

# PRODUCT SPECIFICATION SHEET

## BELZONA 3412

FN10210



### GENERAL INFORMATION

#### Product Description:

A two-component isocyanate free peelable system, used for encapsulating flanges and bolt fastenings to protect against moisture and prevent corrosion. Used in conjunction with **Belzona 8411** to achieve an optimum level of corrosion protection and to allow easy access to bolts and flanges in the event of required maintenance.

#### Application Areas:

When mixed and applied as detailed in the Belzona Instructions for Use (IFU), the system is ideally suited for application to steel flanges, fastenings and pipe sections.

### APPLICATION INFORMATION

#### Belzona 3412

##### Application Method

Brush or cartridge spray

##### Coverage Rates

The theoretical coverage rate to achieve the correct minimum two coat system thickness of 1000 microns (40 mil) is 0.8 m<sup>2</sup> (8.6 sq.ft.)/kg.

##### Working Life

The working life will vary according to the temperature and humidity. At 20°C/68°F and 50% relative humidity, the usable life of mixed material will typically be 40 minutes. Consult the Belzona IFU for specific details.

##### Cure Time

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

#### Belzona 8411

##### Application Method

Non-pressurized spray pump  
Brush

##### Coverage Rates

The theoretical coverage rate at 125 microns (5 mil) is 4.0 m<sup>2</sup> (43 sq.ft.) per 0.5 litre unit.

##### Drying Time

Drying times will vary depending on the ambient conditions. At 20°C (68°F) the drying time will typically be 60 minutes. Consult the Belzona IFU for specific details.

#### Base Component

Appearance: Thixotropic liquid  
Colour: Grey or Orange  
Density: 1.25 - 1.29 g/cm<sup>3</sup>

#### Solidifier Component

Appearance: Clear, colourless liquid  
Density: 0.94 - 0.98 g/cm<sup>3</sup>

#### Mixed Properties

Density: 1.22 - 1.26 g/cm<sup>3</sup>  
Sag Resistance (BS 5350-B9): 1000 µm / 40 mils  
VOC content (ASTM D2369 / EPA ref. 24): 6.33% / 79.13 g/L

#### Mix Ratio (Base : Solidifier)

13 : 1 (pbw)

#### Properties

Appearance: Opaque liquid  
Colour: Brown  
Density: 0.84 - 0.86 g/cm<sup>3</sup>  
VOC content (ASTM D2369 / EPA ref. 24): 57.62% / 489.77 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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### CORROSION RESISTANCE

The combined system of **Belzona 3412** and **Belzona 8411** demonstrates excellent resistance to corrosion (no rusting or blistering) when exposed for 3000 hours in the salt spray cabinet operating to ASTM B117.

### DRY HEAT RESISTANCE

After exposure for 8500 hours at 90°C/194°F, typical values for the unreinforced coating tested in accordance with ASTM D412 (Die C) and ASTM D624 will be:

(i)	Elongation	25%
(ii)	Tear strength	800 kg/m (45 pli)
(iii)	Tensile strength	2.1 MPa (310 psi)

### ELONGATION

Following 20°C cure, when tested to ASTM D412 (Die C) the elongation will typically be:

(i)	Reinforced with <b>Belzona 9311</b>	52%
(ii)	Unreinforced	260%

### FLEXIBILITY

Maintains flexibility down to -22°C (-8°F) passing ASTM D522 mandrel test at minimum 3.2mm diameter.

### HARDNESS

Following 20°C cure, when tested to ASTM D2240 the Shore A hardness will typically be:  
65

### PEEL ADHESION

Following 20°C cure, when tested in accordance with ASTM D429, typical 90° peel adhesion values achieved when the material is used in conjunction with the designated surface will be:

Manually prepared carbon steel (ISO 8501-1 St 2)	107 kg/m (6.0 pli)
Manually prepared solvent-free epoxy paint	146 kg/m (8.2 pli)
Manually prepared solvent-borne polyurethane paint	196 kg/m (11.0 pli)

### TEAR STRENGTH

Following 20°C cure, when tested to ASTM D624 the tear strength will typically be:

(i)	Reinforced with <b>Belzona 9311</b>	3180 kg/m (180 pli)
(ii)	Unreinforced	1830 kg/m (100 pli)

### TENSILE STRENGTH

Following 20°C cure, when tested to ASTM D412 (Die C) the tensile strength will typically be:

(i)	Reinforced with <b>Belzona 9311</b>	5.5 MPa (800 psi)
(ii)	Unreinforced	3.4 MPa (500 psi)

### UV RESISTANCE

When tested in accordance with ISO 4892-2 (Xenon Arc), **Belzona 3412** will not show significant chalking or colour change following 8500 hours exposure.

### SHELF LIFE

Separate base and solidifier components shall have a shelf life of 2 years from date of manufacture when stored in their original unopened containers between 5°C (41°F) and 30°C (86°F).

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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 3412** 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,  
Claro Road, Harrogate,  
HG1 4DS, UK

Belzona Inc.  
14300 NW 60<sup>th</sup> Ave,  
Miami Lakes, FL, 33014, USA

### 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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