BELZONA® 1522

INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

METALLIC SURFACES – APPLY ONLY AFTER BLAST CLEANING

a) Brush away any loose contamination and remove dirt, oil, grease etc with **Belzona® 9111** (Cleaner/Degreaser), **Belzona® 9141** 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 SP10
Swedish Standard SA2½ SIS 05 5900
d) After blasting, metal surfaces should be coated before any contamination 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 for 24 hours to allow the ingrained salts to sweat to the surface, then washed prior to a further brush blast to remove these. This process may need to be repeated several times to ensure complete removal of the salts. For detailed procedure consult Belzona Technical Service Department.

2. COMBINING THE REACTIVE COMPONENTS BY PLURAL AIRLESS SPRAY

a) Ensure that the material is at a temperature of 68-86°F (20-30°C) to aid application.
b) Both components should be thoroughly stirred individually using a mechanical "spiral" or "jiffy" type mixer.
c) As the spray equipment accurately meters and mixes the material there is no requirement to mix the base and solidifier components other than for repairs.

NOTES:
1. APPLICATION TEMPERATURE
Belzona® 1522 should not be applied at ambient or substrate temperatures below 65°F(18°C).

2. WORKING LIFE
From the commencement of mixing, **Belzona® 1522** must be used within the times shown:

Temperature	68°F(20°C)	86°F(30°C)	104°F(40°C)	122°F(50°C)
Use all material within	85 mins.	55 mins.	30 mins.	20 mins.

3. MIXING SMALL QUANTITIES
For mixing small quantities of **Belzona® 1522** use:
4 parts Base to 1 part Solidifier by volume
4.25 parts Base to 1 part Solidifier by weight

3. APPLYING BELZONA® 1522

FOR BEST RESULTS
Do not apply when:-
i) The temperature is below 65°F(18°C) or the relative humidity is above 85%.
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 or grease from adjacent equipment or from smoke from kerosene heaters.

Apply the **Belzona® 1522** directly onto the prepared surface using plural component airless spray equipment (e.g. Hydra-Cat).

The plural spray equipment should be selected to achieve the required mixing ration of 4 : 1 v/v.

EQUIPMENT REQUIRED
A typical setup is as follows:
4 : 1 King Fixed Ratio Hydra-Cat with 45 : 1 King master and #5 slave.
Base component: Suitable holding tank fitted with Monarch 5 : 1 feed pump, heater and agitator.
Solidifier component: Suitable holding tank fitted with Monarch 5 : 1 feed pump, heater and agitator.
#30 filters (Base & Solidifier).
1/2 in. x 50 ft. heated hose (Base)[1] + return hose.
3/8 in. x 50 ft. heated hose (Solidifier)[1] + return hose.
Hose control box.
Suitable mix manifold.
2 off 3/8 -30 stainless steel pipe mixer [2].
1/4 in. whip hose of suitable length.
Graco 510 gun or equivalent.
Suitable spray tips (typically 521 to 525).
10 : 1 president flush pump with 1/4 in. hose and #60 filter.
Compressed air supply capable of delivering a minimum of 70 psi (5 bar) free from oil and water.
Viscon in line heaters for each component.

[1] Hoses should be wrapped/insulated together and heated using hot water or electrical trace heating.

[2] Plastic multiblade mixers shall not be used.

For further assistance on correct selection of airless spray equipment please contact Belzona Technical Service Department.

SETTING UP EQUIPMENT

a) This material should be applied by trained applicators only.
b) Prior to commencing application the spray equipment should be thoroughly cleaned out using a suitable solvent such as MEK or acetone.
c) As this material contains some abrasive fillers spare spray tips and seals should be available.

SPRAY PROCESS

a) In order to obtain sprayable viscosities and thorough mixing, heat should be applied to both components as follows:*
Base : Minimum 150°F (65°C) Maximum 158°F (70°C)
Solidifier : Minimum 95°F (35°C) Maximum 104°F (40°C)
**Trace heating should be set at the same temperature as the solidifier component.*

b) Operating pressure for each component should be set to give an acceptable pattern but typically:
Base : Minimum 2800 psi
Solidifier : Minimum 2700 psi

Maximum:Refer to equipment suppliers instructions.

c) Air-assisted airless spray application will produce better atomisation. If this is to be used the air pressure should be set at 80-100 psi.

d) For airless spray application a 521-523 tip would typically be used.

e) For air assisted airless spray application a 525 tip would be preferable.

f) A wet film thickness of 26-34 mils (650-850 microns) should be maintained throughout the application.

g) Ensure that the maximum thickness of 48 mils (1200 micron) is not exceeded.

h) Suitable personal protective equipment should be worn at all times.

i) During application pay particular attention to welds, brackets and fixings. In awkward areas stripe coating may be required before spray application to ensure uniform coverage.

COVERAGE RATE

To achieve the recommended film thickness a practical coverage rate of 12.9 sq.ft. (1.2 sq.m.) /litre.

EQUIPMENT MAINTENANCE

Filters should be checked at the start and end of each shift. Mix ratios shall be verified prior to commencing spraying. Ensure suitable spares are available for regular maintenance.

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. The addition of a wetting agent such as detergent to the water used on the sponge will also assist.

d) Spark testing is preferred to confirm coating continuity. A DC voltage of 3,000 volts is recommended to confirm that minimum coating thickness of 26 mil (650 microns) has been achieved.

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. **Belzona® 1591** or **Belzona® 1522** may be used for small repairs/damage.

CLEANING

Mixing tools should be cleaned immediately after use with **Belzona® 9111** or any other effective solvent e.g. MEK. Brushes, spray equipment and other application tools should be cleaned using a suitable solvent such as MEK or Acetone.

4. COMPLETION OF THE MOLECULAR REACTION

Where operating temperature will be achieved gradually.

Allow to cure for at least 24 hours above 65°F (18°C) before putting into service. The system is designed to post cure in service.

Where immediate exposure to a hot aggressive environment will occur.

Allow the coating to harden at ambient temprature as above. Post cure using wet heat (steam) for at least 4 hours at the operating temperature of the equipment or for at least 6 hours at 250°F (120°C).

NOTE:

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

HEALTH & SAFETY INFORMATION

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

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