



BELZONA® 4231

INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

Any surface to which **Belzona® 4231** 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. Allow new concrete to cure for a minimum of 28 days or until the moisture content is below 6% using a Protimeter. Wire brush vertical upstands to remove loose surface material.

Horizontal concrete surfaces and new concrete will show the phenomenon of surface laitence and this must be removed by mechanical scarification.

Abrade 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. Vacuum up any loose dust produced by surface preparation techniques.

Treat any surface to which **Belzona® 4231** 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

When mixing **Belzona® 4231** as a pourable slurry with reduced aggregate, it is not necessary to condition the substrate.

For screeding, condition the substrate using the **Belzona® 4251** resins, i.e. measure 50 cm³ of **Belzona® 4251** Base and 50 cm³ of **Belzona® 4251** Solidifier into the white plastic 100cm³ container provided (i.e. fill the container using equal volumes of Base and Solidifier). Stir thoroughly until completely mixed. Immediately brush all of this conditioner onto the surface with a stiff bristled brush.

From the commencement of mixing, the **Belzona® 4251** resin must be applied within 5 minutes.

N.B. The full 100cm³ of **Belzona® 4251** resins should always be mixed whether it is required or not, since this will ensure that the correct resin : aggregate mix is available for preparation of the **Belzona® 4231** screed.

NOTE:

1. Overcoating must be completed within the following times:

Ambient Temperature	Minimum overcoating time	Maximum overcoating time*
41°F/ 5°C	Application can commence as soon as conditioning has been completed	30 mins.
50°F/10°C		30 mins.
59°F/15°C		30 mins.
68°F/20°C		30 mins.
77°F/25°C		30 mins.

* If the maximum overcoating time for the conditioned substrate is exceeded, then the cured surface should be abraded and reconditioned as in Section 2.

3. COMBINING THE REACTIVE COMPONENTS

Mix equal amounts by volume (or 1:1.25 parts by weight) of **Belzona® 4251** Base with **Belzona® 4251** Solidifier until homogeneous. Add the **Belzona® 4231** aggregate until the desired consistency is achieved (i.e. pourable slurry or trowelable mortar). Mix in the aggregate for at least one minute. Use immediately.

NOTES:

1. WORKING LIFE

From the commencement of mixing, **Belzona® 4231** must be applied within 5 minutes.

2. VOLUME CAPACITY OF MIXED BELZONA® 4231

1250 cm³ (75 cu.ins.) per 2.5 kg unit.

3. COVERAGE RATE

On a flat smooth surface, the coverage rate of **Belzona® 4231** is 0.2 m² (2.15 sq.ft.) per 2.5 kg unit at a thickness of 6 mm (0.25 ins.)

4. APPLYING BELZONA® 4231

Apply the mixed **Belzona® 4231** directly on to the conditioned surface with a trowel, float or other suitable tool. Tamp down firmly to remove entrapped air, to compact it and to ensure maximum contact with the surface. Complete the operation within 5 minutes.

NOTES:

1. APPLICATION TO VERTICAL SURFACES

When applying **Belzona® 4231** to vertical surfaces, the normal maximum thickness obtainable without sagging is 6 mm (0.25 ins.). However, on small areas, thicknesses of 12 mm (0.5 ins.) can be achieved without sagging and, if necessary, a piece of polyethylene can be pressed onto the surface of the **Belzona® 4231** to prevent sagging. The polyethylene can be removed when the **Belzona® 4231** has cured.

2. APPLICATION LIMITS

Belzona® 4231 can be applied when the temperature is anywhere between 0°C and 25°C. Below 0°C the material may be too stiff for easy mixing and application, and above 25°C the material may be too "fluid" to enable the required thickness, or build up, to be obtained on vertical surfaces. Reference must also be made to the cure times below. Below 0°C the rate of cure is reduced and some external heat source must then be used to effect full cure.

3. DAMP SURFACES

Belzona® 4231 should not be applied to damp surfaces.

4. APPLYING ADDITIONAL LAYERS OF BELZONA® 4231

Where this is required it should be done as soon as the first layer is firm enough to accept the second layer and within the maximum overcoating time of 6 hours.

After this time the surface of the **Belzona® 4231** must be abraded and reconditioned before further application.

5. CLEANING

Mixing tools should be cleaned immediately after use with **Belzona® 9111** or any other effective solvent eg. MEK. Brushes, injection guns, spray equipment and any other 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® 4231** to solidify for the following times before subjecting it to the conditions indicated:

Temperature	32°F (0°C)	50°F (10°C)	68°F (20°C)
To resist pedestrian traffic	1½ hours	1¼ hours	1 hour
Full mechanical hardness	2 days	1 day	8 hours
Full chemical resistance	7 days	5 days	3 days

These figures are for **Belzona® 4231** at a film thickness of 6 mm (0.25 ins.).

HEALTH & SAFETY INFORMATION

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

All descriptions are based on the results of long term tests carried out in our laboratories and are believed to be true and accurate. No condition or warranty is given covering the results from the use of our products in any particular case, whether the purpose is disclosed or not, and we cannot accept liability if the desired results are not obtained.

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