

PRODUCT SPECIFICATION SHEET

BELZONA 5231

FN10177



GENERAL INFORMATION

Product Description:

A two component coating system, incorporating a non-slip aggregate. A versatile aggregate-free version is also available to allow post addition of aggregate, such as Belzona 9211, 9221, 9232 or different types of aggregate, to meet anti-slip and decorative requirements. This high build solvent free coating is suitable for application to a range of rigid substrates, including concrete, steel, etc. Available in a range of colors. Gray and light gray are available with aggregate. Gray, light gray and yellow are available aggregate-free.

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:

- Food preparation
- Warehousing
- Showrooms
- Corridors
- Decks
- Chemical storage
- Canteens
- Schools
- Offices, etc.

APPLICATION INFORMATION

Application Methods

Roller
Brush

Coverage Rate

As a guide, the coverage rate of the recommended two coat system at a thickness of 6 mils (150 microns) per coat, total 12 mils (300 microns), is 121.6 ft² (11.3 m²) per 4 liter unit. Refer to the Belzona IFU for more specific information.

Application to rough, pitted or irregular surfaces may reduce these coverage rates by 20 - 25%.

Cure Time

Allow to solidify for the times shown on the Belzona IFU before subjecting it to the conditions indicated.

Note: Below 41°F (5°C), solidification times will be significantly extended and the resultant properties of the **Belzona 5231** will be reduced.

Slip resistance can be improved by incorporating additional aggregate. Refer to Belzona TKL for additional information.

Base Component

Appearance Gritty soft paste
Density 1.72-1.79 g/cm³

Solidifier Component

Appearance Slightly hazy amber liquid
Density 1.04-1.06 g/cm³

Mixed Properties

Mixing ratio by Volume (Base : Solidifier) 3 : 1
Color Gray, Light Gray and Yellow
Density 1.50-1.60 g/cm³
Sag Resistance 4 mils (100 microns)
Time to Peak Exotherm at 68°F (20°C) 100 minutes
Peak Exotherm Temperature 120°F (49°C)
Usable Life at 68°F (20°C) 60 minutes
VOC content (ASTM D2369 / EPA ref.24) 1.18% / 18.3 g/L

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

The Taber abrasion resistance using CS17 wheels dry and 1kg load is typically:

21mm³ loss of coating per 1000 cycles.

ADHESION

Tensile Shear

When tested in accordance with ASTM D1002, typical adhesion values obtained on grit blasted steel will be:

2040 psi (14.06 MPa)

Tensile

Pull off adhesion tested to ASTM D4541:

Dry concrete	1050 psi (7.24 MPa)*
Damp concrete	770 psi (5.31 MPa)*
Blasted steel	3270 psi (22.55 MPa)**
Ground steel	3510 psi (24.20 MPa)**
Dry brick	1250 psi (8.62 MPa)*
Damp brick	1175 psi (8.10 MPa)*
Dry quarry tile	2580 psi (17.78 MPa)*
Damp quarry tile	1710 psi (11.79 MPa)*

* Cohesive failure in substrate

** Cohesive failure within **Belzona 5231**

CHEMICAL RESISTANCE

Belzona 5231 is resistant to a broad range of chemicals including: alkalis, hydrocarbons, detergent solutions, mineral and lubricating oils, salts and many other commonly found chemicals.

* For a more detailed description of chemical resistance properties, refer to relevant Chemical Resistance chart.

HARDNESS

Shore D

The Shore D hardness of the material tested to ASTM D2240 is typically: 78

Koenig Pendulum

When tested to ISO 1522 the Koenig damping time of the ambient cured coating is typically: 87 seconds

Barcol

When tested to ASTM D2583 the hardness using a Barcol impressor, Model No. 935 is typically: 87

HEAT RESISTANCE

Heat Distortion Temperature

The heat distortion temperature (HDT) of the material has been tested in accordance with ASTM D648, under 264 psi fiber stress. Typical results obtained using different cure schedules are as follows:

Cure Schedule

68°F (20°C, 7 days) cure

212°F (100°C, 4 hours) cure

HDT Values

90°F (32°C)

113°F (45°C)

Dry Heat Resistance

The indicated degradation temperature in air based on Differential Scanning Calorimetry (DSC) operated in accordance with ISO11357 is typically 320°F (160°C).

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

SLIP RESISTANCE

Belzona 5231 will meet the safety standard (minimum PTV of 36) by incorporating additional anti-slip aggregate. When tested in accordance with ASTM E303 with a rubber slider, the results obtained were:

	As supplied*	+ 30% Belzona 9232 Anti-slip
aggregate		
Average PTV Wet	33	40
Average PTV Dry	81	82

* The original version of **Belzona 5231** with aggregate incorporated used for the testing.

COMPRESSIVE STRENGTH

Compressive strength

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

11,147 psi (76.9 MPa)	24 hours at 72°F (22°C)
12,142 psi (83.7 MPa)	5 days at 72°F (22°C)

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 32°F (0°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 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 5231 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

Belzona Polymerics Limited
Claro Road
Harrogate HG1 4DS
United Kingdom

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.

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