



# A guide to Flat Roof Waterproofing

Whatever type of flat roofing project you are undertaking, SIG Roofing can provide full support including products, accessories, expertise, innovation and advice - we've got you covered.



WHEN THE JOB HAS TO BE DONE RIGHT

# Welcome to our flat roofing product selector

Your needs covered everyday.

You can purchase flat roofing products with the reassurance and confidence that during your working day we will be here to support you.



**Finding fresh approaches and solutions is an essential part of what makes any business tick, especially in a highly competitive market like flat roofing.**

**You can focus on getting the right solution for the right job because you can rely on our expert technical support and innovative technologies.**



## **Driving innovation**

With technology constantly developing, you need to know which products are right for your projects.

As the leading flat roofing specialist in the UK, we have a rich depth of knowledge underpinning systems from cutting edge to more traditional techniques.

## **Working in partnership**

In a competitive market, you need a supplier who is more than just a merchant.

We work in partnership with trade associations including the NFRC to ensure that you can receive the latest updates on regulations and standards.

You can rely on unparalleled expertise through dedicated training tailored to your needs and expert sales staff at your local branch.

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# Flat Roofing Systems

**The key components  
that you'll find covered  
in this guide**

**Whatever type of flat roof you are building,  
there are four main elements to the roof:**

- What material is your structural deck made from?
- Is it a Cold, Warm or Inverted Roof?
- What type of ventilation is required?
- What finish do you want to achieve?

Whether it's a completely new covering, a refurbishment or a patch and repair, consider the above before you start your project and speak to your local branch if you need any assistance.

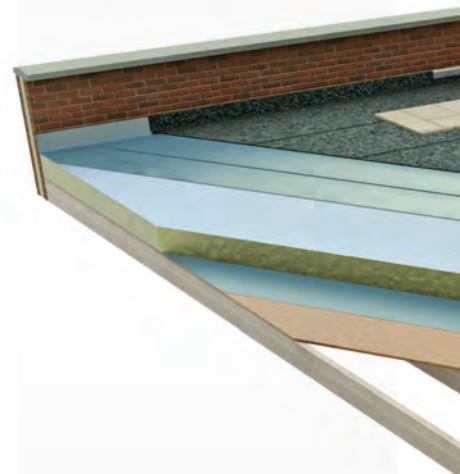
**Other factors to consider:**

- Longevity and guarantee preference
- Use of heat or heavy equipment
- Specialist tools required
- Speed of installation
- Chemical & odour impact during construction

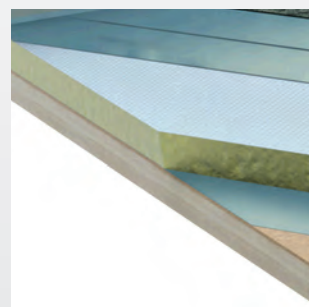
On pages 10 & 11 we give you options to consider for many of these questions.



■ Perimeter Trims  
and Finishing



■ Insulation  
■ Decking



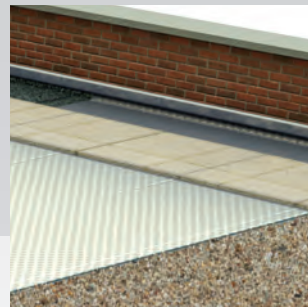




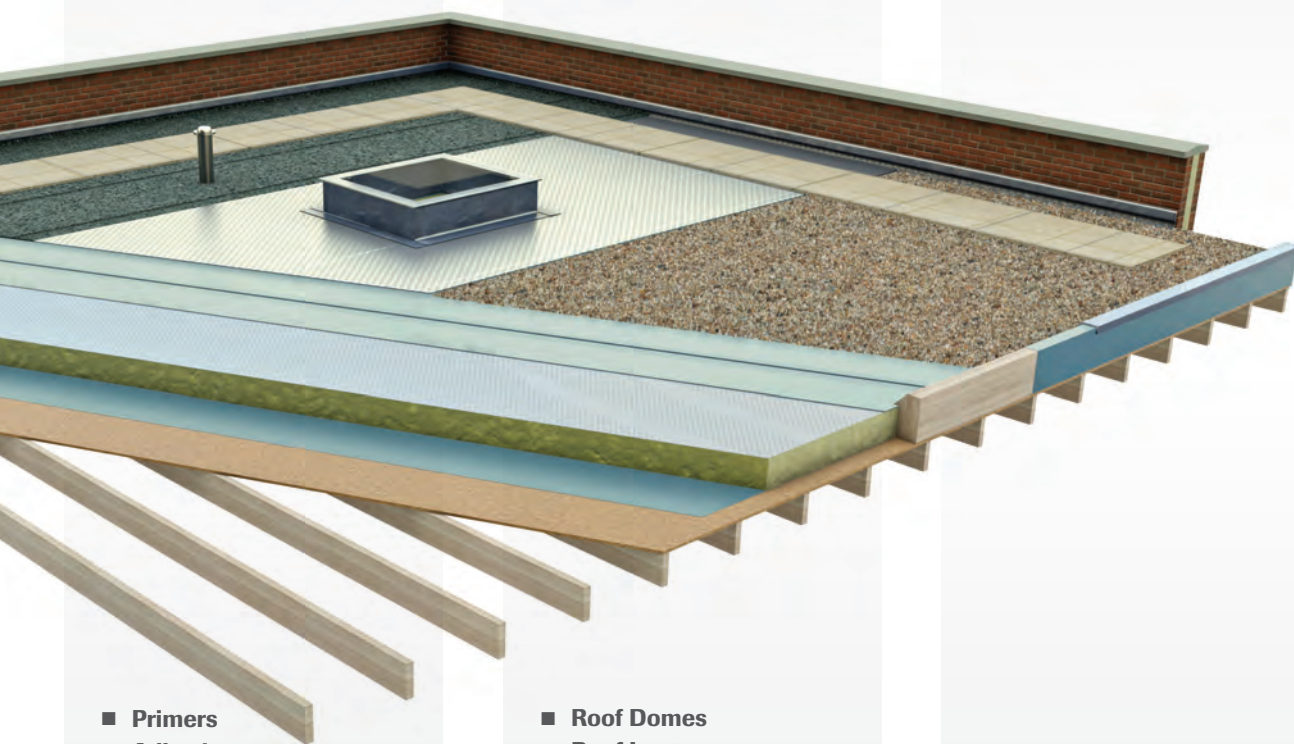
- Torch On Membranes
- EPDM
- Single Ply
- Asphalt
- Liquid Coatings
- Repair Compounds
- GRP



