

# Belzona 1211

FN10019 (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® 1211**.

#### WHERE BELZONA® 1211 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

Remove any protective skin which may have formed on Solidifier.

Transfer the entire contents of the Base and Solidifier modules on to the **Belzona®** Working Surface.

Mix the two components thoroughly to achieve a uniform mid gray material free of any streakiness.

#### 1. MIXING AT LOW TEMPERATURES

To ease mixing when the material temperature is below 41°F (5°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® 1211** 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	9 min.	6 min.	4 min.

#### 3. MIXING SMALL QUANTITIES

For mixing small quantities of **Belzona® 1211** use:  
1 part Base to 1 part Solidifier by volume  
2 parts Base to 1 part Solidifier by weight

#### 4. VOLUME CAPACITY OF MIXED BELZONA® 1211

27.5 cu.in. (450 cm<sup>3</sup>) per kg.  
13.7 cu.in. (225 cm<sup>3</sup>) per 500gm. unit

### 3. APPLYING BELZONA® 1211

#### 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® 1211** 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® 1211** is forced through to the outside of the **Belzona® 9341**.
- Apply a final coat of **Belzona® 1211** on top of the **Belzona® 9341**.

## FOR REBUILDING

- a) Apply the **Belzona® 1211** 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.

- b) Contour the **Belzona® 1211** to the correct profile with the plastic applicator 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). Brushes, injection guns, spray equipment 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

Allow **Belzona® 1211** 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	25 mins.	45 mins.	60 mins.	48 hours
50°F/10°C	20 mins.	30 mins.	40 mins.	36 hours
59°F/15°C	15 mins.	25 mins.	35 mins.	30 hours
68°F/20°C	10 mins.	20 mins.	30 mins.	24 hours
77°F/25°C	7 mins.	15 mins.	25 mins.	20 hours
86°F/30°C	5 mins.	10 mins.	20 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® 1211

Where this is required, it should be applied no longer than 30 minutes after application of the first layer when the ambient temperature is 59 - 77°F (15 - 25°C).

At higher temperatures, this time will be reduced; at lower temperatures it will be extended.

After the maximum overcoating time has elapsed, the solidified **Belzona® 1211** must be roughened before applying further **Belzona® 1211**.

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## HEALTH & SAFETY INFORMATION

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

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