

Belzona 5811DW2

FN10124 (DW IMMERSION GRADE)



INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

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

- a) 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).
- b) 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.
- c) 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.
- d) After blasting, metal surfaces should be coated before any oxidation of the surface takes place.

SALT CONTAMINATED SURFACES

Metal surfaces that have been immersed for any periods in salt solutions e.g. sea water, should be blasted to the required standard, left 24 hours to allow any ingrained salts to sweat to the surface and then washed prior to a further brush blast to remove these. This process may need to be repeated to ensure complete removal of salts. The soluble salt contamination of the prepared substrate, immediately prior to application, should be less than 30mgs/m².

ii) CONCRETE SURFACES

Remove all paint, tar and other coatings, as well as any loose surface material, before application of **Belzona® 5811DW2**.

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%

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. APPLICATION AT LOW TEMPERATURES

Belzona® 5811DW2 can be applied down to 41°F (5°C) but the product is easier to apply over large areas when the ambient temperature and the surface to be coated are above 50°F (10°C).

3. WORKING LIFE

From the commencement of mixing, **Belzona® 5811DW2** must be used within the times shown below.

Temperature	50°F(10°C)	68°F(20°C)	86°F(30°C)
Use all material within	1 hour	30 minutes	20 minutes

4. MIXING SMALL QUANTITIES

For mixing small quantities of **Belzona® 5811DW2** use:
2.5 parts Base to 1 parts Solidifier by volume
4 parts Base to 1 parts Solidifier by weight

3. APPLYING BELZONA® 5811DW2

FOR BEST RESULTS

Do not apply when:

- (i) The temperature is below 41°F (5°C) or the relative humidity is above 90%.
- (ii) Rain, snow, fog or mist is present.
- (iii) There is moisture on the metal surface or is likely to be deposited by subsequent condensation.
- (iv) The working environment is likely to be contaminated by oil/grease from adjacent equipment or smoke from kerosene heaters or tobacco smoking.

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	43 sq.ft/liter (4.0 m ² /liter)
Theoretical coverage rate 2 nd coat	43 sq.ft/liter (4.0 m ² /liter)
Theoretical coverage rate to achieve minimum recommended system thickness	27 sq.ft/liter (2.5 m ² /liter)

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) FIRST COAT

Apply the **Belzona® 5811DW2** directly on to the prepared surface with a stiff bristled brush or with the plastic applicator provided at the recommended coverage rate.

b) SECOND COAT

As soon as possible after application of the first coat, apply a further coat of **Belzona® 5811DW2** as in (a) above. This time will be 6-8 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.

SPRAY APPLICATION

On suitable areas, **Belzona® 5811DW2** may be applied by heated airless spray. Typical set up would be 63:1 airless spray unit with either in-line heater or trace heated lines capable of raising product temperature to 122°F (50°C). Solvent must **NOT** be added. Please contact Belzona direct for more specific information.

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. COLOR

Belzona® 5811DW2 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. Recommended top coat is Grey but if Cream is required then two coats of Cream need to be applied. One coat will not totally obliterate the Grey.

3. 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.
- Spark testing in accordance with NACE SP0188 can be carried out to confirm coating continuity. A voltage of 2.5kV is recommended to confirm that a minimum coating thickness of 16 mil (400 microns) has been achieved.

4. COMPLETION OF THE MOLECULAR REACTION

Belzona® 5811DW2 will solidify under cold, damp conditions down to a temperature of 41°F (5°C). However, solidification time is dependent on ambient temperature, the lower the temperature the longer the solidification time.

Allow **Belzona® 5811DW2** to solidify as below subjecting it to the conditions indicated.

Temperature	Light loading	Full mechanical/ thermal loading or water immersion
50°F/10°C	48 hours	14 days
68°F/20°C	24 hours	7 days
86°F/30°C	12 hours	4 days

NOTE: The cured **Belzona® 5811DW2** coating should be washed with clean water and the washings discarded prior to service in potable water.

HEALTH & SAFETY INFORMATION

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

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