

# Belzona 1221

FN10020

(SUPER E-METAL)



## INSTRUCTIONS FOR USE

### 1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

#### APPLY ONLY TO CLEAN, FIRM, DRY AND WELL ROUGHENED 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). Use a flame to sweat out oil from deeply impregnated surfaces.
- Roughen surfaces by blast cleaning, deeply scoring or grinding.
- Finally degrease again. Use clean rags to avoid spreading contamination.

#### PLUGGING ALL LEAKS

Leakages may be temporarily plugged with lead wool, cork or wooden plugs during surface preparation and application of **Belzona® 1221**.

#### WHERE BELZONA® 1221 SHOULD NOT ADHERE

Brush on a thin layer of **Belzona® 9411** (Release Agent) and allow to dry for 15-20 minutes before proceeding to step 2.

### 2. COMBINING THE REACTIVE COMPONENTS

- Cut off one end of both the Base and Solidifier sachets as close as possible to the seal.
- Using the straight edge of a mixing spatula or other suitable mixing tool squeeze out the entire contents of the sachets onto the **Belzona®** Working Surface provided.
- Mix the two components thoroughly to achieve a uniform material free of any streakiness.

#### 1. WORKING LIFE

From the commencement of mixing, **Belzona® 1221** must be used within the times shown below.

Temperature	41°F (5°C)	59°F (15°C)	77°F (25°C)
Use all material within	5 min.	4 min.	3 min.

#### 2. MIXING SMALL QUANTITIES

For mixing small quantities of **Belzona® 1221** use:  
1 part Base to 1 part Solidifier by volume  
2 parts Base to 1 part Solidifier by weight

#### 3. VOLUME CAPACITY OF MIXED BELZONA® 1221

33.5 cu.in. (550 cm<sup>3</sup>) per kg.  
4.2 cu.in. ( 67 cm<sup>3</sup>) per 125gm. unit

### 3. APPLYING BELZONA® 1221

#### FOR BEST RESULTS

##### Do not apply when:

- The temperature is below 41°F (5°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.

#### FOR REPAIRING

- Spread the **Belzona® 1221** on to the **Belzona® 9341** (Reinforcement Tape).

- Apply the bandage to the area to be repaired with the coated side adjacent to the substrate.

In the case of pipes, wrap tightly round several times so that the **Belzona® 1221** is forced through to the outside of the **Belzona® 9341**.

- Apply a final coat of **Belzona® 1221** on top of the **Belzona® 9341**.

#### FOR REBUILDING

- Apply the **Belzona® 1221** directly on to the prepared surface with the plastic applicator or spatula provided.

Press down firmly to fill all cracks, remove entrapped air, and ensure maximum contact with the surface.

- Contour the **Belzona® 1221** to the correct profile or alternatively allow to cure and then machine down.

#### CLEANING

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

#### 4. COMPLETION OF THE MOLECULAR REACTION

Allow **Belzona® 1221** to solidify as below subjecting it to the conditions indicated.

Temperature	Movement or use involving no loading or immersion	Machining and/or light loading	Full mechanical or thermal loading	Immersion in chemicals
41°F/ 5°C	17 mins.	60 mins.	120 mins.	48 hours
50°F/10°C	16 mins.	50 mins.	100 mins.	36 hours
59°F/15°C	15 mins.	45 mins.	90 mins.	30 hours
68°F/20°C	14 mins.	40 mins.	75 mins.	24 hours
77°F/25°C	13 mins.	35 mins.	60 mins.	20 hours
86°F/30°C	12 mins.	30 mins.	45 mins.	16 hours

These times are for a thickness of approximately 0.25 inch (6 mm); they will be reduced for thicker sections and extended for thinner sections.

#### 5. APPLICATION OF A FURTHER LAYER OF BELZONA® 1221

Where this is required, it should be applied no longer than 4 hours after application of the first layer when the ambient temperature is 41 - 86°F (5 - 30°C).

After the maximum overcoating time has elapsed, the solidified **Belzona® 1221** must be roughened before applying further **Belzona® 1000 Series** products, or application of **Belzona® 2000 Series** products.

#### 6. APPLICATION OF BELZONA® 1000 SERIES PRODUCTS TO BELZONA® 1221

If a repair involves overcoating of **Belzona® 1221** by other **Belzona® 1000 Series** products, the surface of the **Belzona® 1221** must be allowed to cure to a stage where its surface can be suitably roughened prior to application of other **Belzona® 1000 Series** products.

Do not attempt to apply other **Belzona® 1000 Series** products to **Belzona® 1221** using a "wet on wet" method.

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#### HEALTH & SAFETY INFORMATION

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

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