PRODUCT SPECIFICATION SHEET
BELZONA 1251
FN10021

BELZONA®
Repair • Protect • Improve

GENERAL INFORMATION

Product Description:
A single component heat activated paste grade system based on a silicon steel alloy blended with a heat activated resin. When cured, the material is durable and corrosion resistant.

Application Areas:
When mixed and applied as detailed in the Belzona Instructions for Use (IFU), the system is designed to be applied to hot surfaces 158 - 302°F (70 - 150°C), such as under insulation metalwork.

APPLICATION INFORMATION

Working Life
Cure will not commence until the product is heated, hence the working life of **Belzona 1251** is effectively unlimited.

Cure Time
The cure time of **Belzona 1251** is primarily dependent on the heat-cure temperature - consult the Belzona IFU for specific details. The minimum recommended cure temperature for **Belzona 1251** is 158°F (70°C).

N.B. Increased thickness (>1/8in. or 3mm) may require additional heating time.

Volume Capacity
24.5 in^3 (401 cm^3)/kg.

Mixed Properties

Appearance	Paste
Colour	Dark grey
Gel strength at 77°F (25°C)	>200 g/cm HF
Density	2.4 - 2.5 g/cm^3
VOC content (ASTM D2369 / EPA ref. 24)	0.02% / 0.47 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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ADHESION

Tensile Shear
When tested in accordance with ASTM D1002, typical values will be:

2350 psi (16.2 MPa) after cure at 158°F (70°C) applied onto clean, ground steel.

2475 psi (17.1 MPa) after cure at 212°F (100°C) applied onto clean, ground steel.

3200 psi (22.1 MPa) after cure at 248°F (120°C) applied onto clean, ground steel.

1200 psi (8.3 MPa) after cure at 212°F (100°C) applied onto rusty steel prepared to ISO 8501-1 St 2 (wire brushed)

2100 psi (14.5 MPa) after cure at 212°F (100°C) applied onto rusty steel prepared to ISO 8501-1 St 3 (manually abraded)

CHEMICAL RESISTANCE

Once fully cured, the material will demonstrate excellent resistance to many commonly found inorganic acids and alkalis at concentrations up to 20%. The material is also resistant to hydrocarbons, mineral oils, lubricating oils and many other commonly found chemicals.

COMPRESSIVE PROPERTIES

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

Compressive Strength

17,400 psi (120.0 MPa)	after 7 days cure at 158°F (70°C)
14,000 psi (96.5 MPa)	after 1 day cure at 212°F (100°C)
18,100 psi (124.8 MPa)	after 7 days cure at 212°F (100°C)

CORROSION PROTECTION

Corrosion Resistance
Will show no visible signs of corrosion after 5,000 hours exposure in the ASTM B117 salt spray cabinet.

FLEXURAL PROPERTIES

When determined in accordance with ASTM D790, typical values will be:

Flexural Strength

8700 psi (60.0 MPa)	after 7 days cure at 158°F (70°C)
7700 psi (53.1 MPa)	after 1 day cure at 212°F (100°C)
9000 psi (62.1 MPa)	after 7 days cure at 212°F (100°C)

HARDNESS

Shore D & Barcol Hardness
The Shore D and Barcol hardness, when determined in accordance with ASTM D2240 and ASTM D2583, will typically be:

	Post cure (212°F/100°C)
Shore D	88
Barcol 934-1	39
Barcol 935	97

HEAT RESISTANCE

Heat Distortion Temperature (HDT)
Tested in accordance with ASTM D648 (264 psi fibre stress), typical values obtained will be:

221°F (105°C)	after 7 days cure at 158°F (70°C)
243°F (117°C)	after 7 days cure at 212°F (100°C)
226°F (108°C)	after 7 days cure at 302°F (150°C)

Service Temperature Limits
For many typical applications, the product will be suitable for use at the following service temperatures:

Type of Service	Temperature
Lower temperature limit	-40 °C (-40 °F)
Upper temperature limit (dry)	105 °C (221 °F)
Upper temperature limit (wet)	90 °C (194 °F)

Dry Heat Resistance
The indicated degradation temperature in air based on Differential Scanning Calorimetry (DSC) operated in accordance with ISO11357 is typically 410°F (210°C).

IMPACT RESISTANCE

Impact Strength
The impact strength (un-notched) when tested to ASTM D256 is typically:

1.04 ft.lb./in., 56 J/m	212°F (100°C) cure

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SHELF LIFE

Belzona 1251 will have a shelf life of 24 months from date of manufacture when stored in the original unopened containers at 68°F (20°C). Refrigeration of this product will extend the shelf life.

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 1251 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.

Belzona products are manufactured under an ISO 9001 Registered Quality Management System