PRODUCT SPECIFICATION SHEET
BELZONA 5831LT
FN10202

BELZONA® Repair • Protect • Improve

GENERAL INFORMATION

Product Description:
Belzona 5831LT is an environmental moisture tolerant barrier coating, specially formulated for the protection of metallic and non-metallic surfaces at lower temperatures.

Belzona 5831LT is ideally suited for substrate temperatures ranging from 5-30°C (41-86°F)

Application Areas:
When mixed and applied as detailed in the Belzona Instructions for Use (IFU), the system is specifically designed for applications where water or oil contamination cannot be effectively removed including:

- Splash zones
- Underwater
- Coolant pipes.

APPLICATION INFORMATION

Working Life
Will vary according to temperature. At 20°C (68°F) the usable life of mixed material is 45 minutes.

Coverage Rate
Applied at a thickness of 300 microns (12mil), the theoretical coverage rate is 3.3 m^2/litre (35.5 ft^2/litre) per coat.

The **Belzona 5831LT** should be applied in 2 coats to achieve a minimum thickness of 400 micron (16mil).

In practice many factors influence the exact coverage rate achieved. Application at low temperatures will reduce coverage rates. On rough surfaces, such as pitted steel or concrete, the coverage rate achieved may be reduced by up to 20%.

Application underwater will reduce coverage rates further.

Cure Time
The **Belzona 5831LT** system will cure under cold, wet and submerged conditions down to 5°C (41°F). Allow to solidify for the times shown in the Belzona IFU before subjecting it to the conditions indicated.

Base Component	
Appearance	Viscous liquid
Colour	White
Density	2.11 g/cm^3

Solidifier Component	
Appearance	Thixotropic liquid
Colour	Black or Yellow
Density	1.22 g/cm^3

Mixed Properties	
Mixing Ratio by Weight (Base : Solidifier)	1.75 : 1
Mixing Ratio by Volume (Base : Solidifier)	1 : 1
Mixed Density	1.67 g/cm^3
Sag resistance at 20°C (68°F)	≥500 µm
Mixed Colour	Grey or White

The above application information serves as introductory guide only. For full application details including the recommended application procedure/technique, refer to the Belzona IFU which is enclosed with each packaged product.

PRODUCT SPECIFICATION SHEET
BELZONA 5831LT
FN10202

BELZONA
Repair • Protect • Improve

ABRASION

Taber
When determined in accordance with ASTM D4060 the sliding Taber abrasion resistance, will typically be:

Dry (CS17 Wheels)
54 mm^3 loss per 1000 cycles — 7 day cure at 20°C (68°F)

Wet (H10 Wheels)
125 mm^3 loss per 1000 cycles — 7 day cure at 20°C (68°F)

ADHESION

Tensile Shear Adhesion
When tested in accordance with ASTM D1002, following a 7 day cure at 20°C (68°F), using mild steel substrates the tensile shear adhesion, will typically be:

Grit Blasted (SSPC-SP10) (ISO 8501-1 Sa2.5)	Lap Shear Adhesion
Clean & Dry	8.80 MPa / 1280 psi*
Transformer Oil	9.30 MPa / 1350 psi*
Underwater	8.40 MPa / 1220 psi*

* Cohesive failure of **Belzona 5831LT**

Ground (SSPC-SP11)	Lap Shear Adhesion
Clean & Dry	10.10 MPa / 1460 psi*

* Cohesive failure of **Belzona 5831LT**

Cleavage Adhesion
The Cleavage Adhesion on mild steel substrates, as determined in accordance with ASTM D1062, following a 7 day cure at 20°C (68°F), will typically be:

Grit Blasted (SSPC-SP10) (ISO 8501-1 Sa2.5)	Cleavage Adhesion
Clean and Dry	106 N/mm / 605 pli*

* Cohesive failure of **Belzona 5831LT**

Pull Off Adhesion on Steel
Cure at 20°C (68°F)
The Dolly Pull Off Strength on 10mm thick mild steel, as determined in accordance with ASTM D4541 and ISO 4624, following a 7 day cure at 20°C (68°F), will typically be:

Grit Blasted (SSPC-SP10) (ISO 8501-1 Sa2.5)	Pull Off Adhesion
Clean & Dry	15.70 MPa / 2280 psi*
Transformer Oil	10.90 MPa / 1580 psi*
Wet	10.50 MPa / 1520 psi*
Underwater	12.30 MPa / 1780 psi*

* Cohesive failure of **Belzona 5831LT**

Ground (SSPC-SP11)	Pull Off Adhesion
Clean & Dry	14.10 MPa / 2050 psi*
Transformer Oil	9.90 MPa / 1440 psi*
Wet	8.70 MPa / 1260 psi*
Underwater	8.10 MPa / 1170 psi*

* Cohesive failure of **Belzona 5831LT**

ADHESION

Pull Off Adhesion on Steel
Cure at 5°C (41°F)
The Dolly Pull Off Strength on 10mm thick mild steel, as determined in accordance with ASTM D4541 and ISO 4624, **following the stated cure at 5°C (41°F) will typically be:**

