

PRODUCT SPECIFICATION SHEET

BELZONA 4341

FN10086



GENERAL INFORMATION

Product Description:

A high performance, two-component barrier coating optimised for resistance to hot inorganic acids, such as sulphuric and hydrochloric acid.

Application Areas:

When mixed and applied as detailed in the Belzona Instructions for Use (IFU), the system, which isolates concrete and metal substrates from deteriorating chemical environments, is ideally suited for application to:

- Acid retaining walls
- Chemical drains and channels
- Chemical transfer and holding areas
- Pump bases
- Pump casings
- Tank pads
- Walkways (with non-slip aggregate incorporated)
- Tanks

APPLICATION INFORMATION

Cure Time

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

Note: Below 59°F (15°C), solidification times will be significantly extended and the resultant chemical resistance capability of the **Belzona 4341** will be reduced.

For optimum results, **Belzona 4341** should be forced cured at 180°F (80°C) for 4 hours. This will ensure the very best chemical resistance.

Coverage Rate

Theoretical coverage rate of a 1.5kg unit is 26.7 sq.ft. (2.48m²) at the recommended thickness of 16 mils (400 micron) per coat.

Application to rough or irregular surfaces may reduce the coverage rate by 20 - 25%.

Volume Capacity

60.7 cu.in. (994 cm³) per 1.5 kg unit.

Base Component

Appearance	Thixotropic liquid
Colour	Red/Black
Gel Strength	70 g/cm ³
Density	1.58 g/cm ³

Solidifier Component

Appearance	Clear Liquid
Colour	Amber
Density	1.12 g/cm ³

Mixed Properties

Mixing Ratio by Weight (Base : Solidifier)	8.82 : 1
Mixing ratio by Volume (Base : Solidifier)	6.26 : 1
Density	1.52 g/cm ³
Sag Resistance	> 50 thou
Time to Peak Exotherm at 68°F (20°C)	28 minutes
Peak Exotherm Temperature	266°F (130°C)
Useable Life at 68°F (20°C)	15 minutes

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

Tensile Shear

When tested in accordance with ASTM D1002, the adhesion to grit blasted mild steel will typically be:

68°F (20°C) cure	1500 psi (10.3 MPa)
212°F (100°C) post cure	1600 psi (11.0 MPa)

The adhesion to grit blasted aluminium will typically be:

68°F (20°C) cure	1190 psi (8.24 MPa)
212°F (100°C) post cure	1350 psi (9.29 MPa)

Pull Off Adhesion

When tested in accordance with ASTM D 4541/ ISO 4624, the pull off strength after a 7 day cure at 68°F (20°C) will typically be:

Grit blasted mild steel	3540 psi (24.4 MPa)
Grit blasted aluminium	2930 psi (20.2 MPa)

CHEMICAL RESISTANCE

Belzona 4341 has been formulated for optimum resistance to hot inorganic acids up to 194°F (90°C).

Post-curing may be required before exposure to chemicals.

Note: Chemical resistance ratings are assigned based on the ability of a Belzona product to resist chemical attack and/or protect the underlying substrate. Belzona cannot guarantee the purity of the chemical, appearance or colour stability following contact.

It is recommended that all proposed applications are checked with TKL at Harrogate or Miami for suitability before proceeding.

* For a more detailed description of chemical resistance properties, determined in accordance with ISO 2812-1, please refer to relevant Chemical Resistance chart.

COMPRESSIVE PROPERTIES

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

	Compressive Strength	Proportional Limit	Youngs Modulus
68°F/20°C cure & test	82.4 MPa 11,950 psi	53.7 MPa 7,788 psi	1,441.3 MPa 2.09 x 10 ⁵ psi
212°F/100°C cure & 68°F/20°C test	153.8 MPa 22,311 psi	99.3 MPa 14,401 psi	1,499.6 MPa 2.18 x 10 ⁵ psi

FLEXURAL PROPERTIES

Flexural Strength

The flexural strength of the material when tested to ASTM D790 is typically:

5000 psi (34.5 MPa).

HARDNESS

Barcol Hardness

The Barcol hardness, when determined in accordance with ASTM D2583, will typically be:

	Ambient cure (68°F/20°C)	Post cure (140°F/60°C)	Post cure (212°F/100°C)
Barcol 934-1	13	19	32
Barcol 935	80	85	84

HEAT RESISTANCE

Heat Distortion Temperature (HDT)

When tested in accordance with ASTM D648, under 264 psi fibre stress, typical results obtained will be:

Cure Schedule	HDT Value
68°F (20°C) cure	142°F (61°C)
122°F (50°C) cure	176°F (80°C)
212°F (100°C) cure	185°F (85°C)
302°F (150°C) cure	205°F (96°C)

Dry Heat Resistance

The indicated degradation temperature in air based on Differential Scanning Calorimetry (DSC) operated in accordance with ISO11357 is typically 374°F (190°C).

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

Wet Heat Resistance

Suitable for service at temperatures up to 194°F (90°C) but refer to chemical resistance data for chemical contact limitations.

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IMPACT RESISTANCE

Izod Pendulum

Izod impact strength, when determined in accordance with ASTM D256, will typically be:

	Reversed notched Izod Impact Strength	Un-notched Izod Impact Strength
68°F/20°C	3.9 KJ/m ²	3.8 KJ/m ²
cure & test	40.8 J/m	48.4 J/m
212°F/100°C cure &	4.4 KJ/m ²	4.4 KJ/m ²
68°F/20°C test	46.9 J/m	55.3 J/m

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 41°F (5°C) and 86°F (30°C).

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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 4341 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.

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