

# Belzona 1251

FN10021 (HA-METAL)



## INSTRUCTIONS FOR USE

Belzona® 1251 is designed to be applied to hot surfaces 158-302°F (70-150°C). All surface preparation and application procedures should be carried out after due review of health and safety.

### 1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

Belzona® 1251 is tolerant of surface contamination, 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

- i) Brush away loose contamination and remove any oil and grease with a cleaner that will not leave a residue and is suitable for use on hot surfaces and in the application environment.
- ii) Blast clean the metal surface to achieve the following minimum standard of cleanliness:  
ISO 8501-1 Sa 2 thorough blast cleaning  
SSPC SP-6 commercial blast cleaning  
Swedish Standard Sa 2 SIS 05 5900.
- iii) UHP Hydroblasting (2000 - 2500 bar) to remove previous coatings and expose original profile.
- iv) Power tool clean (MBX Bristle Blaster, grinders etc.) to achieve a minimum SSPC-SP11 bare metal power tool cleaned surface.

### 2. APPLYING BELZONA® 1251

- a) **Belzona® 1251** is a single component product and so no mixing or measuring is required. Cure will not commence until the product is heated, hence the useable life is effectively unlimited, providing the material is stored as described in Section 4.
- b) **Belzona® 1251** is designed to be applied to hot surfaces 158-302°F (70-150°C) so that cure will take place in service.
- c) Apply the **Belzona® 1251** directly on to the prepared surface with a plastic applicator or spatula.
- d) Press down firmly to fill all cracks, remove entrapped air, and ensure maximum contact with the surface.
- e) Due to flow out of **Belzona® 1251** on heating, the maximum recommended thickness for vertical applications is 1/8in. (3mm). For horizontal applications the maximum recommended thickness is 1/4in. (6mm).

- f) Avoid application of **Belzona® 1251** onto areas where it is not required.
- g) After application, proceed to step 3 in order to ensure the **Belzona® 1251** is fully cured.

#### NOTES:

1. **VOLUME CAPACITY OF BELZONA® 1251**  
24.5 cu.in. (401 ccs) per 1kg.

#### 2. CLEANING

Application tools should be cleaned immediately after use with **Belzona® 9111** or any other effective solvent e.g. Methyl ethyl ketone (MEK).

### 3. COMPLETION OF THE MOLECULAR REACTION

Cure **Belzona® 1251** using the recommended schedules below:

Cure temperature	Light loading	Full thermal or mechanical loading	Optimum heat resistance
158°F (70°C)	1¼ hours	5 hours	7 days
185°F (85°C)	25 min.	2 hours	5 days
212°F (100°C)	15 min.	1 hour	3 days
239°F (115°C)	15 min.	1 hour	1 day

**IMPORTANT:** Additional time must be allowed for the component and repair to heat through. This time will be dependent on the size of the component and thickness of the **Belzona®** repair.

For a 1/4in. (6mm) deep repair it is suggested that an extra 15-30 minutes heating will be required to heat the repair through.

**NOTE:** If the **Belzona® 1251** is not completely hard after heating, or remains glossy, then more cure time is required. If in doubt, heat for longer.

If substrate temperature is below 158°F (70°C), additional curing as follows must be carried out. The use of a temperature controlled oven is recommended, but hot air blowers, such as electric paint strippers can be used for small repairs, if the following guidelines are observed.

- a) Surface thermometers (Mercury/Alcohol bulb thermometers are not suitable) must be used to monitor substrate temperatures being achieved. It is not sufficient to measure air temperature.
- b) To avoid local overheating keep the heater moving over the surface and indirect heating of the **Belzona®** by heating the surrounding metal is preferred.

- c) Maintain temperature between 158-302°F (70-150°C).
- d) Do not exceed 356°F (180°C).

#### **4. STORAGE**

Due to the heat cure mechanism of this material when not in use avoid storing the product above ambient temperatures and, if possible, keep refrigerated. Shelf life at 68°F (20°C) will be at least 24 months.

#### **5. OVERCOATING**

Application of subsequent layers of **Belzona® 1251** can be carried out up to 3 days after the previous application without need of any surface treatment other than removal of contamination.

---

### **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 © 2018 Belzona International Limited. Belzona® is a registered trademark.

*Belzona products are  
manufactured under an  
ISO 9001 Registered  
Quality Management System*

