

## **High Performance Polyurethane Elastomeric Liquid Cold Applied Waterproofing Membrane**

### **Description**

**Build Bond 1K/SB** is a one component, modified polyurethane solvent based, waterproofing elastomeric coating that cures by reaction with atmospheric moisture to form a tough but flexible waterproofing membrane.

Excellent mechanical chemical, thermal, UV and weather resistance properties, as it is based on pure, elastomeric, hydrophobic polyurethane resins.

A continuous, elastic, waterproof and vapor-permeable membrane, without seams or joints.

Excellent bonding to various substrates like concrete, cement mortars, wood and most waterproofing layers.

Applicability even to irregular substrates. Suitability for green roofs, flower beds, etc.

Availability in other colors. When a dark green color of **Build Bond 1K/SB** has been chosen as an exposed layer, it is necessary to cover it with a layer of **PUR Roof Gard UV 920**, Top coat UV resistance of the same color.

### **Uses**

Exposed or concealed waterproofing membrane on flat or pitched roofs both for new construction and refurbishment of old roofs.

### **Recommended For**

**Build Bond 1K/SB** is designed to be used as an effective waterproofing membrane in a variety of structures both above and below grade. Application includes.

- Internal tanking of pools, water tanks, slumps, reservoirs, etc before tiling or other surface finishing.
- Suitable for external tanking of masonry/concrete walls of basements, swimming pools sumps, subways.
- Waterproofing of terraces, balconies, kitchens, toilet floors.
- All types of reinforced concrete, roof slab & gutter.
- All types of reinforced concrete, basement floor & wall.

### **Advantage & Properties**

The specific advantage offered by this single component is that it can stand moderate movements of less than 0.02 mm or hairline cracks. No joints or laps to allow ingress of water. Tar free, more environmental friendly. The membrane withstands exposure to subsoil salts, sewage, water treating chemicals, etc. more effectively, versatile. It saves time and labour.

### **Tested Approved by**

British Board of Agreement requirement (BBA)  
Japan requirement JIS A 6021:1995

### **Packing**

25.00 kg pail

### **Available of Color**

Standard Color Dark Green & Black [other Color is Order Made]

**Mechanical of Properties Specification (Result tested at 25 °C)**

Description	Test	Unit	Result
Elongation at break	ASTM D 412	%	> 500 – 600%
Viscosity		cps	4600 ±500
Solid Content		%	85 by Volume [90 by weight]
Density		kg/litre	1.25
Shore A Hardness			75 ±5
Crack Bridging Ability	ASTM C836		Up to 2mm [no cracks]
Resistance to Root Penetration	DIN 4062		Pass
Surface drying time		hour	12
Fully cured time		hour	24
Tensile strength	ASTM D 412	Mpa	>6.40
Tear strength	ASTM D 624	kN/m	>15
Low temperature flexibility		°C	-35 °C no cracking
Water tightness 0.3Mpa		mins	120 Watertight
Water Vapour Transmission	ASTM E96/96M		31.3g±/(m2.24h)

**Build Bond 1K/SB apply on R. C. Roof****Build Bond 1K/SB apply on Metal Roof****Build Bond 1K/SB apply on R. C. Roof**

**System of Structure**

<b>Roof Slab</b>	<b>Roof Waterproofing</b> <b>Expose Direct to Sunlight with Excellent UV Resistance</b>		
	Wet Layer Applied Consumptions	Dry Film Thick without Reinforced Fiber Mat	Dry Film Thick with Reinforced Fiber Mat
Epo Bond Primer	0.10 kg/m2	0.10 mm	0.10 mm
Build Bond 1K/SB	0.75-1.00 kg/m2	0.60-0.80 mm	0.60-0.80 mm
Reinforced Fiber Mat	One Layer		0.05 mm
Build Bond 1K/SB	0.75-1.00 kg/m2	0.60-0.80 mm	0.60-0.80 mm
PUR Roof Gard 920UV	0.15 kg/m2	0.10 mm	0.10 mm

<b>Roof Slab</b>	<b>Roof Waterproofing</b> <b>Concealed with Protection 50-75mm Thick Cement Sand Screed</b>		
	Wet Layer Applied Consumptions	Dry Film Thick without Reinforced Fiber Mat	Dry Film Thick with Reinforced Fiber Mat
Epo Bond Primer	0.10 kg/m2	0.10 mm	0.10 mm
Build Bond 1K/SB	0.75-1.00 kg/m2	0.60-0.80 mm	0.60-0.80 mm
Reinforced Fiber Mat	One Layer		0.05 mm
Build Bond 1K/SB	0.75-1.00 kg/m2	0.60-0.80 mm	0.60-0.80 mm
Cement Sand Screed Protection		50 mm	50 mm

<b>Roof Slab</b>	<b>Roof Waterproofing</b> <b>Concealed with Protection Cement Sand Mortar &amp; Floor Tiles</b>		
	Wet Layer Applied Consumptions	Dry Film Thick without Reinforced Fiber Mat	Dry Film Thick with Reinforced Fiber Mat
Epo Bond Primer	0.10 kg/m2	0.10 mm	0.10 mm
Build Bond 1K/SB	0.75-1.00 kg/m2	0.60-0.80 mm	0.60-0.80 mm
Reinforced Fiber Mat	One Layer		0.05 mm
Build Bond 1K/SB	0.75-1.00 kg/m2	0.60-0.80 mm	0.60-0.80 mm
Cement Sand Screed Protection		50 mm	50 mm
Install of Tiling		10 mm	10 mm

