

PRODUCT SPECIFICATION SHEET

BELZONA 1131

FN10015



GENERAL INFORMATION

Product Description:

A two component paste grade system used to create low friction surfaces subject to intermittent contact and where specific loads are low. Based on a silicon steel alloy blended with graphite and high molecular weight reactive polymers and oligomers. When cured, the material is fully machinable and possesses self-lubricating properties and surface porosity.

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:

- Sleeves
- Slideways
- Bushings
- Low friction surfaces
- Shafts

APPLICATION INFORMATION

Working Life

Will vary according to temperature. At 77°F (25°C) the usable life of mixed material is 15 minutes.

Cure Time

Cure times will vary depending on the ambient conditions and will be reduced for thicker sections and extended for thinner applications. Consult the Belzona IFU for specific details.

Volume Capacity

35.1 in³ (575 cm³) per kg.

Base Component

Appearance Paste
Color Dark gray
Gel strength at 68°F (20°C) 150 - 350 g/cm QH
Density 1.84 - 1.90 g/cm³

Solidifier Component

Appearance Paste
Color Black
Gel strength at 68°F (20°C) 80 - 160 g/cm QV
Density 1.32 - 1.38 g/cm³

Mixed Properties

Mixing Ratio by Weight (Base : Solidifier) 4 : 1
Mixing Ratio by Volume (Base : Solidifier) 3 : 1
Mixed Form Paste
Peak Exotherm Temperature 279 - 307°F (137 - 153°C)
Time to Peak Exotherm 20 - 28 mins.
Slump Resistance nil at 1.0 inch (25mm)

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

Taber abrasion resistance determined in accordance with ASTM D4060 with 1 kg load is typically:

H10 Wheels (Wet)	994 mm ³ loss per 1000 cycles
CS17 Wheels (Dry)	95 mm ³ loss per 1000 cycles

ADHESION

Tensile Shear

When tested in accordance with ASTM D1002, using degreased strips, grit blasted to a 3-4 mil (75 micron) profile, typical values will be:

Mild steel	2,800 psi (19.3 MPa)
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Pull Off Adhesion

When tested in accordance with ASTM D4541/ISO4624, the pull off strength from grit blasted steel will be typically:
1770 psi (12.2 MPa)

CHEMICAL RESISTANCE

Once fully cured, the material will demonstrate excellent resistance to most 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.

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

COMPRESSIVE PROPERTIES

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

Compressive Strength
10,800 psi (74.5 MPa)

FLEXURAL PROPERTIES

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

Flexural Strength
7,650 psi (52.7 MPa)

HARDNESS

Shore D

When determined in accordance with ASTM D2240, typical value will be:

87

Barcol

When determined in accordance with ASTM D2583, typical values will be:

75	68°F (20°C) cure
82	212°F (100°C) cure

HEAT RESISTANCE

Heat Distortion Temperature (HDT)

Tested to ASTM D648 (264 psi fiber stress), typical values obtained will be:

140°F (60°C)	68°F (20°C) cure
216°F (102°C)	212°F (100°C) cure

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).

IMPACT RESISTANCE

When tested to ASTM D256 the Izod impact strength (un-notched) is typically:

0.455 ft.lb./in. (24.5 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).

APPROVALS/ACCEPTANCES

The material has received recognition from organizations worldwide including:

U.S.D.A.

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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 1131 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

Belzona Polymerics Ltd.
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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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