

Belzona 1818

FN10211



INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

Belzona® 1818 is tolerant of surface contamination and can be applied directly to wet and oily surfaces, however it is recommended that the best possible surface preparation is carried out. The substrate must always be firm and free from loose corroded material, mill scale, dust, and any other loose debris.

Optimal Surface Preparation:

- Brush away loose contamination and degrease with a rag soaked in **Belzona® 9111** (Cleaner/Degreaser) or any other effective cleaner which does not leave any residue, e.g. methyl ethyl ketone (MEK).
- Select an abrasive to give the necessary standard of cleanliness and a minimum depth of profile of 75 microns (3 mils). Use only an angular abrasive.
- Blast clean the metal surface to achieve the following standard of cleanliness:
ISO 8501-1 Sa 2½ very thorough blast cleaning.
American Standard near white finish SSPC-SP 10.
Swedish Standard Sa 2½ SIS 05 5900.
- After blasting, metal surfaces should be coated before any oxidation of the surface takes place.

Minimum Recommended Surface Preparation:

Power tool clean to achieve an SSPC-SP 11 bare metal power tool cleaned surface with a minimum profile of 25 microns (1 mil).

Refurbishment of existing Belzona 1800 series products:

Firm existing **Belzona® 1800** series materials can be repaired with **Belzona® 1818**. The surface must be roughened by abrading or flash blasting, then degreased before applying **Belzona® 1818**.

2. COMBINING THE REACTIVE COMPONENTS

Transfer the entire contents of Base and Solidifier modules on to the **Belzona® Working Surface** or similar. Mix thoroughly together with a plastic spatula to achieve a uniform material free of any streakiness.

1. MIXING SMALL QUANTITIES

For mixing small quantities of **Belzona® 1818** use:
3 parts Base to 2 parts Solidifier by volume
4 parts Base to 3 parts Solidifier by weight

2. MIXING AT LOW TEMPERATURES

If required, to ease mixing when the material temperature is below 5°C/41°F, warm the containers to between 20°C/68°F and 40°C/104°F.

3. WORKING LIFE

From the commencement of mixing, **Belzona® 1818** must be used within the times shown below:

Temperature	Working Life
5°C/41°F	22 mins
10°C/50°F	18 mins
20°C/68°F	16 mins
30°C/86°F	12 mins
40°C/104°F	9 mins

4. VOLUME CAPACITY OF MIXED BELZONA® 1818

432 cm³ / 26.36 in³ per 1kg unit

3. APPLYING BELZONA® 1818

- Apply the mixed **Belzona® 1818** directly on to the prepared surface with a plastic applicator or other suitable application tool. When applied at 3 mm (0.12 in.) thickness the theoretical coverage rate of 1 kg unit will be approx. 0.14 sq.m. (1.55 sq.ft.). When applied at 6 mm (0.24 in.) thickness the theoretical coverage rate of 1 kg unit will be approx. 0.07 sq.m. (0.78 sq.ft.).
- Press down firmly to fill all cracks, remove entrapped air, and ensure maximum contact with the surface.
- Contour the **Belzona® 1818** to the correct profile with an applicator or other suitable tool.

CLEANING

Mixing and application tools should be cleaned immediately after use with **Belzona® 9111**, **Belzona® 9121**, or any other effective solvent e.g. Methyl ethyl ketone (MEK) or acetone.

4. COMPLETION OF THE MOLECULAR REACTION

Allow **Belzona® 1818** to solidify as below before subjecting it to the conditions indicated.

Temperature	Movement or use involving no loading	*Light Loading	Full mechanical loading
5°C/41°F	4 hours	6 hours	24 hours
10°C/50°F	3 hours	4.5 hours	18 hours
20°C/68°F	1.5 hours	2 hours	8 hours
30°C/86°F	1 hour	1.5 hours	6 hours
40°C/104°F	20 mins	30 mins	2 hours

*In emergency situations, **Belzona® 1818** can be returned to service following the light loading times in the above table. The product will continue to cure in service to achieve full mechanical strength and maximum abrasion resistance.

POST CURE

The mechanical properties, heat resistance and chemical resistance of **Belzona® 1818** may be improved by post curing.

Once the **Belzona® 1818**, has reached the 'Movement or use involved no loading' level of cure, it can be post-cured at a temperature between 50°C/122°F and 100°C/212°F using forced air heaters, heat lamps, etc.

5. APPLICATION OF A FURTHER LAYER OF BELZONA® 1818

Where this is required it should be applied as soon as possible after the first layer. When applied between 5°C/41°F-40°C/104°F a second layer can be applied up to 24 hours later without additional preparation. If the above overcoating time is exceeded the surface of **Belzona® 1818** must be roughened by abrading or flash blasting before applying further **Belzona® 1818**.

6. USE OF BELZONA® 1818 FOR GROUTING OF BELZONA® 9811

Where additional abrasion resistance is required, **Belzona® 9811** alumina tiles can be used in conjunction of **Belzona® 1818**.

- Select appropriate Belzona adhesive to suit service conditions. The selected Belzona product should be applied in accordance with the relevant IFU and finished flush with the surrounding surface.
- Apply the **Belzona® 9811** tile mats into the wet Belzona adhesive. Tiles may be bonded mesh side down for temperatures below 60°C (140°F) but must always be bonded mesh side up at higher temperatures. After placing the tile mat onto Belzona adhesive ensure all tiles are firmly bedded into the Belzona. The use of a rubber roller will quickly ensure all tiles are pressed down and in contact with the chosen Belzona adhesive.
- Once Belzona adhesive is firm enough, if required, the backing mesh can be peeled away and grouting commenced.

Note:

Removal of the mesh can leave a slightly rough surface on the tile surface making grouting slightly more difficult together with cleaning of the tiles. This does not in any way impact on the performance of the system, it is purely aesthetic. Alternatively, the remaining adhesive for the backing mesh may be ground or blasted away once the Belzona tile adhesive is hard.

- Use a thick 8-10mm (0.3-0.4in.) rubber sheet to press **Belzona® 1818** grout into place and to scrape excess off ensuring the **Belzona® 1818** grout is finished flush with the top of the tiles.

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 © 2020 Belzona International Limited. Belzona® is a registered trademark.

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

