

# Belzona 5721

FN10204



## INSTRUCTIONS FOR USE

### 1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

**BELZONA 5721 HAS BEEN SPECIFICALLY DESIGNED TO REPAIR AND PROTECT THE LEADING EDGE OF WIND TURBINE BLADES. BELZONA 5721 SHOULD ONLY BE APPLIED ONTO STRUCTURALLY SOUND SURFACES.**

#### SURFACE PREPARATION ONTO COMPOSITE BLADES

- a) Roughen surfaces to completely remove the gel coat and abrade back to the composite avoiding exposing the fibres. This can be completed using a mechanical sander e.g. orbital sander. Alternatively, frost-blasting technique can also be used.

#### PREPARING THE TRANSITIONAL AREA

- b) A pre-determined section of the existing gel coat surrounding the application area must also be prepared to provide an overlap for the **Belzona® 5721**. This can be also completed using a mechanical sander.
- c) Brush away loose contamination and if necessary degrease with **Belzona® 9111** (Cleaner/Degreaser) or any other effective cleaner which does not leave a residue e.g. methyl ethyl ketone (MEK).

#### PIT FILLING

Where required, pitting should be smoothed out with **Belzona® 1221** mixed and applied in accordance with the IFU.

As soon as possible after application of **Belzona® 1221**, the first coat of **Belzona® 5721** shall be applied in accordance with the instructions below. Typically, this will be 30 minutes at 20°C (68°F).

The maximum overcoating time will be 24 hours under all ambient conditions. If the maximum overcoating time has elapsed, the solidified **Belzona® 1221**, must be roughened before applying **Belzona® 5721**.

### 2. COMBINING THE REACTIVE COMPONENTS

- a) Transfer the entire contents of the Solidifier container into the Base container.
- b) Mix thoroughly together for a minimum of two minutes to achieve a uniform material.

#### NOTES:

##### 1. WORKING LIFE

Working life will be affected by relative humidity (RH). From the commencement of mixing, **Belzona® 5721** must be used within the times shown below.

	35% RH	50% RH	65% RH	80% RH
At 5-40°C (41-104°F) use all material within	50 min.	40 min	30 min	20 min

##### 2. VOLUME CAPACITY OF MIXED BELZONA® 5721

662 cm<sup>3</sup> (40.4 cu.in.) per 1Kg unit

### 3. APPLYING BELZONA® 5721

#### FOR BEST RESULTS

##### Do not apply when:

- i) The temperature is below 5°C (41°F) or the relative humidity is above 90%.
- ii) Rain, snow, fog or mist is present.
- iii) There is moisture or ice on the 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

Target thickness per coat	500 microns (20 mils)
Recommended minimum thickness per coat	400 microns (16 mils)
Recommended maximum thickness per coat	600 microns (24 mils)
Theoretical coverage rate per coat	1.3 m <sup>2</sup> (14 sq.ft.)/kg

For coating thicknesses greater than 500 microns (20 mils), multiple coats are required.

#### 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 composite the practical coverage rate will be reduced.

##### a) FIRST COAT

Apply the **Belzona® 5721** directly on to the prepared surface with a stiff bristled brush at the recommended coverage rate.

## b) SECOND COAT

If required, apply a further coat of **Belzona® 5721** as in (a) above. Under all application conditions, the minimum overcoat time will typically be 30 minutes. The first coat must not be left longer than 24 hours before overcoating. Should this occur, then the surface should be thoroughly abraded before commencing application.

## NOTE

1. Do not apply **Belzona® 5721** outside of the prepared area.
2. Maintain a wet edge by constantly working away from the starting point.
3. Apply evenly over the surface and avoid overbrushing the product and disturbing the material during cure as the product will surface dry rapidly.
4. Higher humidity will cause the product to surface dry more rapidly.
5. Due to the fast cure nature of the product, if tape is applied, this should be removed as soon as possible after the application of the coating.

## 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 (refer to "Touch Dry" column in section 4), carry out a thorough visual inspection to confirm freedom from pinholes and misses, and to identify any possible mechanical damage. Repairs to be carried out as required.

## CLEANING

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

## 4. COMPLETION OF THE MOLECULAR REACTION

Film thickness and environmental conditions will affect the cure. For a 500 microns film, allow **Belzona® 5721** to solidify as below before subjecting it to the conditions indicated.

Temperature	Touch Dry (Overcoat)	Hard Dry (Movement and light loading)	Full Cure (Return to service)
5°C/41°F	30 - 45 mins	3 hours	6 hours
10°C/50°F		3 hours	6 hours
20°C/68°F		2 ½ hours	5 hours
30°C/86°F		2 ½ hours	5 hours
40°C/104°F		2 hours	4 hours

For thicker sections, cure times will be extended.

## HEALTH & SAFETY INFORMATION

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

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