PRODUCT SPECIFICATION SHEET
BELZONA 2141
FN10051

GENERAL INFORMATION

Product Description:
Two component, durable, abrasion and cavitation 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:

- Pipes
- Kort nozzles
- Hydroelectric turbines
- Pumps
- Propellers
- Valves
- Rudders

Use in conjunction with **Belzona 2941** conditioner for maximum adhesion to metal surfaces.

APPLICATION INFORMATION

Working Life
Will vary according to temperature. At 77°F (25°C) the usable life of mixed material is 13 minutes.

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.

Coverage Rate
Applied at a thickness of 40 mil. (1 mm), each 750 gram unit will cover an area of 6.6 sq.ft. (0.61 sq.m.).

Volume Capacity
55.5 cu.in. (909 cc)/kg.
41.6 cu.in. (682 cc) per 750 gm. unit.

Base Component

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

Solidifier Component

Appearance	Paste
Colour	Black or Green
Density	1.02-1.05 g/cm³
Gel strength	50 - 150 HF

Mixed Properties

Appearance	Black or green liquid
Density	1.1 g/cm³
Sag Resistance	> 50 mil. (1.25 mm)
VOC content (ASTM D2369/EPA ref 24)	0.09% / 0.97g/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 when tested in accordance with ASTM D4060 with 1 kg load is typically:

H18 Wheels (Wet)
at 70°F (21°C) — 39 mm^3 loss per 1000 cycles

H18 Wheels (Dry)
at 70°F (21°C) — 50 mm^3 loss per 1000 cycles

ADHESION

90° Peel Adhesion
When tested in accordance with ASTM D429 (modified), typical adhesion value achieved when the material is used in conjunction with the designated surface will be:
Mild steel — 180 pli (3214 kg/m)

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 will be:

Substrate	Peak Adhesion (pli)	Average Peel Adhesion (pli)	Failure Mode
EPDM (Shore A: 73)	17.25	7.99	Cohesive in Substrate
Nitrile (Shore A: 74)	16.22	N/A	
Insertion Rubber (Shore A: 80)	16.87	6.58	
Natural Rubber (Shore A: 72)	40.64	17.46	
Neoprene (Shore A: 74)	18.70	11.87	
Commercial Rubber (Shore A: 78)	15.61	15.61	

Note
Belzona Elastomer Conditioner is required to achieve adhesion.

CAVITATION RESISTANCE

The cavitation resistance of the product, when tested to a modified version of ASTM G32, using an ultrasonic transducer vibrating at 20 kHz, typically shows the following results:

Wave Amplitude (µm)	Volume Loss (mm^3/hr)
36	0.07
50	5.50

Please contact Belzona for additional testing details.

ELECTRICAL PROPERTIES

Dielectric Strength
When tested in accordance with ASTM D149 the dielectric strength will typically be 12.39 kV/mm when tested at 600 V/s

Dielectric Constant
When tested in accordance with ASTM D150 the dielectric constant will typically be 8.11 when tested at 1.0 V and 50 Hz

Dissipation Factor
When tested in accordance with ASTM D150 the dissipation factor will typically be 0.095 when tested at 1.0 V and 50 Hz

Surface Resistivity
When tested in accordance with ASTM D257 the surface resistivity will typically be 1.28×10^{11} Ω when tested at 500 V DC

Volume Resistivity
When tested in accordance with ASTM D257 the volume resistivity will typically be 4.00×10^{7} Ωcm when tested at 500 V DC

ELONGATION & TENSILE PROPERTIES

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

	7 days at 68°F (20°C)
Tensile Strength	2779 psi 19.16 MPa
Tensile Modulus	113.1 psi 0.78 MPa
Elongation	658 %

ENCAPSULATION IMMERSION RESISTANCE

Testing has demonstrated that **Belzona 2141** in conjunction with **Belzona 2941** and **Belzona 8411**, will prevent corrosion on steel substrates in immersed conditions and can be peeled back when maintenance or inspection is required.

HARDNESS

Shore A Hardness:
Tested in accordance with ASTM D2240 typical value will be: 87.

HEAT RESISTANCE

For many typical anti-cavitation applications the product is suitable for operation at temperatures up to 104°F (40°C).

For other dry applications the product is thermally stable up to 212°F (100°C).

TEAR STRENGTH

Tear Strength
Tested in accordance with ASTM D624 is typically 463 pli. (8260 kg/m).

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 2141 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 Safety Data Sheets.

MANUFACTURER / SUPPLIER

Belzona Limited,
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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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