

W^handerBUILDS

LiquidGUARD

APPLICATION GUIDE

LIQUID APPLIED WATERPROOFING
MEMBRANE FOR FLAT AND
PITCHED ROOFS



DESCRIPTION

WonderBuilds LiquidGuard is a single pack, high performance, seamless and cold-applied waterproofing membrane for flat roofs, pitched roofs and a waterproofing coating to WonderBuilds' Built-Up Roof systems. Once cured, it provides seamless waterproof protection, making it suitable for use in all climates. WonderBuilds LiquidGuard does not brittle with age. It is a moisture curing polyurethane system that can cure under water without gassing or foaming. It also becomes quickly resistant to rain damage without loss of performance.

APPLICATIONS

WonderBuilds LiquidGuard can be used on a range of substrates and is suitable for refurbishment or new build construction projects.

- Can be used for roofs displaying complex detail areas, even when accessibility is limited
- Delivers cost efficient life cycle extension of failing roofs

CHARACTERISTICS/ BENEFITS



Cold applied – eliminating the risk of fire



Good adhesion to most substrates



Totally seamless membrane



Shower proof – Typically the system will be shower proof within 30 minutes



Elastomeric – retains flexibility even at low temperatures



Economic – provides a cost-efficient life cycle extension of failing roofs



Single pack application – ready to use, no mixing necessary



Easily re-coated when required



Fully reinforced using WonderBuilds reinforcement (225gsm GFM)

APPROVALS/STANDARDS



**FIRE TEST
CERTIFICATE**



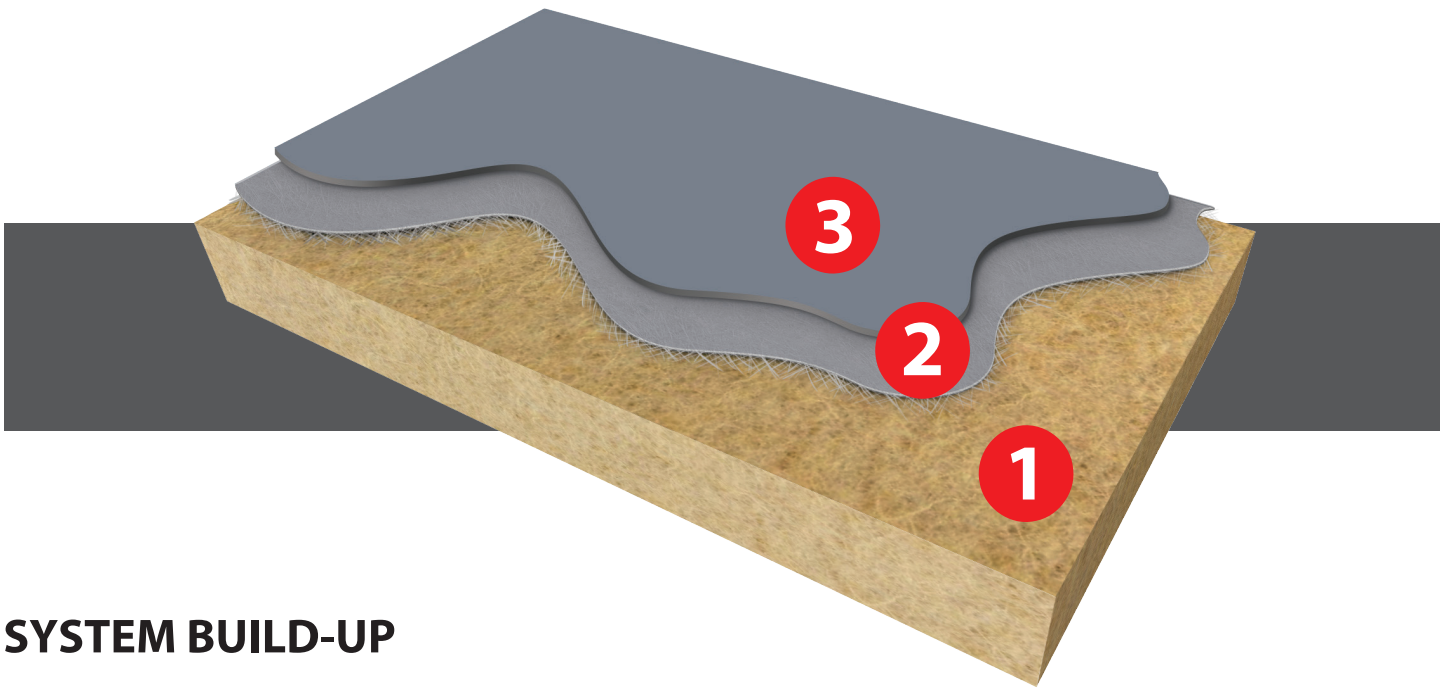
SYSTEM

The base coat is applied in one coat and fully reinforced while wet with Glass Fibre Mat (GFM).

