Belzona 4341

(MAGMA CR4)

BELZONA®
Repair • Protect • Improve

INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

APPLY ONLY TO CLEAN, FIRM, DRY AND WELL ROUGHENED SURFACES.

a) **SURFACE PREPARATION**

(i) Concrete Surfaces
Remove all paint, tar and other coatings, as well as any loose surface material, before application of **Belzona® 4341.**

Allow new concrete to cure for a minimum of 28 days or until the moisture content is below 6% using a Protimeter.

Horizontal concrete surfaces, as well as new concrete, will exhibit the phenomenon of laitence which must be removed prior to application.

Once existing concrete surfaces have been prepared in accordance with these recommendations, proceed to Section 1 (b) -"Conditioning".

NOTE:
All porous surfaces such as concrete require to be Conditioned with **Belzona® 4911** (Magma TX Conditioner).

(ii) Metallic Surfaces
Remove any rust, paint and other surface coatings or contaminants. Blast clean the metal surface to achieve the following standard of cleanliness:
ISO 8501-1 Sa 2½ very thorough blast cleaning
American Standard near white finish SSPC SP 10
Swedish Standard Sa 2½ SIS 05 5900

Minimum depth profile should be 3 mils (75 microns). Now proceed to Section 2 - "Combining the Reactive Components".

(iii) Areas Already Treated with Belzona® 4111 (Magma-Quartz)
Belzona® 4341 may be applied directly to **Belzona® 4111** without conditioning so long as the application takes place within 6 hours and the **Belzona® 4111** has been kept uncontaminated by foreign matter. In this case, proceed directly to Section 2 - "Combining the Reactive Components".

Where an existing **Belzona® 4111** application has been in service for longer than 6 hours, thoroughly clean and roughen the surface and then proceed to Section 2 - "Combining the Reactive Components".

b) **CONDITIONING**

Add the entire contents of **Belzona® 4911** (Magma TX Conditioner) Solidifier to **Belzona® 4911** Base and stir thoroughly until completely mixed.

Immediately brush the Conditioner onto the surface to be treated with **Belzona® 4341** not exceeding an area of 12 sq.ft. (1.1 m²) per 450g unit. Brush the **Belzona® 4911** well into the surface using a stiff bristled brush. Conditioning and overcoating must be completed within the times shown below:

Ambient Temperature	Usable life after mixing	Minimum overcoating time	Maximum overcoating time*
59°F/15°C	55 mins	Application can commence as soon as conditioning has been completed.	6 hours
68°F/20°C	45 mins		6 hours
77°F/25°C	32 mins		6 hours
86°F/30°C	20 mins		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.

2. COMBINING THE REACTIVE COMPONENTS

Add the entire contents of the **Belzona® 4341** Solidifier component to the Base unit.

Mix thoroughly until a completely homogeneous liquid, free of any streaks, is achieved.

NOTES:

1. MIXING AT LOW TEMPERATURES
To ease mixing when the material temperature is below 41°F (5°C), warm the Base and Solidifier modules until the contents attain a temperature of 68-77°F (20-25°C).

2. WORKING LIFE
From the commencement of mixing, **Belzona® 4341** must be used within the following times.

Temperature	50°F (10°C)	68°F (20°C)	86°F (30°C)
Use all material within	35 min.	15 min.	10 min.

3. MIXING RATIO
For mixing small quantities of **Belzona® 4341,** use:
8.82 parts Base to 1 part Solidifier by weight.

4. VOLUME CAPACITY OF MIXED BELZONA® 4341
60.7 cu.in. (994 cm³) per 1.5 kg unit.

3. APPLYING BELZONA® 4341

a) **Application Limits**
Belzona® 4341 can be applied when the temperature of the material, substrate and environment is anywhere between 59°F (15°C) and 86°F (30°C). Below 59°F (15°C), the material will be too stiff for easy mixing and application.

Above 86°F (30°C), the material may be somewhat fluid and will have a short usable life.

Reference must also be made to the cure times. Below 59°F (15°C), the rate of cure is drastically reduced and some external heat source must be used to effect full cure.

b) Apply the mixed material using a short bristled brush, applicator or squeegee to the prepared surface. Practical coverage rates will depend on the applied film thickness of the **Belzona® 4341** as well as the contour, shape and roughness of the prepared surface. As a guide, a 1.5 kg mix should be sufficient to cover an area of 24 sq.ft. (2.25 m²) at the recommended film thickness of 16 mils (400 microns).

Application to rough or irregular surfaces may reduce these coverage rates by 20 - 25%.

c) Apply a further coat of **Belzona® 4341** as in (b). Apply the second layer as soon as it is possible to do so without disturbing the first layer. Never apply product in excess of 24 hours when working at temperatures between 59°F (15°C) and 86°F (30°C).

d) If the maximum overcoating time for the **Belzona® 4341** is exceeded, then the cured surface should be abraded and fresh **Belzona® 4341** applied.

COLOR
Belzona® 4341 is available in different colors to facilitate application and to prevent misses. These colors are for identification only and there will be some variation between batches. In service the color of the applied product may change.

SPRAY APPLICATION
Suitable metal surfaces may be coated by spray.
Belzona® 4341 must be sprayed using heated plural airless equipment capable of metering accurately and mixing the two components. See **"Instructions for spraying Belzona® solvent free coatings".**

Mix ratio	**6.3:1 by volume**
Tip Temperature	**131-149°F (55-65°C)**
Tip pressure (minimum)	**4000 psi (275 bar)**
Tip size	**19-23 thou (0.48-0.58mm)**
	DO NOT THIN
Cleaning solvent	**Belzona® 9121, MEK or Acetone**

CLEANING
Mixing tools should be cleaned immediately after use with **Belzona® 9111** (Cleaner/Degreaser) or any other effective solvent e.g. MEK. Brushes, injection guns, spray equipment and other application tools should be cleaned using a suitable solvent such as **Belzona® 9121,** MEK, acetone or cellulose thinners.

4. COMPLETION OF THE MOLECULAR REACTION

Allow **Belzona® 4341** to solidify as below before subjecting it to the conditions Indicated:

Temperature	Light pedestrian traffic	Full chemical resistance
59°F/15°C	12 hours	7 days
68°F/20°C	8 hours	5 days
86°F/30°C	4 hours	3 days

NOTE: Below 59°F (15°C) solidification times will be significantly extended and the resultant chemical resistance capability of the **Belzona® 4341** will be reduced.

5. FORCE CURE FOR OPTIMUM CHEMICAL RESISTANCE

Allow **Belzona® 4341** to solidify for 12 hours at 68°F (20°C), then force cure the product at 180°F (80°C) for 4 hours, to attain maximum chemical resistance properties.

6. NON-SLIP SURFACES

Belzona® 4341 will solidify to a smooth, hard finish. As such for pedestrian traffic areas, it is strongly recommended that Belzona® Grip Systems Aggregate be broadcast into the **Belzona® 4341** immediately after application. The choice and amount of Aggregate will vary with the degree of non-slip desired. While personal safety will be enhanced, the ultimate chemical resistance of **Belzona® 4341** may be slightly reduced.

HEALTH & SAFETY INFORMATION
Please read and make sure you understand the relevant Material Safety Data Sheets.

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 © 2013 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. 13-04-13