Belzona 3211

(LAGSEAL MEMBRANE)

BELZONA®
Repair • Protect • Improve

INSTRUCTIONS FOR USE

1. TO ENSURE AN EFFECTIVE MOLECULAR WELD

PIPE AND BOILER INSULATION

a) Protect exposed corroded steel work with an approved rust preventative system.

Secure all loose and ragged areas of insulation. Make good joints in insulation. Remove surface oil contamination with strong detergent solution and rinse clean.

b) Existing claddings can be safely overcoated as long as they are clean and firm. Dampen powdery surfaces with water immediately prior to application of **Belzona® 3211.**

c) Condition surrounding concrete and brick areas where overlap of the **Belzona® 3211** is to take place with **Belzona® 3911** (PSC Surface Conditioner). Shake the unit, then brush the **Belzona® 3911** well into the surface, not exceeding the coverage rate of 4.2 m² (45 sq.ft.) per litre. Allow to become touch dry (30 minutes - 4 hours, depending on weather conditions) before applying **Belzona® 3211.** Under no circumstances should **Belzona® 3911** be left longer than 2 days before overcoating with **Belzona® 3211.**

d) Condition metal and other non porous surfaces with **Belzona® 3921** (GSC Surface Conditioner). Stir the contents of the Base can until smooth and then add the entire contents of the Solidifier can, stirring continuously to achieve an even color and consistency. Use the mixed material within 48 hours, as after this time it will start to solidify. For mixing small quantities, use a mixing ratio of 7 parts of Base to 2 parts of Solidifier by volume. Brush the **Belzona® 3921** well into the surface, not exceeding the recommended coverage rate of 4.2 m² (45 sq.ft.) per kg. Leave for at least 4 hours but no longer than 2 days before overcoating with **Belzona® 3211.**

2. APPLYING BELZONA® 3211

DO NOT APPLY WHEN:

i) There is a risk of rain, snow, fog or frost.
ii) Surface temperature is 5°C and falling, or relative humidity rises above 80%.
iii) A combination of high relative humidity and low temperature occurs.
iv) Any of the above conditions is likely to occur within 45 minutes.

Stir material before use.

PIPE AND BOILER INSULATION

*Treat friable substrates with a coat of **Belzona® 3211** diluted with water in the ratio 2 parts **Belzona® 3211** to 1 part water by weight, to bind the surface prior to application of the full system. Do not exceed a coverage rate of 30 - 40 sq.ft. (2.8 - 3. 7 m²) per kg of undiluted material.*

a) Apply a small patch of **Belzona® 3211** at one end of the area to be treated.

b) Whilst still wet, stipple in a layer of **Belzona® 9321** (Lagseal Reinforcing Sheet). Wrap the sheet tightly around the insulation with a minimum of overlapping.

c) Brush **Belzona® 3211** through the sheet to give an even layer, free from creases, following the insulation contours. Do not exceed the coverage rates shown.

d) After the first reinforced layer has dried (see Drying Times) apply the second coat of **Belzona® 3211,** not exceeding the coverage rate. Ensure all pinholes are fully wetted out to give a seamless finish.

SPRAY APPLICATION

The following equipment and set up is given as a guide if spray application is to be adopted :-

1. Optimum results are obtained using airless spray. A 32 : 1 pump unit supplied by an air pressure of 60 psi and combined with a spray tip of 0.015 ins to 0.020 ins is recommended. Thinning by up to 20% by volume may be required.

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2. Alternatively, use a pressure fed air mix system, employing a jet and needle suited to viscous fluids with a spray pressure between 50 psi and 60 psi. In this instance, thinning by up to 25% by volume may be necessary.

Clean brushes and equipment **immediately after use** with cold water.

IMPORTANCE OF USING BELZONA® 9321

Where physical strength is required in the system **Belzona® 9321** must always be used. In situations such as large wall areas, ceilings, and out-of-reach areas, where strength is not so important, it is quite satisfactory to apply two or three coats of **Belzona® 3211** omitting the **Belzona® 9321.** It may be necessary to use small patches of Sheet to cover any damaged, or very ragged areas. **Belzona® 9321** must be used at all corners between ceilings and walls as a flashing to reinforce these weak areas.

DRYING TIMES AT 68°F (20°C)

	Priming Coat	lst Layer	2nd Layer
Touch dry	30 min	2 hours	1 hour
Hard dry for overcoating	1 hour	4 hours	2 hours
* Maximum overcoating time	3 days	3 days	3 days
Full hardness when chemical contact is anticipated	7 days	7 days	7 days

* If the maximum overcoating time is exceeded, wash the first layer with a mild detergent solution, allow to dry and coat with the first layer of **Belzona® 3211** and **Belzona® 9321** once again. Allow to dry for 2 hours before applying the second layer of **Belzona® 3211.**

3. COVERAGE RATES

Apply the first coat of **Belzona® 3211** to a dry film thickness of 10 mil (254 microns). Apply the second coat of **Belzona® 3211** to a dry film thickness of 6.0 mil (152 microns). Do not exceed the following coverage rates.

Substrate	1st Coat Coverage Rate per kg	2nd Coat Coverage Rate per kg
New Calcium Silicate	15.1 sq.ft. 1.40 m²	27.4 sq.ft. 2.55 m²
Old Calcium Silicate	14.5 sq.ft. 1.35 m²	27.4 sq.ft. 2.55 m²
New Glass Fibre/Mineral Wool	12.1 sq.ft. 1.12 m²	27.4 sq.ft. 2.55 m²
Old Glass Fibre/Mineral Wool	8.6 sq.ft. 0.80 m²	25.8 sq.ft. 2.40 m²
New Foam Sectional (urethane)	16.4 sq.ft. 1.52 m²	27.4 sq.ft. 2.55 m²
Old Foam Sectional (urethane)	15.1 sq.ft. 1.40 m²	27.4 sq.ft. 2.55 m²

4. GENERAL NOTES

THINNING
Thinning ratios have already been covered in the relevant sections, but should application still prove difficult due to warm or windy conditions, then further thinning with clean water is acceptable, providing that the recommended coverage rates are not exceeded. Add water slowly, stirring all the time, until the **Belzona® 3211** is a smooth even consistency.

ROUTINE MAINTENANCE
Should it be necessary to break open the insulation, then the **Belzona® 3211** can be re-sealed using the application procedure already described. (It is important when resealing to carry the re-applied material over onto the existing application on all sides).

COLORING
Belzona® 3211 is only available in White but pastel shades can be obtained by adding water based color pigments. Add no more than 1 - 2% of dispersion paste, with continual stirring during addition.

HEALTH & SAFETY INFORMATION
Please read and make sure you understand the relevant Material Safety Data Sheets.

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