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PRODUCT SPECIFICATION SHEET **BELZONA® 5891**

1. PRODUCT NAME

Belzona® 5891

(HT Immersion Grade)

A high performance barrier coating for protection of metallic surfaces against attack from aqueous solutions at temperatures up to 194°F (90°C).

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 system applied by brush for protection of metallic surfaces operating under immersion conditions in contact with aqueous solutions.

Applications

Effluent tanks and channels
Water boxes
Separators
Condensers
Knock out drums
Evaporators
Condensate tanks
Strippers and scrubbers

4. TECHNICAL DATA

Base Component

Appearance	Viscous liquid
Color	Grey
Density	2.18 - 2.22 g/cm ³

Solidifier Component

Appearance	Thin liquid
Color	Amber
Density	0.95 - 0.99 g/cm ³

Mixed Properties at 68°F (20°C)

Mixing Ratio by Weight (Base : Solidifier)	17 : 1
Mixing Ratio by Volume (Base : Solidifier)	7.5 : 1
Density	2.04 - 2.08 g/cm ³
Time to peak exotherm	125-160 mins.
Peak exotherm temperature	122-149°F (50-65°C)
Viscosity	55-65 poise
Sag	>25 thou (625 microns)

• **Shelf Life:**

Separate base and solidifier components will have a shelf life of at least 3 years when stored 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 45 minutes.

• **Coverage Rate:**

Applied at a thickness of 20mil (500 microns), a practical coverage rate of 20.5 sq.ft. (1.9 m²)/litre should be achieved.

• **Cure Time:**

Allow to cure for the times shown in the chart below before subjecting it to the conditions indicated.

In certain instances it may be advantageous to post cure material prior to putting into service where chemical contact is involved.

5. PHYSICAL/MECHANICAL PROPERTIES

Determined after 7 days cure at 68°F (20°C) ambient cure or 24 hours at 68°F (20°C) followed by 4 hours at 212°F (100°C) post cure.

• **Adhesion:**

Tensile Shear

When tested in accordance with ASTM D1002, using mild steel, grit blasted to a 3-4 mil profile, typical values are:

1,880 psi (132 kgs/cm ²)	ambient cure
2,300 psi (161 kgs/cm ²)	post cure

• **Atlas Cell Testing:**

When tested in accordance with NACE standard TM01-74 in contact with de-ionised water at 194°F (90°C) no blistering is observed in the immersed portion or vapour phase after 1600 hours immersion.

• **Chemical Resistance:**

The material will demonstrate excellent resistance to a broad range of dilute aqueous solutions.

For more specific information contact Belzona® TKL.

• **Compressive Strength:**

When tested in accordance with ASTM D695, typical values obtained are:
12,000 psi (843 kgs/cm²) ambient cure
17,000 psi (1195 kgs/cm²) post cure

• **Flexural Strength:**

When tested to ASTM D790 typical values obtained are:
5,200 psi (365 kgs/cm²) ambient cure
7,000 psi (492 kgs/cm²) post cure

• **Hardness:**

The Shore D hardness of the material when tested to ASTM D2240 is typically
85 ambient cure
88 post cure

• **Heat Resistance:**

For many typical applications the material is suitable for continuous immersion in aqueous solutions up to 194°F (90°C).

• **Impact Strength:**

The Izod impact strength of the material when tested in accordance with ASTM D256 is typically

Notched	Un-notched	
22 J/m	14 J/m	ambient cure
37 J/m	27 J/m	post cure

CURE TIMES

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

6. SURFACE PREPARATION AND APPLICATION PROCEDURES

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

7. AVAILABILITY AND COST

Belzona® 5891 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 Belzona® 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 recognised 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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