Belzona 1211

(E-METAL)

BELZONA®
Repair • Protect • Improve

INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

APPLY ONLY TO CLEAN, FIRM, DRY AND WELL ROUGHENED 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). Use a flame to sweat out oil from deeply impregnated surfaces.

b) Roughen surfaces by blast cleaning, deeply scoring or grinding.

c) 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 cm³) per kg.
13.7 cu.in. (225 cm³) per 500gm. unit

3. APPLYING BELZONA® 1211

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.

FOR REPAIRING

a) Spread the **Belzona® 1211** on to the **Belzona® 9341** (Reinforcement Tape).

b) 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**.

c) 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.

Temper-ature	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**.

HEALTH & SAFETY INFORMATION

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

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