



BELZONA® 5891 (HT IMMERSION GRADE)

INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

METALLIC SURFACES - APPLY ONLY AFTER BLAST CLEANING.

- Brush away any loose contamination and remove dirt, oil, grease, etc., with **Belzona® 9111** (Cleaner/Degreaser) or any other effective cleaner which does not leave a residue, e.g. methyl ethyl ketone (MEK).
- 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.
- 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 Sa2½ SIS 05 5900

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

NOTE: 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.

2. COMBINING THE REACTIVE COMPONENTS

- Ensure material is at a temperature of 20-30°C (68-85°F) to aid mixing and application.
- Shake the Solidifier container.
- Transfer approximately a quarter of the contents of the **Belzona® 5891** Solidifier can to the **Belzona® 5891** Base unit.
- Mix until a uniform consistency is achieved.

- Add the remainder of the Solidifier and mix thoroughly to a uniform streak-free material.

NOTES:

1. APPLICATION TEMPERATURE

Belzona® 5891 should not be applied at temperatures below 65°F (18°C).

2. WORKING LIFE

From the commencement of mixing, **Belzona® 5891** must be used within the times shown:

Temperature	65°F (18°C)	75°F (24°C)	85°F (30°C)	105°F (40°C)
Use all material within	45 mins	35 mins	25 mins	20 mins

3. MIXING SMALL QUANTITIES OF BELZONA® 5891

For mixing small quantities of **Belzona® 5891** use:

7.5 parts Base to 1 part Solidifier by volume
17 parts Base to 1 part Solidifier by weight

3. APPLYING BELZONA® 5891

FOR BEST RESULTS

Do not apply when:-

- The temperature is below 65°F (18°C) or the relative humidity is above 90%.
- 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.

Apply the **Belzona® 5891** directly on to the prepared surface with a stiff bristled brush at a thickness of 20 mils (500 microns). To achieve the correct film thickness a practical coverage rate of 20.5 sq.ft. (1.9 m²)/litre should be obtained.

TO ACHIEVE A UNIFORM COATING

- Apply the coating in one operation without interruption.
- In the area being treated by one unit of material, first "stripe coat" detail areas such as brackets, edges, corners and welds. Use a brush or applicator to initially wet out the substrate before building up to the full coating thickness over the complete area designated for that unit of material.

- c) Use a wet film thickness gauge to regularly check that the correct film thickness is being achieved.
- d) Finish application with a brush to obtain uniform coverage.
- e) Ensure adequate lighting is available to prevent misses.

INSPECTION

- a) Immediately after application of each unit, visually inspect for pinholes and misses. Where detected, these should be immediately brushed out.
- b) Once the application is complete and the coating has hardened, carry out a thorough visual inspection to confirm freedom from pinholes and misses, and to identify any possible mechanical damage.
- c) Where wet sponge testing is being used as an aid to confirm continuity of the coating, care should be taken to ensure that the surface is thoroughly wetted out by repeated passage of the sponge tester over the surface.
- d) Spark testing can be carried out to confirm coating continuity. A DC voltage of 3,000 volts is recommended to confirm that minimum coating thickness of 16 mil (400 microns) has been achieved.

SPRAY APPLICATION

On suitable areas, **Belzona® 5891** may be applied by heated airless spray. Typical set up would be 63:1 airless spray unit with either in-line heater or trace heated lines capable of raising product temperature to at least 122°F (50°C). Solvent must **NOT** be added. Please contact Belzona direct for more specific information.

NOTES:

1. REPAIRS

Any misses, pinholes or mechanical damage found in the coating should be repaired by brush blasting or abrading the surface to produce a frosted appearance prior to cleaning the surface and application of further material as detailed above.

2. CLEANING

Mixing tools should be **cleaned immediately after use** with **Belzona® 9111** or any other effective solvent e.g. MEK. Brushes, injection guns, spray equipment and 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® 5891** to solidify as below before subjecting it to the conditions indicated.

Temperature	Light loading	Full mechanical/thermal loading or water immersion
68°F/20°C 86°F/30°C	24 hours 12 hours	5 days 3 days

NOTE:

Surface temperature should be above 65°F (18°C) throughout the curing period.

5. FINAL SOLIDIFICATION OF BELZONA® 5891

When time is important and equipment usage is pressing, then by installing forced air heaters and taking steps to contain this heat around the equipment being reclaimed, final solidification time can be as little as 24 hours. Due allowance must be made for "warming up".

6. POST CURING TO OBTAIN OPTIMUM HEAT RESISTANCE

This can be done prior to putting coated equipment into service by first allowing the coating to harden at ambient temperature for 24 hours prior to force curing at 212°F (100°C) for between 2 hours and 24 hours. This procedure should be adopted for any application when immediate exposure to a hot aggressive environment will occur.

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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