

# Belzona 5831

FN10102 (ST-BARRIER)



## INSTRUCTIONS FOR USE

### 1. SURFACE PREPARATION

**Belzona® 5831** is tolerant of surface preparation and can be applied directly to wet and oily surfaces, however it is recommended that the best possible surface preparation is carried out. As a minimum, the substrate must always be firm and free from loose corroded material, mill scale, dust, and any other loose debris.”

#### RECOMMENDED PROCEDURE

- i) Blast clean the metal surface to achieve the following minimum standard of cleanliness:  
ISO 8501-1 Sa 2 thorough blast cleaning  
SSPC SP-6 commercial blast cleaning  
Swedish Standard Sa 2 SIS 05 5900.
- or
- ii) UHP Hydroblasting (2000 - 2500 bar) to remove previous coatings and expose original profile.
- or
- iii) Power tool clean to achieve a minimum SSPC-SP11 bare metal power tool cleaned surface (ISO 8501-1 St3, SIS 05 5900 St3).
- iv) Cathodic protection systems must be isolated/disconnected and surface allowed to de-polarize.
- v) It is important to remove contaminants such as salt from above water surfaces.
- vi) Porous surfaces such as concrete must be as dry as possible with no pooled water visible. Such surfaces are not suitable for coating underwater.
- vii) Grit blasting as in i) above is recommended for applications exposed to continuous or regular immersion.

The better the surface preparation, the longer the service life.

### 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.

#### MIXING SMALL QUANTITIES

For mixing small quantities of **Belzona® 5831** use:  
1 parts Base to 1 parts Solidifier by volume  
1.75 parts Base to 1 parts Solidifier by weight.

#### 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).

#### WORKING LIFE

From the commencement of mixing, **Belzona® 5831** must be used within the times shown below.

Temperature	50°F (10°C)	77°F (20°C)	86°F (30°C)
Use all material within	70 mins	45 mins	22 mins

### 3. APPLYING BELZONA® 5831

#### Coverage rates

Recommended number of coats	2
Target thickness 1 <sup>st</sup> coat	12 mils (300 microns)
Target thickness 2 <sup>nd</sup> coat	12 mils (300 microns)
Minimum total DFT	16 mils (400 microns)
Maximum total DFT	Only limited by sag resistance
Theoretical coverage rate 1 <sup>st</sup> coat	35.5 sq.ft/litre (3.3 m <sup>2</sup> /litre)
Theoretical coverage rate 2 <sup>nd</sup> coat	35.5 sq.ft/litre (3.3 m <sup>2</sup> /litre)
Theoretical coverage rate to achieve minimum recommended system thickness	27 sq.ft/litre (2.5 m <sup>2</sup> /litre)

#### 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. Application under water will reduce coverage rates further.

#### a) FIRST COAT

Apply the **Belzona® 5831** directly on to the prepared surface with a short bristled brush, scrubbing the product well into the surface to ensure complete wetting.

#### b) SECOND COAT

As soon as possible after application of the first coat, apply a further coat of **Belzona® 5831** as in (a) above. This time will be 6 - 8 hours at 68°F (20°C) or 16 hours at 41°F (5°C). The first coat must not be left longer than 72 hours before overcoating, irrespective of temperature. Should this occur, then the surface should be brush blasted or abraded before commencing application.

### 3.5 INSPECTION

- a) Immediately after application of each unit, visually inspect for pinholes and misses. Where detected, these should be immediately brushed out.
- b) 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.
- c) Spark testing in accordance with NACE SP0274 can be carried out to confirm coating continuity. A voltage of 5.0kV is recommended to confirm that a minimum coating thickness of 16 mil (400 microns) has been achieved.

#### 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.

### 4. COMPLETION OF THE MOLECULAR REACTION

**Belzona® 5831** 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® 5831** to solidify as below before subjecting it to the conditions indicated.

Temperature	Light loading	Full mechanical loading
50°F/10°C	48 hours	14 days
68°F/20°C	24 hours	5 days
86°F/30°C	12 hours	2 days

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### HEALTH & SAFETY INFORMATION

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

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