

1 SURFACE PREPARATION

1.1 METALLIC SURFACES

APPLY ONLY TO CLEAN, FIRM, AND ROUGHENED SURFACES

- Brush away loose contamination and dirt.
- Use a flame to sweat out oil from deeply impregnated surfaces.
- Degrease with **Belzona 9111** (Cleaner/Degreaser) or any other effective cleaner which does not leave a residue e.g., methyl ethyl ketone (MEK).
- Roughen surfaces by blast cleaning, deeply scoring, or grinding.
- Stabilize cracks by drilling the extremities. Long cracks should be drilled, tapped, and bolted every 3 – 4 in. (77 – 103 mm).
- Vee-out all cracks using a rotary file.
- Finally, degrease again as in c) above.
- Use clean lint-free rags to avoid spreading contamination.

1.2 AREAS WHERE BELZONA 1121 SHOULD NOT ADHERE

- Apply a thin layer of **Belzona 9411** (Release Agent) using a brush.
- Allow to dry for 15 – 20 minutes before commencement of the application.

2 APPLICATION PROCEDURE

2.1 MIXING

- Stir the contents of the solidifier container thoroughly to reincorporate any separation.
- Transfer the entire contents of the base and solidifier modules onto a Belzona working board.
- Mix both components thoroughly to achieve a uniform material free of any streakiness.

For mixing small quantities of **Belzona 1121** use:

Mixing Ratio	By Volume	By Weight
Base: Solidifier	1: 1	1.2: 1

2.2 MIXING AT LOW TEMPERATURES

To ease mixing when the temperature of either component 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).

2.3 WORKING LIFE

From the commencement of mixing, **Belzona 1121** must be used within the times shown below.

Temperature	41 °F (5 °C)	59 °F (15 °C)	77 °F (25 °C)	86 °F (35 °C)
Use material within	90 min.	45 min.	35 min.	25 min.

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 are 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.

2.4 VOLUME CAPACITY OF MIXED BELZONA 1121

23 in³/kg (374 cm³/kg)

2.5 HAND APPLICATION

- Apply **Belzona 1121** directly onto the prepared surface using the plastic applicator or spatula provided.
- Press the product down firmly to fill all cracks, remove entrapped air, and ensure maximum contact with the surface.
- Over cracks, gaps, and holes, stipple in **Belzona 9341** (Reinforcement Tape).
- Contour **Belzona 1121** to the correct profile with the plastic applicator. Alternatively, allow to cure and then, machine down.
- When **Belzona 1121** is being used as an irregular shim, offer the two mating surfaces together as soon as **Belzona 1121** has been applied. Remove exuding product with the spatula.

2.7 OVERCOAT TIMES

Whenever possible, **Belzona 1121** should be applied in a single layer to achieve the required thickness. However, **Belzona 1121** can be overcoated as soon as it is firm enough to do so.

The maximum overcoat time is 36 hours irrespective of temperature. If the maximum overcoat time is exceeded, the surface must be roughened by abrading or grit-blasting to achieve a frosted appearance with a minimum surface profile of 1.5 mil (40 µm) before overcoating.

3 INSPECTION AND REPAIRS

3.1 INSPECTION

- Visually inspect the area to ensure the repair is smooth with no misses and that **Belzona 9341**, if used, is fully encapsulated.
- Apply more **Belzona 1121** if needed.

3.2 REPAIRS

Within the overcoating window, any misses can be repaired by application of a further layer of **Belzona 1121**. Outside the overcoating window, the surface of **Belzona 1121** must be abrasive blasted or abraded to produce a frosted appearance, free of all gloss, before re-coating. A profile of 1.5 mil (40 µm) should be aimed for.

3.3 COLOR

Belzona 1121 is available in one color, grey. In service, the final color of the applied product may change.

4 CURING AND CLEANING

4.1 CURING

Belzona 1121 should be allowed to ambient cure as follows.

Ambient temperature	Curing Time			
	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)	28 hours	4 days	10 days	24 days
50 °F (10 °C)	15 hours	2 days	5 days	12 days
59 °F (15 °C)	9 hours	27 hours	3 days	7 days
68 °F (20 °C)	4¾ hours	16 hours	1½ days	4 days
77 °F (25 °C)	2½ hours	9 hours	1 day	2½ days
86 °F (30 °C)	1½ hours	5 hours	16 hours	1½ days

Note: These times are for a thickness of approximately ¼ in. (6 mm). They will be reduced for thicker sections and extended for thinner sections.

4.2 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 and brushes should be cleaned using a suitable solvent such as **Belzona 9121**, MEK, acetone, or cellulose thinners.

HEALTH & SAFETY INFORMATION

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

The technical data contained herein is based on the results of long-term tests carried out in our laboratories and to the best of our knowledge is true and accurate on the date of publication. It is however subject to change without prior notice and the user should contact Belzona to verify the technical data is correct before specifying or ordering. No guarantee of accuracy is given or implied. We assume no responsibility for rates of coverage, performance or injury resulting from use. Liability, if any, is limited to the replacement of products. No other warranty or guarantee of any kind is made by Belzona, express or implied, whether statutory, by operation of law or otherwise, including merchantability or fitness for a particular purpose. Nothing in the foregoing statement shall exclude or limit any liability of Belzona to the extent such liability cannot by law be excluded or limited.

Copyright © 2023 Belzona International Limited. Belzona® is a registered trademark.

Belzona products are manufactured under an ISO 9001 registered Quality Management System.

