Belzona 4341

FN10086 (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® 4911.** Horizontal concrete surfaces, as well as new concrete, will exhibit the phenomenon of laitance which must be removed prior to application. Allow new concrete to cure for a minimum of 28 days Floors should have an effective vapor barrier installed.

Test for presence of moisture either

a) In accordance with ASTM D4263 – plastic sheet method, or
b) Measure moisture content using Electronic Moisture Meter <6% moisture (<15%WME)

If test is positive for presence of moisture, test further by either

a) Measure Moisture Vapor Emission Rate in accordance with ASTM F 1869 - Anhydrous Calcium Chloride test. Acceptable if <3lbs/1000ft²/24 hours (15g/m²/24 hours), or
b) Measure Relative Humidity of concrete in accordance with ASTM F2170. Acceptable if <75%

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

COVERAGE RATES

Recommended number of coats	2
Target thickness 1st coat	16 mils (400 microns)
Target thickness 2nd coat	16 mils (400 microns)
Minimum total DFT	16 mils (400 microns)
Maximum total DFT	Only limited by sag resistance
Theoretical coverage rate 1st coat	26.7sq.ft (2.48m²)/1.5kg unit)
Theoretical coverage rate 2nd coat	26.7sq.ft (2.48m²)/1.5kg unit)
Theoretical coverage rate to achieve minimum recommended system thickness	26.7sq.ft (2.48m²)/1.5kg unit)

PRACTICAL COVERAGE RATES
Appropriate loss factors must be applied to the above coverage rates. In practice, many factors influence the actual coverage rate achieved. On rough surfaces such as pitted steel the practical coverage rate will be reduced. Application at low temperatures will also reduce practical coverage rates further.

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) **FIRST COAT**
Apply the **Belzona® 4341** directly on to the prepared surface with a stiff bristled brush or with the plastic applicator provided at the recommended coverage rate.

c) **SECOND COAT**
As soon as possible after application of the first coat, apply a further coat of **Belzona® 4341** as in (b) above. This time will be 3-4 hours at 68°F (20°C). The first coat must not be left longer than 24 hours before overcoating, irrespective of temperature. Should this occur, then the surface should be brush blasted or abraded before commencing application. Application to rough or irregular surfaces may reduce these coverage rates by 20 - 25%.

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 Safety Data Sheets.

Belzona products are manufactured under an ISO 9001 Registered Quality Management System

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