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PRODUCT SPECIFICATION SHEET **BELZONA® 1522**

1. PRODUCT NAME

Belzona® 1522

Plural spray applied system for high temperature equipment handling water, aqueous solutions and hydrocarbons.

2. MANUFACTURER

Belzona Inc.

2000 N.W. 88th Court
Miami, Florida 33172

Belzona Polymerics Ltd.,

Claro Road, Harrogate,
HG1 4AY, England

3. PRODUCT DESCRIPTION

A two-component high temperature coating system designed to be applied by plural airless spray, to resist water and pressurised steam up to a temperature of 302°F (150°C) and to exhibit excellent erosion-corrosion resistance at elevated temperatures.

When mixed and applied as detailed in the Instructions for Use leaflet the system is ideally suited for application to:

- Condensate return tanks
- Evaporators
- Oil/gas and oil/water separators
- Autoclaves
- Scrubber units
- Distillation units
- Regenerators
- Stripper towers

4. TECHNICAL DATA

Base Component

Appearance	Paste
Color	Brown
Density	1.785 - 1.805 g/cm ³

Solidifier Component

Appearance	Viscous liquid
Color	Gray
Density	1.665 - 1.685 g/cm ³

Mixed Properties

Mixing Ratio by Weight (Base : Solidifier)	4.25 : 1
Mixing Ratio by Volume (Base : Solidifier)	4 : 1

Mixed Form	Liquid
Sag	nil at 30 mil (750 microns)

Peak exotherm temperature	86 - 104°F (30 - 40°C)
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Time to peak exotherm	100 - 120 mins
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• **Limitations of Use:**

Belzona® 1522 should not be applied at temperatures below 65°F (18°C).

• **Shelf Life:**

Separate Base and Solidifier components will have a minimum shelf life of 3 years when stored in their original unopened containers between 32°F (0°C) and 86°F (30°C).

• **Working Life:**

Will vary according to temperature. At 68°F (20°C) the usable life of mixed material is 85 minutes.

• **Coverage Rate:**

To achieve the recommended film thickness a practical coverage rate of 12.9 sq.ft. (1.2 sq.m.)/liter should be aimed for.

• **Cure Time:**

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

This procedure is suitable for applications where operating temperature will be achieved gradually.

NOTE:

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

5. PHYSICAL / MECHANICAL PROPERTIES

The material is designed to post cure in service under immersion conditions following cure at temperatures above 18°C for at least 24 hours.

The following test data has been obtained by post curing at the test temperature.

• **Abrasion Resistance:**

Taber

The sliding abrasion resistance of the material using the Taber Abraser fitted with grinding wheels and 1 kg load is typically:

H10 wet

191 mm³ - 7 days @ 20°C

CS17 dry

24 mm³ - 7 days @ 20°C

13 mm³ - 7 days @ 100°C

• **Adhesion:**

Tensile Shear

When tested in accordance with ASTM D1002, gives typical values of,

<u>Temperature</u>	<u>Adhesion</u>
68°F (20°C)	2400 psi (169 kgs/cm ²)
212°F (100°C)	2000 psi (141 kgs/cm ²)
320°F (160°C)	1970 psi (138 kgs/cm ²)

• **Chemical Resistance:**

Once fully cured, the material will demonstrate excellent resistance to a wide range of chemicals, eg.

Monoethanolamine up to	212°F (100°C)
Diethanolamine up to	293°F (145°C)
Methyldiethanolamine up to	248°F (120°C)
Triethylene glycol up to	302°F (150°C)
Tetraethylene glycol up to	302°F (150°C)
Water/Hydrocarbon mixtures up to	302°F (150°C)

Refer to Belzona® TKL for specific recommendations.

• **Compressive Strength:**

When tested in accordance with ASTM D695, typical values obtained will be:

<u>Temperature</u>	<u>Compressive Strength</u>
68°F (20°C)	13600 psi (956 kgs/cm ²)
212°F (100°C)	18100 psi (1272 kgs/cm ²)
320°F (160°C)	17400 psi (1223 kgs/cm ²)

• **Flexural Strength:**

When tested in accordance with ASTM D790, typical values obtained will be:

<u>Temperature</u>	<u>Flexural Strength</u>
68°F (20°C)	9400 psi (661 kgs/cm ²)
212°F (100°C)	8700 psi (612 kgs/cm ²)
320°F (160°C)	6500 psi (456 kgs/cm ²)

• **Hardness:**

When tested at ambient temperatures the Shore D hardness of the post cured material is typically as follows:

68°F (20°C)	- 88
212°F (100°C)	- 89
320°F (160°C)	- 91

• **Heat Distortion Temperature:**

Tested to ASTM D648 (264 psi fiber stress), typical values obtained will be

Cure/Postcure Temperature	Distortion temperature after 24 hours
68°F (20°C)	129°F (54°C)
212°F (100°C)	277°F (136°C)

• **Heat Resistance:**

The material will resist water and pressurised steam at temperatures up to 302°F (150°C). The material is not recommended for dry applications at elevated temperatures.

• **Impact Strength:**

When tested in accordance with ASTM D256 typical values obtained will be:

Temperature	Izod Impact Strength
68°F (20°C)	84 j/m unnotched
212°F (100°C)	56 j/m unnotched
68°F (20°C)	11 j/m notched
212°F (100°C)	11 j/m notched

6. SURFACE PREPARATION AND APPLICATION PROCEDURES

For proper technique, refer to the Belzona® Instructions For Use Leaflet which is enclosed with each packaged product.

Belzona® 1522 has been specifically designed to be applied using plural spray equipment.

7. AVAILABILITY AND COST

Belzona® 1522 is available from a network of Belzona® Distributors throughout the world for prompt delivery to the application site. For information, consult the Belzona® Distributor in your area.

8. WARRANTY

Belzona® guarantees this product will meet the performance claims stated herein when material is stored and used as instructed in the Instructions For Use Leaflet. Belzona® further guarantees that all its products are carefully manufactured to ensure the highest quality possible and tested strictly in accordance with universally recognized standards (ASTM, ANSI, BS, DIN, etc.). Since Belzona® has no control over the use of the product described herein, no warranty for any application can be given.

9. TECHNICAL SERVICES

Complete technical assistance is available and includes fully trained Technical Consultants, technical service personnel and fully staffed research, development and quality control laboratories.

10. HEALTH AND SAFETY

Prior to using this material, please consult the relevant Material Safety Data Sheets.

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Belzona® 1522 - Product Specification Sheet (2)