease and dust. Use clean water to wash away the detergent.

Remove all paint, tar and any other coatings.

Concrete suspected of carbonation should be thoroughly hammer tested to establish all areas of loose concrete. Hack off all loose concrete to expose corroded rebar, including hidden faces to the back of the rebar.

Abrade exposed rebar and other metallic surfaces to remove loose rust and flaking paint and then roughen by blasting, grinding or other suitable means to achieve a rough bright metal surface.

Stone, concrete or other masonry surfaces should be mechanically abraded or abrasive blasted to remove loose material.

Vacuum up any loose dust produced by surface preparation techniques.

Treat any surfaces to which **Belzona® 4141** should not adhere with **Belzona® 9411** (Release Agent) and leave for 15 - 20 minutes to dry before proceeding; seal porous surfaces to be treated with **Belzona® 9411** first, with a suitable lacquer, e.g. shellac or cellulose enamel.

### 2. CONDITIONING

Add the entire contents of **Belzona® 4911** (Magma TX Conditioner) Solidifier to **Belzona® 4911** Base and stir thoroughly until completely mixed. Immediately brush all of this conditioner onto the surface to be treated with **Belzona® 4141**, with a stiff bristled brush, not exceeding an area of 1.1 m<sup>2</sup> (12 sq.ft.) per 450g unit.

#### NOTES:

- For mixing small quantities of **Belzona® 4911** use:  
2 Parts Base : 1 Part Solidifier by Volume
- Conditioning and overcoating must be completed within the times shown opposite:

Ambient Temperature	Usable life after mixing	Minimum overcoating time	Maximum overcoating time*
5°C/41°F	230 min	Application can commence as soon as conditioning has been completed.	6 hours
10°C/50°F	105 min		6 hours
20°C/68°F	45 min		6 hours
30°C/86°F	20 min		6 hours
40°C/104°F	7 min		6 hours

- \* If the maximum overcoating time for the **Belzona® 4911** is exceeded, then the cured surface should be abraded and fresh **Belzona® 4911** applied.

### 3. COMBINING THE REACTIVE COMPONENTS

Mixing may be carried out in the large bucket supplied but due to the bulk and stiffness of the mixed materials, it is essential that a mechanical mixer is used to ensure complete mixing.

Add approximately half the Base component and all of the Solidifier component to the mixing container and start the mixer.

Once initial incorporation has been achieved, slowly add the remainder of the Base material and mix together thoroughly for approximately 5 minutes, or until an even colour and consistency are achieved. During this time periodically stop the mixer and withdraw the mixing paddle and scrape clean before continuing mixing.

#### NOTES:

##### 1. WORKING LIFE

From the commencement of mixing, **Belzona® 4141** must be used within the times shown below:

Temperature	Use all material within
5°C/41°F	80 min
10°C/50°F	50 min
20°C/68°F	30 min
30°C/86°F	20 min
40°C/104°F	15 min

To extend the working life of mixed **Belzona® 4141** spread the material out on a sheet of polyethylene and keep it in a cool place out of direct sunlight.

## 2. MIXING SMALL QUANTITIES

For mixing small quantities of **Belzona® 4141**, use:  
8 parts Base to 1 part Solidifier by weight, or  
13 parts Base to 1 part Solidifier by volume.

For convenience, measuring vessels of 1 litre and 77 cm<sup>3</sup> capacity are supplied with the product for measuring the components by volume. The Base component should be packed into the orange 1 litre container when measuring out.

## 3. VOLUME CAPACITY OF MIXED BELZONA® 4141

9,805 cm<sup>3</sup> (598 in<sup>3</sup>) per 8 kg unit.  
1,225 cm<sup>3</sup> (75 in<sup>3</sup>) per kg.

## 4. APPLYING BELZONA® 4141

The mixed **Belzona® 4141** is best applied by gloved hand, forcing the material firmly into the areas to be rebuilt leaving the **Belzona® 4141** proud of the surrounding area.

It can then be finished with a steel float or similar tool. Best results are obtained by continuously cleaning the float or tool with a clean damp cloth.

### NOTES:

#### 1. APPLICATION LIMITS

**Belzona® 4141** can be applied when the temperature is anywhere between 5°C (41°F) and 40°C (104°F).

#### 2. DAMP SURFACES

**Belzona® 4141** can be applied to damp surfaces, however, performance may be reduced. Note; excess water must be removed from the surface prior to application.

#### 3. APPLYING ADDITIONAL LAYERS OF BELZONA® 4141

Where this is required, the first layer must be left until it is firm. **Belzona® 4911** must be applied, followed by a further layer of **Belzona® 4141**. All of this must be completed within the maximum overcoating time of 6 hours.

If left longer than 6 hours, the surface of the **Belzona® 4141** must be abraded prior to the application of **Belzona® 4911** and **Belzona® 4141**.

## 4. COLOURING

**Belzona® 4141** is supplied in cement grey and stone colours but it can be tinted as required by initially mixing powder type concrete colouring additives such as Cementone with the Base Component. As a guide, an addition of 0.5-1.0% by weight of colorant is sufficient to give a strong colour with the lighter stone coloured material being easier to tint.

## 5. CLEANING

Mixing tools should be cleaned immediately after use with **Belzona® 9111** or any other effective solvent e.g. Methyl ethyl ketone (MEK). Application tools should be cleaned using a suitable solvent such as **Belzona® 9121**, MEK, acetone or cellulose thinners.

## 5. COMPLETION OF THE MOLECULAR REACTION

Allow **Belzona® 4141** to solidify for the following times before subjecting it to the conditions indicated:

Temperature	5°C (41°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
Dimensionally stable	8 hours	6 hours	3 hours	2 hours	1 hour
Full mechanical strength	3 days	2.5 days	2 days	16 hours	2 hours

## 6. SHELF LIFE

**Belzona® 4141** shall have a shelf life of 5 years from date of manufacture when stored in the original unopened containers between 5°C (41°F) and 30°C (86°F).

## HEALTH & SAFETY INFORMATION

Please read and make sure you understand the relevant Safety Data Sheets.

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