After curing, the system is completed with a further coat of WonderBuilds LiquidGuard top coat to achieve the required system Dry Film Thickness (DFT).

The system working life is up to 20 years; **see following table for coverage rates.**

The following table assumes a non-porous, smooth substrate. Base coat consumption may increase with rough/porous surfaces.



SYSTEM BUILD-UP

WonderBuilds LiquidGuard Waterproof System for Flat or Pitched Roofs.

- 1** Substrate
- 2** WonderBuilds LiquidGuard Base Coat reinforced with Glass Fibre Mat (GFM)
- 3** WonderBuilds LiquidGuard Top Coat

Priming (typical)	System	Please refer to substrate pre-treatment	Please refer to the primer datasheet
BASE Layer		WonderBuilds LiquidGuard	1.0 Ltr/m ²
		Glass Fibre Mat (GFM) Reinforcement	
TOP Layer	10 YEARS	WonderBuilds LiquidGuard	0.5 Ltr/m ²
	15 YEARS		0.75 Ltr/m ²
	20 YEARS		1.0 Ltr/m ²

* All quantities are minimum material use

PREPARATION

Prior to application, all substrates must be clean, dry and free from any oxidation, mould and any other deleterious materials.

SURFACE PREPARATION AND APPLICATION

All areas should be clean, dry, free from dirt, dust, grease and any loose aggregate removed.

Ideally, all roof surfaces should be power washed clean at a minimum 2,000 psi. WonderBuilds LiquidGuard should not be applied in wet conditions or when rain is imminent. The surface must be free of any visible moisture.

Asbestos exposed roof cladding will require cleaning back to a firm substrate. The cleaning needs to comply with all health and safety guidelines. Once panels are cleaned, they must be treated with fungicidal wash and left for a minimum of 7 days prior to overcoating. This is to ensure all vegetation microbes are killed off.

PRIMERS: WonderBuilds LiquidGuard is bitumen compatible therefore no primer is required on a bituminous substrate. Metal, concrete, single ply, other coatings and porous surfaces will require priming. WonderBuilds Technical Department should be consulted for guidance.

PRIMER CHART

	Cold Melt DPM Primer	SA & Vapour Control/Carrier Membrane SA	Epoxy Primer	Apply Direct	Adhesion Test Required	Abrade/Remove
Exposed Asphalt				X		
Coated Asphalt					X	
Felt				X		
Solar Reflective Paint					X	
Mineral Felt				X		
Brittle Bitumen					X	X
Stable Bitumen				X		
Concrete Aged	X			X	X	
Concrete New/Damp	X					
Dry Brickwork				X		
Brickwork Porous/Damp	X					
Metal			X			X
Lead			X			X
Aluminium			X			X
Stainless Steel			X			
Galvanised			X			
Timber Upstands		X				
PVC Membranes			X		X	
EPDM Membrane		X				
Other Single-ply Membranes		X	X	X	X	
GRP		X	X	X	X	X
Asbestos Cement	X					

Note: For the consumption rates and waiting time/overcoating you should refer to the datasheets of the appropriate cleaner or primer. Other substrates must be tested for their compatibility. If in doubt, apply a test area first.

CONDITIONS

APPLICATIONS Temperatures Range

Air



+5°C to +35°C

The system can be applied within an ambient temperature range between +5°C and +35°C.

Surface



+5°C to +55°C

The surface temperature must be at least +3°C above dew point during application and curing.

Material



+5°C to +25°C

The surface temperature must not be less than +3°C if a topping is applied to the surface. Reaction problems can occur at lower temperatures.

Moisture

Relative humidity must be less than 85%. The surface must be protected from moisture until the coating has hardened. Typically the system will be shower proof within 30 minutes.

The surface temperature will affect how quickly the materials will cure. Allow 4 to 6 hours to overcoat at 20°C. Cure times may be extended at low temperatures and low humidity.



APPLICATION

Preparation



Ensure the substrate is free from old plant and debris



The outlets and gutters must be free flowing and free from obstruction



Cut all brick chases if required. Do all dirty work before cleaning. Ensure you have read all relevant material safety datasheets and planned your risk assessment accordingly. You will require medium pile rollers for the installation plus radiator rollers and paint brushes of various sizes for the detailing and/or awkward areas.

