Product Specification Sheet
Belzona 5115
FN10223

General Information

Product Description:
Two-component, high-gloss, solvent-free, low VOC, epoxy-polysiloxane hybrid topcoat with excellent color retention and corrosion and weathering resistance. Ideal for top coating other Belzona products to attain excellent resistance to weathering while retaining exterior gloss and color. Available in white and gray as finished products, and in a neutral shade for achieving other industrial finish colors.

Application Areas:
When mixed and applied as detailed in the Belzona Instructions for Use (IFU), the system is ideally suited for application to the following:

- Bridges
- Cooling towers
- Walls and floors
- Marine structures and offshore platforms topsides
- External tank surfaces
- Piping, pipeline, and pipework
- Steelwork
- Wind turbines

Application Information

Application Methods: Brush, air-assisted, and airless spray

Application Temperature: The application should ideally occur from 41 °F to 104 °F (5 °C to 40 °C).

Coverage Rate: The coverage rate depends on roughness, porosity, profile, and the nature of the substrate. Please refer to the Belzona IFU for guidance on practical coverage rates.

Cure Times:
Cure times will vary depending on the ambient conditions. Consult the Belzona IFU for specific details.

Base Component

Base Name	WHITE	GRAY	NEUTRAL
Appearance & Color	White Liquid	Gray Liquid	Translucent Liquid
Viscosity (P) 72 °F (22 °C)	20 - 30	19 - 20	29 - 31
Density (g/cm^3)	1.47 – 1.50	1.47 – 1.50	1.53 – 1.55

Solidifier Component

Appearance	Liquid
Color	Colorless
Density (g/cm^3)	1.00 – 1.02

Mixed Properties

Mixing Ratio by Weight (Base: Solidifier)	4.5: 1
Mixing Ratio by Volume (Base: Solidifier)	3: 1

Finished Product	Belzona 5115 (White)	Belzona 5115 (Gray)
Viscosity (P) 72 °F (22 °C)	3.0 – 4.0	1.5 – 2.0
VOC Content (%)	6.64	5.52
VOC Content (g/L)	88.73	72.85
Density (g/cm^3)	1.32 – 1.33	1.32 – 1.33
Sagging Resistance	6 mil (150 μm)	5 mil (125 μm)

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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Abrasion

Taber
When tested in accordance with ASTM D4060 (1-kg load), the sliding abrasion of samples cured at 72 °F (22 °C) for 7 days will typically be:

CS17 Wheels (Dry)	55 mm^3 loss per 1,000 cycles

Accelerated Weathering Resistance

When tested in accordance with ISO 16474-3, samples of Belzona 5115 (white) were subjected to artificial accelerated weathering using fluorescent UVA and UVB lamps for 1,000 hours. Visual inspection and specular gloss measurements are provided as follows.

Visual inspection: No color change, cracking, flaking, rusting, or any other breakdown were observed.

Specular gloss: Some degree of specular gloss loss was evident, as shown below.

Fluorescent Lamp Type	Specular Gloss* (GU)	
	Initial	After 1,000 hours
UVA	85.7	71.5
UVB	93.9	27.5

* ASTM D2457 (60° angle)

Adhesion

Pull Off Adhesion
When tested in accordance with ASTM D4541/ISO 4624, the pull-off adhesion of Belzona 5115 applied onto various substrates prepared to the requirements of SSPC SP 11 and cured at 72 °F (22 °C) for 14 days will typically be:

Aluminum	2,200 psi (15.2 MPa)
Belzona 5811	2,932 psi (20.2 MPa)
Belzona 6111	3,000 psi (20.7 MPa)
Carbon steel	3,860 psi (26.6 MPa)
Vinyl Ester FRP	1,100 psi (7.6 MPa)
Epoxy FRP	3,700 psi (25.5 MPa)

Adhesion by Tape Test (Crosshatch)
When tested on blasted steel substrates, in accordance with ASTM D3359 Method B, the rate of adhesion of Belzona 5115 will typically be **5B**, i.e., the edges of the cuts were found to be completely smooth and none of the squares of the lattice was detached.

Chemical Resistance

Although not recommended for full immersion applications, when fully cured, the material will demonstrate excellent resistance to a broad range of chemicals. For a more detailed description of chemical resistance properties, refer to relevant Chemical Resistance Chart.

Corrosion Resistance

Panels top-coated with Belzona 5115 demonstrated no rusting, blistering, or flaking when subjected to salt spray for 2,000 hours in accordance with ASTM B117-19.

Flexibility

When tested in accordance with ASTM D522-Method B (Cylindrical Mandrel Bend), typical elongation values of samples cured under the conditions stated below for 40 days and bent onto different mandrel diameters will be:

Cure Temperature / Mandrel Diameter	Elongation (%)	
	1 in. (25 mm)	¾ in. (19 mm)
68 °F (20 °C)	3.93	5.18
86 °F (30 °C)	3.93	F
104 °F (40 °C)	3.93	F

F – For this mandrel diameter and smaller, cracking was produced.

Hardness

König Pendulum
When tested in accordance with ISO 1522, the König damping time of samples cured under the conditions stated below will typically be:

133 s	72 °F (22 °C) – 50% RH – 7 days
169 s	72 °F (22 °C) – 50 % RH – 40 days

Pencil Hardness
When tested in accordance with ASTM D3363, the hardness by pencil test of samples cured at 72 °F (22 °C) for 7 days, will typically be:

Gouge Hardness	7H
Scratch Hardness	7H

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Heat Resistance

Glass Transition Temperature (T_g)
When tested to ISO 11357-2, T_g of samples cured at the conditions stated below will typically be:

237 °F (114 °C)	Cured at 72 °F (22 °C) – 50% RH – 30 days

Dry Heat Resistance
The material will typically be stable under dry conditions at elevated temperatures up to 212 °F (100 °C) and low temperatures down to -40 °F (-40 °C).

Impact Resistance

Rapid Deformation (Falling Weight)
When tested in accordance with ASTM D2794, the impact resistance to cracking of samples cured for 40 days under the conditions stated below will typically be:

9 in.lb (0.10 kg.m)	68 °F (20 °C)
9 in.lb (0.10 kg.m)	86 °F (30 °C)
6 in.lb (0.07 kg.m)	104 °F (40 °C)

Approvals

Direct Food Contact (FDA)
Belzona 5115 meets extraction requirements as set out in 21 CFR 175.300 for a broad range of food types in Conditions of Use E and F.

Contact Belzona for more details on these approvals or any other approvals or certifications not stated herein.

Shelf Life

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

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Warranty

Belzona guarantees this product will meet the performance claims stated herein when material is stored and used as instructed in the Belzona Information for Use (IFU) 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, 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 5115 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.

Health and Safety

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

Manufacturer/Supplier

Belzona Limited
Claro Road
Harrogate HG1 4DS
United Kingdom

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

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.