PRODUCT SPECIFICATION SHEET
BELZONA 4231
FN10081

GENERAL INFORMATION

Product Description:
A rapid curing system for repairing and resurfacing concrete and stonework damaged by impact, vibration, chemicals and environmental attack. Also for grouting and bonding. Will cure down to 32°F (0°C). A combination of selected quartz particles and two specifically formulated reactive liquid resins (**Belzona 4251**) which interlink chemically fusing the quartz particles together. Ideally suited for horizontal surfaces, the system may also be applied on vertical substrates up to ¼ inch (6mm) thickness.

Application Areas:
Suitable for rapid grouting of handrails, holding down bolts, etc.
It is ideal for emergency repairs to any structure made from concrete, brick, marble, stone, etc.

APPLICATION INFORMATION

Working Life
Will vary according to temperature. At 77°F (25°C), use all mixed material within 5 minutes.

Coverage Rates
The theoretical coverage rate of a 13 kg unit applied at ¼ inch (6 mm) is 9.7 sq.ft (0.95m^2).

Cure Time
Will be reduced for thicker sections and extended for thinner applications. Allow to solidify for the times shown in the Belzona IFU before subjecting it to the conditions indicated.

Volume Capacity
349 cu.ins. (5720 cm^3) per 13 kg unit.

Belzona® 4251 Base Component

Appearance	Opaque Liquid
Colour	Gray
Density	1.15 g/cm^3

Belzona® 4251 Solidifier Component

Appearance	Clear Liquid
Color	Colorless
Density	1.22 g/cm^3

Belzona® 4231 Aggregate Component

Appearance	Pre-wetted, fine granular powder
Color	Buff
Density	2.59 g/cm^3
Bulk Density	Approx. 1.5 g/cm^3

Mixing Ratio
For mixing small quantities the mixing ratio of the component to achieve a tolerable screed is:-
(Base : Solidifier : Aggregate)

by weight	1.4 : 1 : 18
by volume	1.5 : 1 : 13

For slurry mixes Aggregate may be added to desired consistency.

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 using CS17 wheels dry, 1 kg load, typical loss per 1,000 cycles is:

16mm^3

ADHESION

Positest dolly pull-off
When tested in accordance with ASTM D4541 adhesion values will typically be:

Dry concrete	1100 psi (7.6 MPa)
Damp concrete	700 psi (4.8 MPa)

CHEMICAL RESISTANCE

This material offers resistance to a broad range of chemicals and will demonstrate good resistance to dilute acids, alkalis, oils, bleach, diesel and unleaded petrol.

COMPRESSIVE PROPERTIES

Compressive Strength
When tested in accordance with ASTM D695 the compressive strength is typically:

11,000 psi (75.8 MPa).

Compressive Modulus
When tested in accordance with ASTM D695 the compressive modulus is typically:

1.90 x 10^5 psi (1310 MPa).

FLEXURAL PROPERTIES

Flexural Strength
The flexural strength of the material (binder/aggregate matrix), when tested to ASTM D790 is typically:

2,500 psi (17.2 MPa).

Flexural Modulus
When tested in accordance with ASTM D790 the flexural modulus is typically:

2.02 x 10^5 psi (13920 MPa).

HEAT RESISTANCE

Heat Distortion Temperature (HDT)
The heat distortion temperature when tested to ASTM D648 is typically 111°F (44°C).

Heat Resistance
For many typical applications, the product is thermally stable to 300°F (150°C) dry and 140°F (60°C) wet, and down to -40°F (-40°C).

SHELF LIFE

Separate Base and Solidifier components will have a minimum shelf life of 3 years 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 recognised 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 4231 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

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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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ISO 9001:2008
Q 09335
ISO 14001:2004
EMS 509612

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