

PRODUCT SPECIFICATION SHEET

BELZONA 2121

FN10180



GENERAL INFORMATION

Product Description:

Two component, durable and abrasion resistant, coating grade elastomeric system designed for coating and resurfacing applications involving erosion.

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:

- Pump casings and impellers
- Pipes, tanks and fluid handling equipment
- Vibratory feed bowl linings
- Deburring machine linings
- Hydroelectric turbine guide vanes
- Ship propellers

APPLICATION INFORMATION

Application Methods

Applicator
Brush

Working Life

The working life will vary according to temperature. At 68°F/20°C the usable life of mixed material will typically be 12 minutes. Consult the Belzona IFU for specific details.

Cure Time

Cure times will vary depending on ambient conditions; consult the Belzona IFU for specific details.

Volume Capacity

The volume capacity of mixed material will be
53.2 cu.in. (873cm³) / kg
27.7 cu.in. (454cm³) / 520g unit.

Base Component

Appearance Pale straw colored viscous liquid
Density 1.1 – 1.2 g/cm³
Viscosity 190-330 P at 77°F/25°C

Solidifier Component

Appearance Black/Red paste
Density 1.12 g/cm³
Gel Strength (HF) 335 g/cm at 68°F/20°C

Mixed Properties

Appearance Black/Red thixotropic liquid
Density 1.15 g/cm³
Sag Resistance 50 mil / 1250 μm
VOC content (ASTM D2369/EPA ref 24) 0.62% / 7.14g/L

Mix Ratio

Mixing Ratio by Weight (Base : Solidifier) 3.1 : 1
Mixing Ratio by Volume (Base : Solidifier) 3.0 : 1

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 determined in accordance with ASTM D4060 using H18 wheels and 1kg load, the sliding Taber abrasion resistance will be:

Dry

31 mm³ loss per 1000 cycles (7 day cure at 68°F/20°C)

Wet

27 mm³ loss per 1000 cycles (7 day cure at 68°F/20°C)

ADHESION

90° Peel Adhesion

When tested in accordance with ASTM D429 (modified), typical adhesion values achieved when the material is used in conjunction with the designated surface and recommended surface conditioner will be:

Substrate	Peak Adhesion	Failure Mode
Grit Blasted Mild Steel	169 pli 3020 kg/m	Tape Failure

180° Peel Adhesion

When tested in accordance with ASTM D413, typical adhesion values achieved when the material is used in conjunction with the designated surface and recommended surface conditioner will be:

Substrate	Peak Adhesion	Average Peel Adhesion	Failure Mode
EPDM (Shore A: 75)	30 pli 540 kg/m	5 pli 95 kg/m	Cohesive in Substrate
Nitrile (Shore A: 77)	44 pli 790 kg/m	20 pli 365 kg/m	Cohesive in Substrate
Neoprene (Shore A: 83)	25 pli 450 kg/m	12 pli 220 kg/m	Cohesive in Substrate
Natural Rubber (Shore A: 51)	12 pli 220 kg/m	3 pli 50 kg/m	Cohesive in Substrate
Commercial Rubber (Natural/SBR) (Shore A: 72)	17 pli 300 kg/m	9 pli 160 kg/m	Cohesive in Substrate
Insertion Rubber (commercial with textile reinforcement) (Shore A: 70)	21 pli 370 kg/m	7 pli 135 kg/m	Cohesive in Substrate

CHEMICAL RESISTANCE

Once fully cured, the material will demonstrate excellent resistance to a range of chemicals including; dilute inorganic acids and alkalis.

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

COMPRESSION RESISTANCE

When tested in accordance with BS 903 part A6, the compression set following a 30 minute recovery period will typically be 24%.

ELECTRICAL PROPERTIES

Dielectric Strength

When tested in accordance with ASTM D149 the dielectric strength will typically be 7.1 kV/mm when tested at 500 V/s

Dielectric Constant

When tested in accordance with ASTM D150 the dielectric constant will typically be 5.02 when tested at 1.0 V and 100 Hz

Dissipation Factor

When tested in accordance with ASTM D150 the dissipation factor will typically be 0.021 when tested at 1.0 V and 100 Hz

Surface Resistivity

When tested in accordance with ASTM D257 the surface resistivity will typically be $7.66 \times 10^{12} \Omega$ when tested at 500 V DC

Volume Resistivity

When tested in accordance with ASTM D257 the volume resistivity will typically be $2.30 \times 10^{12} \Omega\text{cm}$ when tested at 500 V DC

ELONGATION & TENSILE PROPERTIES

When tested in accordance with ASTM D412 (Die C) the tensile properties will typically be:

	24hours at 68°F/20°C	7 days at 68°F/20°C
Tensile Strength	2500 psi 17.2 MPa	2300 psi 15.9 MPa
Tensile Modulus	185 psi 1.3 MPa	215 psi 1.5 MPa
Elongation	500-600 %	400-500 %

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HARDNESS

Shore A Hardness:

Tested in accordance with ASTM D2240 typical value will be;

89 (24 hour cure at 68°F/20°C)
92 (7 day cure at 68°F/20°C)

TEAR STRENGTH

Tear Strength

When tested in accordance with ASTM D624 will typically be:

380 pli / 6785 kg/m (24 hour and 7 day cure at 68°F/20°C)

HEAT RESISTANCE

Dry

For many typical applications the product will be suitable for operation in dry conditions in the temperature range -40°F to 194°F (-40°C to 90°C).

Wet

For wet or immersed conditions the maximum service temperature is 104°F (40°C).

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 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 2121 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.

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