Grit Blasted (SSPC-SP10) (ISO 8501-1 Sa2.5)	Pull Off Adhesion 7 day cure	Pull Off Adhesion 28 day cure
Clean & Dry	12.20 MPa / 1770 psi*	17.20 MPa / 2490 psi*
Wet	8.70 MPa / 1260 psi*	13.20 MPa / 1910 psi*

* Cohesive failure of **Belzona 5831LT**

Ground (SSPC-SP11)	Pull Off Adhesion 7 day cure	Pull Off Adhesion 28 day cure
Clean & Dry	10.10 MPa / 1460 psi*	12.80 MPa / 1860 psi*
Wet	7.90 MPa / 1150 psi*	9.80 MPa / 1420 psi*

* Cohesive failure of **Belzona 5831LT**

Pull Off Adhesion on Concrete
Cure at 20°C (68°F)
The Dolly Pull Off Strength on concreate, as determined in accordance with ASTM D4541 and ISO 4624, following a 7 day cure at 20°C (68°F), will typically be:

	Pull Off Adhesion
Clean & Dry	6.70 MPa / 970 psi *
Damp	4.70 MPa / 680 psi *

* Cohesive failure of substrate

COMPRESSIVE STRENGTH

When determined in accordance with ASTM D695, typical values after a 7 day cure at 20°C (68°F) will be:

Compressive strength	10.5 MPa / 1520 psi
Compressive Modulus	193 MPa / 2.7 x 10^4 psi

CORROSION PROTECTION

Cathodic Disbondment
When tested in accordance with ASTM G8-96 at 77°F (25°C), no coating disbondment was observed.

PRODUCT SPECIFICATION SHEET
BELZONA 5831LT
FN10202

FLEXURAL STRENGTH

When tested to ASTM D790 typical values obtained after a 7 day cure at 20°C (68°F) are:

Flexural strength	3.30 MPa / 480 psi
Flexural Modulus	57.80 MPa / 8380 psi

HARDNESS

The Shore D hardness, when determined in accordance with ASTM D2240, will typically be:

	Shore D
7 day cure at 5°C (41°F)	64
7 day cure at 20°C (68°F)	66
7 day cure at 40°C (104°F)	67

HEAT RESISTANCE

Dry Heat Resistance
The coating will exhibit no significant degradation when exposed to dry heat at temperatures up to 120°C (248°F).

For many applications the product is suitable down to -40°C (-40°F).

IMMERSION RESISTANCE

When tested in accordance with ISO 2812-2 the coating shows no blistering or undercutting after the listed exposure time when immersed in tap water at 40°C (104°F), when applied to:

Grit blasted steel (SSPC-SP10)	>2000 hours
Ground (SSPC-SP11)	>1000 hours

IMPACT STRENGTH

The Izod impact strength of the material when tested in accordance with ASTM D256 after a 7 day cure at 20°C (68°F), is typically:

Un-notched	4.13 kJ/m^2
Notched	6.69 kJ/m^2

SALT SPRAY RESISTANCE

When tested in accordance with ASTM B117, the coating shows no blistering or corrosion after the listed exposure time, when applied to:

Grit blasted steel (SSPC-SP10)	>2000 hours
Ground (SSPC-SP11)	>1000 hours

TENSILE PROPERTIES

When determined in accordance with ASTM D638, after a 7 day cure at 20°C (68°F) typical values will be:

Tensile Strength	7.50 MPa / 1090 psi
Young's Modulus	630 MPa / 9.10 x10^5 psi
Elongation	6.94%

SHELF LIFE

Separate base and solidifier components shall have a shelf life of 5 years from date of manufacture when stored in their original unopened containers between 5°C (41°F) and 30°C (86°F).

PRODUCT SPECIFICATION SHEET
BELZONA 5831LT
FN10202

WARRANTY

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

AVAILABILITY AND COST

Belzona 5831LT 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.

MANUFACTURER / SUPPLIER

Belzona Limited,
Claro Road, Harrogate,
HG1 4DS, UK

Belzona Inc.
14300 NW 60th Ave,
Miami Lakes, FL, 33014, USA

HEALTH AND SAFETY

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

TECHNICAL SERVICE

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

The technical data contained herein is based on the results of long term tests carried out in our laboratories and to the best of our knowledge is true and accurate on the date of publication. It is however subject to change without prior notice and the user should contact Belzona to verify the technical data is correct before specifying or ordering. No guarantee of accuracy is given or implied. We assume no responsibility for rates of coverage, performance or injury resulting from use. Liability, if any, is limited to the replacement of products. No other warranty or guarantee of any kind is made by Belzona, express or implied, whether statutory, by operation of law or otherwise, including merchantability or fitness for a particular purpose.

Nothing in the foregoing statement shall exclude or limit any liability of Belzona to the extent such liability cannot by law be excluded or limited.

Copyright © 2022 Belzona International Limited. Belzona® is a registered trademark.

Belzona products are manufactured under an ISO 9001 Registered Quality Management System