PRODUCT SPECIFICATION SHEET
BELZONA 5721
FN10204

BELZONA®
Repair • Protect • Improve

GENERAL INFORMATION

Product Description:
A high performance, two component, solvent free coating system for the protection of leading edges on wind turbine blades. For use in repair situations or Original Equipment Manufacture (OEM). **Belzona 5721** offers high erosion resistance, is optimised for ease of application and a rapid return to service.

APPLICATION INFORMATION

Application Methods
Brush

Application Temperature
Application should occur in the following ambient temperature range: 5°C/41°F to 40°C/104°F.

Coverage Rate
Belzona 5721 can be applied as a one coat or two coat system at a target thickness of 500 microns (20 mil) per coat.

Applied at a thickness of 500 microns (20 mil), the theoretical coverage rate will be 1.3 m^2 (14.0 sq.ft)/kg.

Cure Time
The cure time is dependent on ambient conditions. Allow to cure for the times shown in the Belzona IFU before subjecting it to the conditions indicated.

Base Component

Appearance	Thixotropic liquid
Colour	White or Light Grey
Density	1.72 - 1.74 g/cm^3

Solidifier Component

Appearance	Liquid
Colour	Clear, colourless
Density	1.11 - 1.15 g/cm^3

Mixed Properties

Appearance:	Thixotropic liquid
Colour:	White or Light Grey (RAL 7035)
Density	1.51 g/cm^3
Sag resistance (BS 5350-B9):	750 µ m / 30 mils
60° Specular Gloss (ASTM D2457):	88 Gloss Units
VOC content (ASTM D2369 / EPA ref. 24):	0.13% / 1.89 g/L

Mix Ratio

Mixing Ratio by Weight (Base : Solidifier)	2.66 : 1
Mixing Ratio by Volume (Base : Solidifier)	1.75 : 1

Overcoat Window
Between an ambient temperature range of 5°C/41°F to 40°C/104°F, the minimum overcoat time will be 30 minutes. The maximum overcoat time will be 24 hours. Consult the Belzona IFU for specific details.

Working Life
The working life will vary depending on ambient conditions. At 20°C/68°F and 50% relative humidity, the usable life of mixed material will typically be 40 minutes. Consult the Belzona IFU for specific details.

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.

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ADHESION

Pull Off Adhesion
The PosiTest Dolly Pull Off Strength on GRP composite, as determined in accordance with ASTM D4541 and ISO 4624, will typically be:

10.5 MPa / 1520 psi* 20°C/68°F cure & test

**Cohesive failure of GRP composite*

The PosiTest Dolly Pull Off Strength on 10mm thick grit blasted mild steel, as determined in accordance with ASTM D4541 and ISO 4624, will typically be:

36.8 MPa / 5340 psi 20°C/68°F cure & test

Tensile Shear Adhesion
The tensile shear adhesion on grit blasted mild steel, as determined in accordance with ASTM D1002, will typically be:

25.2 MPa / 3650 psi 20°C/68°F cure & test

Tensile Shear Adhesion (Immersion)
The Tensile Shear Adhesion on mild steel, as determined in accordance with ASTM D1002, tested at 20°C after 1000 hours immersion in tap water at 40°C/104°F, will typically be:

19.2 MPa / 2780 psi 20°C/68°F test

Cleavage Adhesion
The cleavage adhesion on grit blasted mild steel, as determined in accordance with ASTM D1062, will typically be:

314 N/mm / 1800 pli 20°C/68°F cure & test

COMPRESSIVE PROPERTIES

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

Compressive Yield Strength
42.4 MPa / 6140 psi 20°C/68°F cure & test

Compressive Modulus
1050 MPa / 1.52 x 10^5 psi 20°C/68°F cure & test

CORROSION PROTECTION

Salt Spray
When tested in accordance with ASTM B117, **Belzona 5721** will show no signs of failure after 13,000 hours continuous exposure.

Water Immersion
When tested in accordance with ISO 2812-2, **Belzona 5721** will show no signs of failure after 1000 hours continuous immersion at 40°C/104°F in deionised water.

EROSION RESISTANCE

Taber
Dry sliding abrasion resistance, when determined in accordance with ASTM D4060 using CS17 wheels, will typically result in:

16 mm^3 loss per 1000 cycles 20°C/68°F cure & test

Grit Impact
Direct impact of 2kg G34 chilled iron grit at 80 psi and 90° angle, will typically result in volume loss of:

15 mm^3 20°C/68°F cure & test

Solid Particle Impingement
When independently tested at a coating thickness of 500 microns, in accordance with ASTM G76, using 50g dry silica sand jet erosion, at a distance of 20mm from the surface, at an impingement angle of 90° and at an erodent velocity of 70 m/s, the volume loss will typically be:

8.8 mm^3 20°C/68°F cure & test

Rain Erosion Testing (RET)
When independently tested at a coating thickness of 500 microns, in accordance with ASTM G73 at a tip velocity of 160 m/s, the coating will show no significant damage following 3 hours of continuous testing.

When independently tested in accordance with ASTM G73 and DNVGL-RP-0171 with a flow rate of 65 L/hr and mean droplet size of 2.46mm, the breakthrough to substrate time was:

Product Thickness	Tip Velocity	
	125 m/s	150 m/s
500 microns (1 coat)	13 hrs	2 hrs
1000 microns (2 coats)	21 hrs	3.5 hrs

Cavitation Resistance
When tested to a modified version of ASTM G32 using stationary specimens at 20 kHz frequency and 50 microns amplitude, will typically result in:

58 mm^3 loss in 8 hours 20°C/68°F cure & test

FLEXURAL PROPERTIES

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

Flexural Strength
59.2 MPa / 8580 psi 20°C/68°F cure & test

Flexural Modulus
3330 MPa / 4.83 x 10^5 psi 20°C/68°F cure & test

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HARDNESS

Shore D
The Shore D hardness of the material tested to ASTM D2240 is typically:

81	20°C/68°F cure & test

Barcol (Model 935)
The Barcol hardness of the material tested to ASTM D2583 is typically:

78	20°C/68°F cure & test

König Pendulum
When tested to ISO 1522 the König damping time of the coating will typically be:

161 seconds	20°C/68°F cure & test

HEAT RESISTANCE

Heat Distortion Temperature (HDT)
When determined in accordance with ASTM D648, the HDT will typically be:

49°C / 120°F	20°C/68°F cure

IMPACT STRENGTH

Izod Impact
When tested in accordance with ASTM D256, the reverse notched impact strength will typically be:

14.9 kJ/m^2	20°C/68°F cure & test

Falling Weight
The direct falling weight impact resistance when determined in accordance with ASTM D2794 will typically be

0.91 kg.m / 78.7 in.lbs	20°C/68°F cure & test

UV RESISTANCE

Artificial Weathering (Xenon Arc)
When tested in accordance with ISO 4892-2 (Xenon Arc), **Belzona 5721** will show no chalking or colour change following >4000 hours exposure.

SHELF LIFE

Separate base and solidifier components shall have a shelf life of 3 years from date of manufacture when stored in their original unopened containers between 5°C (41°F) and 30°C (86°F).

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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 5721 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 N.W. 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.

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