

Belzona 5813

FN10215



INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

i) METALLIC SURFACES - APPLY ONLY TO BLAST CLEANED SURFACES.

- Brush away loose contamination and degrease with a rag soaked in **Belzona® 9111** (Cleaner/Degreaser) or any other effective cleaner which does not leave a residue e.g. methyl ethyl ketone (MEK).
- Select an abrasive to give the necessary standard of cleanliness and a minimum depth of profile of 3 mils (75 microns). Use only an angular abrasive.
- 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.
- After blasting, metal surfaces should be coated before any oxidation of the surface takes place.

ii) CONCRETE SURFACES

Remove all paint, tar and any other coatings.

Any surface to which **Belzona® 5813** 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.

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

Blast clean, or mechanically scarify the surface to remove all loose material and surface laitance.

2. COMBINING THE REACTIVE COMPONENTS

Transfer the entire contents of the Solidifier container into the Base container. Mix thoroughly together to achieve a uniform material free of any streakiness.

NOTES:

1. MIXING AT LOW TEMPERATURES

To ease mixing when the material temperature is below 50 °F (10°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® 5813** must be used within the times shown below.

Temperature	50 °F (10 °C)	68 °F (20 °C)	86 °F (30 °C)	104 °F (40 °C)
Use all material within	2 ½ hr	1 ½ hr	45 min	25 min

3. MIXING SMALL QUANTITIES

For mixing small quantities of **Belzona® 5813** use:

3 parts Base to 1 part Solidifier by volume

5 parts Base to 1 part Solidifier by weight

3. APPLYING BELZONA® 5813

FOR BEST RESULTS

Do not apply when:

- The temperature is below 45 °F (7 °C) or the relative humidity is above 90%.
- Rain, snow, fog or mist is present.
- There is moisture on the metal surface or is likely to be deposited by subsequent condensation.
- The working environment is likely to be contaminated by oil/grease from adjacent equipment or smoke from kerosene heaters or tobacco smoking.

a) FIRST COAT

Apply the **Belzona® 5813** directly on to the prepared surface with a short bristled brush or rubber squeegee.

b) SECOND COAT

As soon as possible after application of the first coat, apply a further coat of **Belzona® 5813** as in (a) above. This time will be 5 - 7 hours at 68 °F (20 °C) and 8 - 10 hours at 50 °F (10 °C). The first coat must not be left longer than 72 hours before overcoating, irrespective of temperature. After this time the surface must be brush blasted to achieve a frosted appearance free of any gloss with a target profile of 40 microns.

COVERAGE RATES

Recommended number of coats	2
Target thickness 1 st coat	10 mils (250 microns)
Target thickness 2 nd coat	10 mils (250 microns)
Minimum total DFT	16 mils (400 microns)
Maximum total DFT	Only limited by sag resistance
Theoretical coverage rate 1 st coat	42 ft ² /litre (3.9 m ² /litre)
Theoretical coverage rate 2 nd coat	42 ft ² /litre (3.9 m ² /litre)
Theoretical coverage rate to achieve minimum recommended system thickness	27 ft ² /litre (2.5 m ² /litre)

In practice many factors influence the exact coverage rate achieved. On rough surfaces such as pitted steel and concrete the practical coverage rate will be reduced. Application at low temperatures will also reduce practical coverage rates further.

NOTES:

1. CLEANING

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

2. INSPECTION

- Immediately after application of each unit, visually inspect for pinholes and misses. Where detected, these should be immediately brushed out.
- Once the application is complete and the coating is dimensionally stable, carry out a thorough visual inspection to confirm freedom from pinholes and misses, and to identify any possible mechanical damage.

4. GROUNDING

Grounding is important for effective ESD control, **Belzona® 5813** is a direct contact ESD Coating and will allow static charge to flow immediately to ground. A qualified electrician can confirm whether the substrate provides sufficient earthing.

It is important to ensure any charge can be carried away. Always determine the areas where grounding is needed and determine and evaluate the grounding performance of the area and suitable "common point ground".

Common point ground can be metallic equipment such as tank supports, pipes, steel columns, posts etc. These must be electrically tested to confirm permanent continuity with an earth ground.

If no suitable earthing points are available, alternatives such as metal strips embedded into the coating may be used with a copper wire connected to ground. Contact Belzona Technical Service for additional suggestions.

Connections should be confirmed by a qualified electrician. At least two earthing points should be provided, and all coating should be within 10 meters of earthing points. All earthing points must be prepared as in section 1 (ii) before being coated with **Belzona® 5813**.

5. COMPLETION OF THE MOLECULAR REACTION

Solidification time is dependent on ambient temperature, the lower the temperature the longer the solidification time.

Allow **Belzona® 5813** to solidify as below before subjecting it to the conditions indicated.

Temperature	Light loading	Full mechanical/ thermal loading or water immersion	Chemical contact
50°F/10°C	36 hr	8 day	12 day
68°F/20°C	18 hr	5 day	7 day
86°F/30°C	9 hr	2 day	5 day
104°F/40°C	6 hr	1½ day	4 day

HEALTH & SAFETY INFORMATION

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

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