Cleaning

- Clean the substrate with minimum 2000 psi power wash
- If needed clean the area with fungicidal wash, this eliminates all the moss/algae.
- The substrate must then be dried off using squeegees/rags (gas guns should be avoided)
- Once the substrate is clean and dry, you can begin the application

Priming

If a priming coat has been used, it must have cured tackfree before applying WonderBuilds LiquidGuard. For the waiting time/overcoating please refer to the datasheet of the appropriate primer. Damageable areas (handrails etc.) should be protected with tape or plastic wrapping.

All detail areas should be completed first by applying WonderBuilds LiquidGuard and reinforcement (225gsm GFM).

Detail areas should be allowed to cure prior to the application of Liquid Guard to the whole roof surface.

For detail areas, follow steps 1-3.

Details (Embedment Coat):

1. Prepare the required pieces of reinforcement (225gsm GFM) for each detail. Tear the mat to overlap it rather than cutting it and ensure a good overlap of at least 5cm.
2. Apply first coat of WonderBuilds LiquidGuard at approximately 1.0 Ltr/m² onto the detail. Work only so far in advance that the material stays liquid.
3. Embed the reinforcement (225gsm GFM) and roll it into the wet material. Leave for 5-10 minutes to allow the matting to break down. Once the matting has broken down you can then mold it into the desired detail. The treated details must be left to cure tack free for 4-6 hours before the flat area can be applied.

Flat Areas (Embedment Coat):

4. Apply the first coat of WonderBuilds LiquidGuard at the consumption rate stated under "System Build up". Work only so far in advance that the material stays liquid. Roll in the reinforcement (225gsm GFM) and push into the wet liquid to ensure full saturation. Overlap the reinforcement (225gsm GFM) at a minimum of 5cm and ensure overlaps are sufficiently wet to bond. The roller may require a little extra material to keep wet, but no further material needs to be added at this stage. The surface of the reinforcement should look wet and fully sealed.

Upstands & Flat Areas (Top Coat):

5. Before applying the top coat, check for protruding reinforcement (225gsm GFM) fibres. These fibres must be eliminated by using sandpaper. Make sure all protruding fibres are abraded smooth.

WonderBuilds LiquidGuard top layer is applied directly onto the WonderBuild LiquidGuard base layer (embedment layer) in all roof areas including details, up stands, pipes and protrusions. Apply with consumption rates according to the "system build up" of WonderBuilds LiquidGuard depending upon the system required.

Note: The Top Coat should be applied in straight lines, leaving no runs or raised areas (puddling effect). This should then be laid off in one direction, which creates a good finish to the system. Be aware that heavy rain or rain showers can physically mark or damage a still liquid membrane. *Material will dry at the surface in around 30 minutes depending on temperature. Always maintain a wet edge and finish surface as work proceeds. Going back to re-work areas that are partially dried may disrupt the surface.

LIMITATIONS

- Do not apply WonderBuilds LiquidGuard on substrates with rising moisture.
- WonderBuilds LiquidGuard is not suitable for permanent water immersion.
- On substrates likely to exhibit out-gassing, apply during falling ambient and substrate temperature.
- If applied during rising temperatures 'pin holing' may occur from rising air.
- Do not dilute WonderBuilds LiquidGuard with any solvent.
- Do not use WonderBuilds LiquidGuard for indoor applications.
- Do not apply close to the air intake vent of a running air conditioning unit.
- Do not apply WonderBuilds LiquidGuard directly on Insulation boards. Instead use Vapour Control Layer.
- Use SA membrane between Insulation board and WonderBuilds LiquidGuard System.
- Volatile bituminous materials may stain and or soften below the coating.
- Areas with high movement, irregular substrates, or timber-based roof decks require a complete layer of Carrier SA Membrane.

SAFETY MEASURES ON SITE

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent material safety datasheet containing physical, ecological, toxicological and other safety-related data.

Personal Protection:

The following protective equipment is essential for anyone working with WonderBuilds LiquidGuard:



In addition to protective clothing it is also recommended to use a barrier cream on the skin. The use of a barrier cream is more useful and effective than often reputed. They are inexpensive, convenient, and protect well if they are not frequently flushed with solvents. However, barrier creams are only a supplement and are not a replacement for protective gloves, so always wear gloves. Always ensure there is no contamination inside gloves before reusing them.