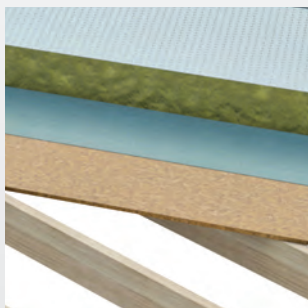
- Vents and Outlets



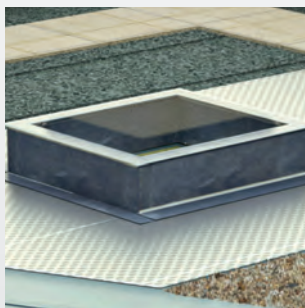
- Promenade Tiles
- Roof Paving
- Paving Support Pads
- Aggregates



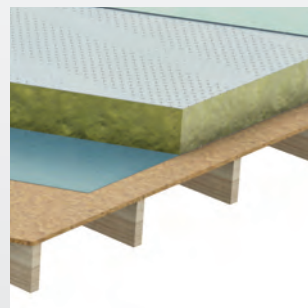
- Primers
- Adhesives
- Bitumen
- PU Adhesive



- Roof Domes
- Roof Lanterns
- Rooflights
- Access Hatches



- Vapour Barriers
- Vapour Control Layer



# Roof Deck Structure Considerations



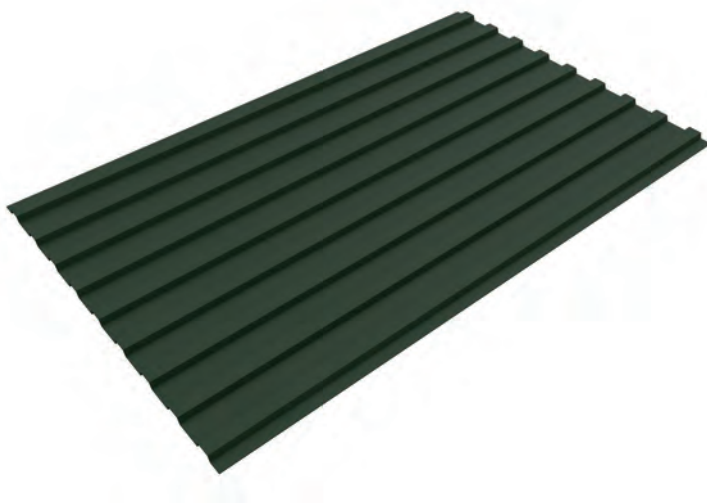
## OSB/3 18mm

### Advantages

- ✓ Complies with BS EN300 and is CE2 Approved for structural use.
- ✓ Can be laid to falls, to provide drainage.
- ✓ Easy to cut and secure to structural supports.
- ✓ Retains structural stability in high humidity applications.
- ✓ Readily available from specialist distributors.

### Disadvantages

- ✗ Limited unsupported span.
- ✗ Performance limitations in respect of dead loads.



## Metal

### Advantages

- ✓ Light-weight and quick to install.
- ✓ Wide range of profiles available.
- ✓ Long-span capabilities.
- ✓ Can be laid to falls, to provide drainage.

### Disadvantages

- ✗ Classified as a 'lively deck' requiring consideration when detailing waterproofing.
- ✗ Corrosion of un-treated cut edges can be an issue on steel decking.
- ✗ Limited dead load performance.
- ✗ Limited wind load performance.
- ✗ Acoustic performance limited.