<b>Metal Roof</b>	<b>Metal Roof Waterproofing, Cool &amp; Whether System</b> <b>Expose Direct to Sunlight with Excellent UV Resistance</b>		
	Wet Layer Applied Consumptions	Dry Film Thick without Reinforced Fiber Mat	Dry Film Thick with Reinforced Fiber Mat
Epo Bond Primer	0.10 kg/m2	0.10 mm	0.10 mm
Build Bond 1K/SB	0.40-0.50 kg/m2	0.32-0.40 mm	0.32-0.40 mm
Reinforced Fiber Mat	One Layer		0.05 mm
Build Bond 1K/SB	0.40-0.50 kg/m2	0.32-0.40 mm	0.32-0.40 mm
PUR Roof Gard 920UV	0.15 kg/m2	0.10 mm	0.10 mm

**Substrate Preparation** In general, the substrate must be dry (moisture content <4%), clean, free of grease, loose particles, dust, etc.

### **Reinforced Concrete Substrates**

Any new or existing cavities in concrete should be filled with the appropriate repair materials in advance. Severe cracks in the substrate must be primed locally and after 2-3 hours (depending on the weather conditions) must be sealed with the epoxy putty or polyurethane sealants.

Moisture Content <4% Concrete and other porous surfaces with moisture content less than <4% should be treated with the **Special Primer**, with a consumption of approx. 150-200g/m<sup>2</sup>.

Moisture Content >4% Surfaces with moisture content more than >4% should be primed with the **special two-component solvent free Epoxy Primer or solvent free Polyurethane Primer**, with a consumption of 100-200g/m<sup>2</sup>

Application of **Build Bond 1K/SB** should follow within next 12-24 hours.  
Consumption: 0.50-0.75 kg/m<sup>2</sup>/layer.  
Require Coat: at least 2 Layers

UV Top Coat It is necessary to cover it with a layer of **PUR Roof Gard UV 920**, Top coat UV resistance of the color. [If Expose Direct to Sunlight]

Top Protection Screed If require the protection, 50-75mm thick cement sand screed

### **Non-Smooth or Non-Flat [Brick Wall Plaster] and Non-Absorbent or Cement Sand Substrates**

Any new or existing cavities in concrete should be filled with the appropriate repair materials in advance. Severe cracks in the substrate must be primed locally and after 2-3 hours (depending on the weather conditions) must be sealed with the epoxy putty or polyurethane sealants.

Application of **Build Bond 1K/SB** should follow within next 12-24 hours.  
Consumption: 0.50-0.75 kg/m<sup>2</sup>/layer.  
Require Coat: at least 2 Layers

UV Top Coat It is necessary to cover it with a layer of **PUR Roof Gard UV 920**, Top coat UV resistance of the color. [If Expose Direct to Sunlight]

### **Metal Surfaces**

Metal surfaces should be dry and clean.  
Free of grease, loose particles, dust, etc. that might impair adhesion.  
Free of corrosion that might impair adhesion.

Application of **Build Bond 1K/SB** should follow within the next 12-24 hours.  
Consumption: 0.35 – 0.50 kg/m<sup>2</sup>/layer.  
Require Coat: at least 2 Layers

UV Top Coat It is necessary to cover it with a layer of **PUR Roof Gard UV 920**, Top coat UV resistance of the color. [If Expose Direct to Sunlight]

- Surface Preparation** Correct substrate preparation is critical for optimum performance. New concrete must be properly water cured for at least 14 days. It is recommended to avoid using curing compounds for curing the surfaces that will be treated with **Build Bond 1K/SB**.
- In new construction, ensure that the drains, vents and drain openings are properly located. Surfaces should be structurally sound, clean dry and free from loose particulars, mould release agents curing membranes and other contaminants must be removed by wet grit blasting, high pressure water jetting (approx. 150 bars) or other such effective methods.
- Pre-Treatment:** Apply a 1mm wet coat of **Build Bond 1K/SB** on all areas repaired as above, including expansion joints, using a squeegee. Extend the coating to about 100mm around repairs. Install fillets in all corners to facilitate a continuous membrane after application.
- Avoid application during inclement weather or when it is imminent. Apply **Build Bond 1K/SB** when substrates are dry and temperatures are between 14°C to 38°C.
- Method of Application** Apply **Build Bond 1K/SB** evenly onto the prepared surfaces with a stiff brush, rubber edged notched squeegee or by airless spray to a wet film thickness of 0.50 – 0.75 mm.
- On horizontal surfaces, Use a wet film thickness gauge to monitor coating thickness. Extend the coating to skirt the peripheral vertical surfaces at least up to a level slightly higher (300mm) that the final finished level of the surface
- Estimating Data** The minimum recommended coverage of **Build Bond 1K/SB** is to obtain a 1.00 - 1.50 mm thick dry film build.
- Storage Shelf Life** 12 months from date of manufacture if stored in tightly sealed original packaging, in dry and temperature at 23 °C, cool enclosed area.

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