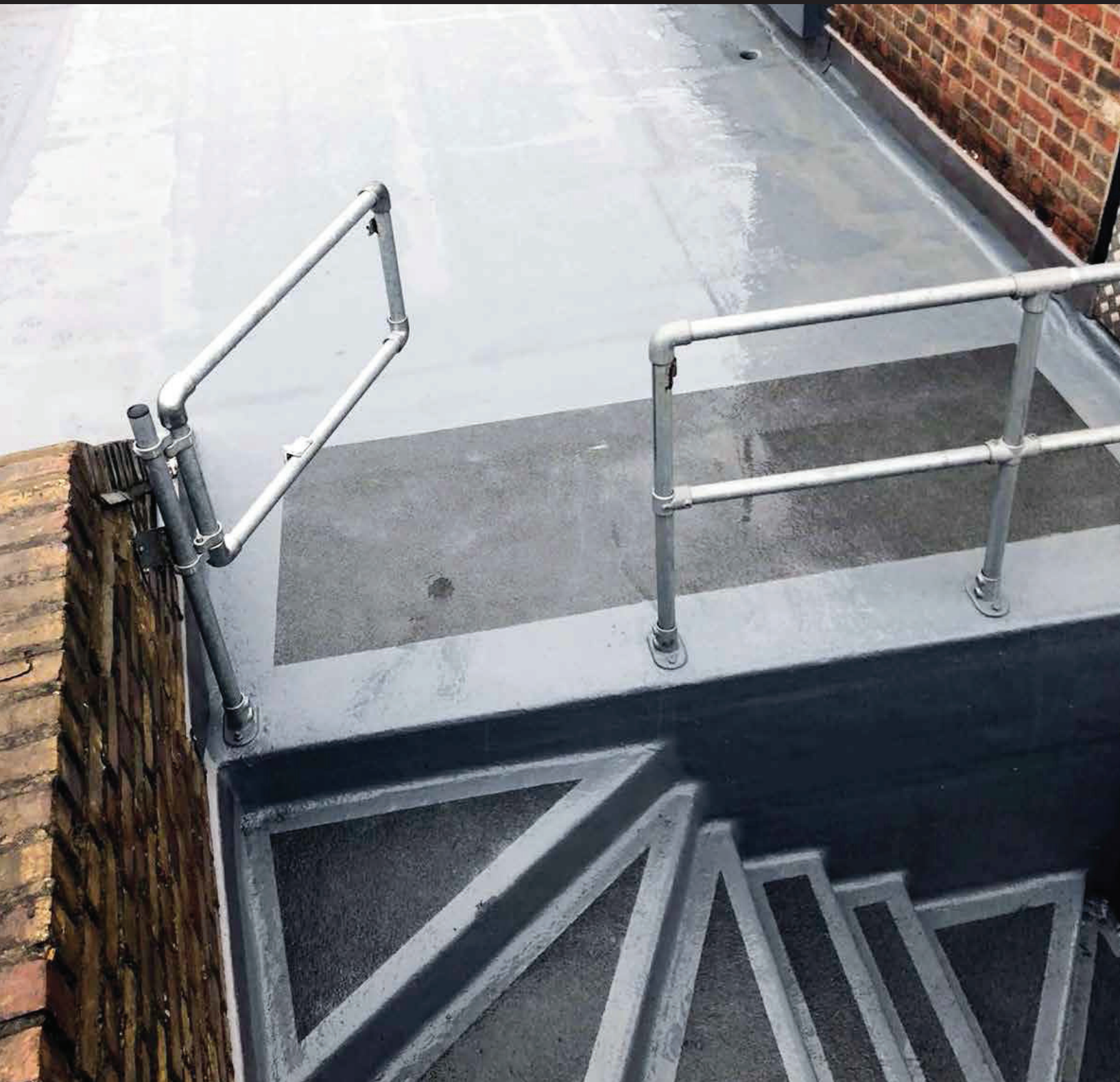
Eye protection must be worn. In the event of any spillage or contact into the eyes, always rinse and clean the eyes with clean water. seek medical advice immediately.

Ensure sufficient ventilation during application in closed or confined spaces. Dependent on local regulations respiratory masks may be required. Please observe all relevant local regulations.

Hard hats, safety shoes and ear protection are required on construction sites. Please observe all necessary requirements

Wash any exposed skin during the workday. If any liquid applied product contacts the skin, it must be washed immediately. Avoid using solvents to clean yourself as they are harmful to the skin and can penetrate the liquid deeper into the skin. Adequate clean water should always be available. If water is not available, clean the contamination with sand instead. Certain hand cleaners also work without harmful effects, for example, citrus skin cleaners are effective and mild. Using soap and water will take time but will eventually work for small areas.

A professional eyewash kit should also be available to use during the application process.



WonderBUILDS

0208 208 2121
www.wonderbuilds.co.uk

WonderBuilds
16 Hampden Gurney Street,
London, W1H 5AL