Belzona 1811

(CERAMIC CARBIDE)

BELZONA®
Repair • Protect • Improve

INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

APPLY ONLY TO BLAST CLEANED 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).

b) Select an abrasive to give the necessary standard of cleanliness and a minimum depth of profile of 3 mils (75 microns). Use only an angular abrasive.

c) 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

d) After blasting, metal surfaces should be coated before any oxidation of the surface takes place.

SALT CONTAMINATED SURFACES

Metal surfaces that have been immersed for any periods in salt solutions e.g. sea water, should be blasted to the required standard, left 24 hours to allow any ingrained salts to sweat to the surface and then washed prior to a further brush blast to remove these. This process may need to be repeated to ensure complete removal of salts.

WHERE BELZONA® 1811 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

a) Transfer the entire contents of the Base and Solidifier modules on to the Belzona® Working Surface. Mix thoroughly together to achieve a uniform material free of any streakiness.

b) When using the 20 kg. unit of **Belzona® 1811,** use the plastic bowl and module provided, to measure out workable amounts of material. A ratio of 1 orange bowl of Base to 1 black module of Solidifier will give the correct mixing ratio by volume. Transfer these to the Belzona Working Surface. Mix thoroughly together to achieve a uniform material free of any streakiness.

NOTES:

1. MIXING AT LOW TEMPERATURE

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® 1811** must be used within the times shown below.

Temperature	41°F (5 °C)	50°F (10 °C)	68°F (20 °C)
Use all material within	3 hours	120 min	60 min

3. MIXING SMALL QUANTITIES

For mixing small quantities of **Belzona® 1811** use:
4 parts Base to 1 part Solidifier by volume
8.5 parts Base to 1 part Solidifier by weight

4. VOLUME CAPACITY OF MIXED BELZONA® 1811

28 cu.in. (459 cm^3) per kg.

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3. APPLYING BELZONA® 1811

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.

a) Apply the **Belzona® 1811** directly on to the prepared surface with the plastic applicator or spatula provided. Applied at 0.25 in. (6 mm) thickness each 2 kg unit will cover approximately 1.64 sq.ft. (0.154 m^2).

b) Press down firmly to remove entrapped air and to ensure maximum contact with the surface.

c) Contour the **Belzona® 1811** to the correct profile with the plastic applicator.

CLEANING
Mixing tools should be cleaned immediately after use with **Belzona® 9111** or any other effective solvent e.g. Methyl ethyl ketone (MEK). Brushes 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® 1811** to solidify as below subjecting it to the conditions indicated.

Temperature	Movement or use involving no loading	Machining and/ or light loading	Full mechanical or thermal loading	Contact with chemicals
41°F/ 5°C	24 hours	36 hours	7 days	14 days
50°F/10°C	16 hours	24 hours	5 days	10 days
59°F/15°C	12 hours	18 hours	4 days	7 days
68°F/20°C	8 hours	12 hours	3 days	5 days
77°F/25°C	6 hours	8 hours	2 days	3 days
86°F/30°C	3 hours	4 hours	1 ½ days	2 days

These times are for a thickness of approximately 0.25 in. (6mm); they will be reduced for thicker sections and extended for thinner sections.

5. MACHINING OF SOLIDIFIED BELZONA® 1811

Belzona® 1811 cannot be satisfactorily ground or machined after cure. Every attempt therefore should be made to obtain the required depth of application to avoid unnecessary machining.

6. APPLICATION OF A FURTHER LAYER OF BELZONA® 1811

Where this is required it should be applied as soon as possible after the first layer and certainly while the first layer is still soft (less than 3 hours at 68°F (20°C)).

If the above overcoating time is exceeded the surface of **Belzona® 1811** must be flash blasted before applying further **Belzona® 1811.**

HEALTH & SAFETY INFORMATION
Please read and make sure you understand the relevant Material Safety Data Sheets.

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Q 09335
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