



BELZONA® 5851 (HA-BARRIER)

INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

Belzona® 5851 is tolerant of surface preparation, however, it is recommended that the best possible surface preparation is carried out. As a minimum, substrate surface must always be clean and firm.

RECOMMENDED PROCEDURE

- 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.

WHERE BELZONA® 5851 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.

SURFACES ALREADY REBUILT WITH BELZONA® 1251 (HA-METAL)

- If overcoating takes place within 2 hours, no further surface preparation is required.
- After this maximum overcoating time has elapsed roughen the **Belzona® 1251** preferably by brush blasting before applying **Belzona® 5851**.

2. APPLYING BELZONA® 5851

FOR BEST RESULTS

Do not apply when:

- 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.

Belzona® 5851 is a single component product and so no mixing or measuring is required. Cure will not commence until the product is heated, hence the usable life is effectively unlimited, providing the material is stored as described in Section 4.

NOTE:

See special instructions for reinforcing areas at risk from immersion.

a) FIRST COAT

Apply the **Belzona® 5851** directly on to the hot prepared surface with a short bristled brush. The substrate temperature must be between 158°F (70°C) and 302°F (150°C) for acceptable cure.

In order to achieve the correct film thickness of 8 mils (200 microns) per coat, apply the material at a theoretical coverage rate of 27 sq. ft. (2.5 m²) per kg. Use a wet film thickness gauge to regularly check that the correct film thickness is being achieved.

b) SECOND COAT

As soon as possible after application of the first coat, apply a further coat of **Belzona® 5851** as in (a) above.

The minimum overcoating time will be dependant on the temperature of the substrate, as indicated in the table below:

Substrate temperature	Touch dry time
158°F (70°C)	24 hours
176°F (80°C)	16 hours
194°F (90°C)	4 hours
212°F (100°C)	2 hours
248°F (120°C)	30 minutes
302°F (150°C)	10 minutes

The maximum recommended overcoating time is 7 days, irrespective of cure temperature.

REINFORCED SYSTEM

In areas at risk of regular immersion the following system should be adopted.

Apply the first coat of **Belzona® 5851** as in 2a above. Immediately lay a layer of **Belzona® 9361** Reinforcing Sheet into the surface, ensuring no air is trapped beneath and all creases are removed. Cut the sheet to follow surface profile.

Apply further **Belzona® 5851** to completely wet out the surface of the **Belzona® 9361**. As a guide, a coverage rate of 13.5 sq.ft. (1.25 m²) per kg should be aimed for.

As soon as possible apply a further coat of **Belzona® 5851** as in 2b above.

THEORETICAL COVERAGE RATES

The theoretical coverage rate for the two coat system will be 13.5 sq. ft. (1.25 m²) per kg. The theoretical coverage rate for a reinforced system will be 9 sq.ft. (0.83m²) per kg.

PRACTICAL COVERAGE RATES

In practice many factors influence the exact coverage rate achieved. On rough surfaces such as pitted steel the coverage rate achieved may be reduced by up to 20%.

NOTES:

1. CLEANING

Brushes or any other application tools should be cleaned using a suitable solvent such as **Belzona® 9121**, MEK, acetone or cellulose thinners.

2. DIFFERENTIATION BETWEEN LAYERS

Belzona® 5851 is currently available only in grey but the coating will go from gloss to matt during cure, hence it is possible to differentiate between layers during overcoating.

3. COMPLETION OF THE MOLECULAR REACTION

Belzona® 5851 will continue to cure whilst the substrate remains hot. Cure times will depend on the substrate temperature, as indicated in the table below:

Substrate temperature	Touch dry/Light loading	Full cure
158°F (70°C)	24 hours	7 days
176°F (80°C)	16 hours	5 days
194°F (90°C)	4 hours	3 days
212°F (100°C)	2 hours	2 days
248°F (120°C)	30 minutes	1 day
302°F (150°C)	10 minutes	16 hours

4. STORAGE

Due to the heat cure mechanism of this material, when not in use, avoid storing the product near heat sources and, if possible, keep refrigerated. Shelf life at 68°F (20°C) will be at least 18 months.

HEALTH & SAFETY INFORMATION

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

All descriptions are based on the results of long term tests carried out in our laboratories and are believed to be true and accurate. No condition or warranty is given covering the results from the use of our products in any particular case, whether the purpose is disclosed or not, and we cannot accept liability if the desired results are not obtained.

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