## Concrete

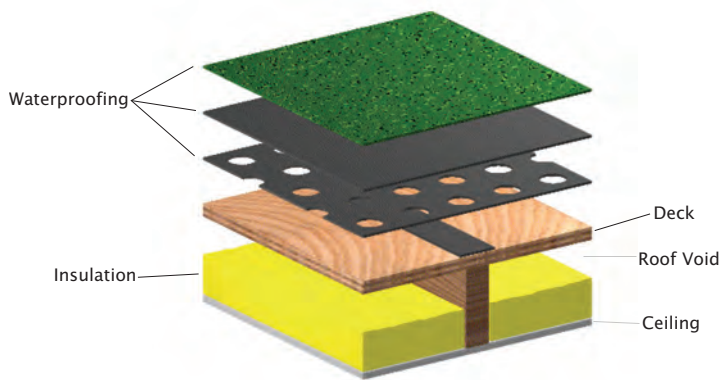
### Advantages

- ✓ Capable of supporting high dead loads (subject to engineer's calculations).
- ✓ Classified as a 'stable deck' simplifying waterproofing detailing.
- ✓ Long 'design life'.

### Disadvantages

- ✗ Construction process is slow, requiring specialist contractors.
- ✗ Long 'drying out' period, before waterproofing can be installed.
- ✗ Generally requires a screed to provide falls.

# What are the build up options?



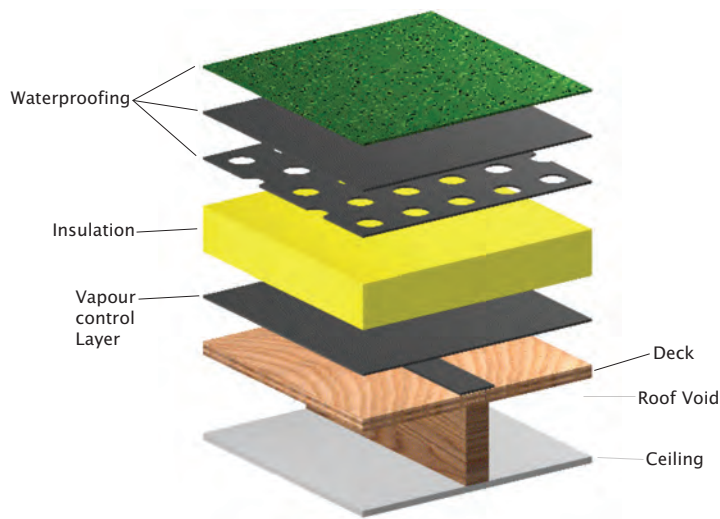
## Cold Roof

### Advantages

- ✓ Reduced installation time for waterproofing.
- ✓ Reduced build up above deck, in respect of impact on upstands.

### Disadvantages

- ✗ Require often complicated cross-ventilation of ceiling void to meet building regulations.
- ✗ Deep ceiling void required to accommodate insulation to comply with building regulations.
- ✗ Cold bridging is an issue, making it difficult to comply with building regulations.
- ✗ Roof structure more susceptible to effects of solar gain and thermal movement.



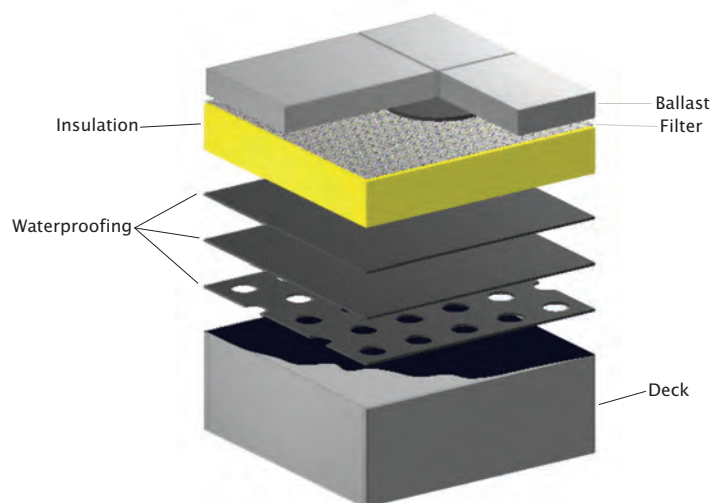
## Warm Roof

### Advantages

- ✓ Compliance with thermal requirements of building regulations is easier.
- ✓ Eliminates 'cold bridging'.
- ✓ No cross-ventilation of ceiling void required.
- ✓ Deep ceiling voids are not required, reducing cost of timber joists.
- ✓ Roof structure protected from solar gain, reducing the effects of thermal movement.

### Disadvantages

- ✗ Increased build up above deck, in respect of impact on upstands.
- ✗ Full installation slower than a 'cold roof', however, the structure can be made water-tight at Vapour Control Layer stage.



## Inverted Roof

### Advantages

- ✓ Roof can be used as a recreational space with paving (subject to engineer's calculations).
- ✓ Reduced installation time for waterproofing.
- ✓ Waterproofing protected from solar degradation.
- ✓ Aesthetic appeal.

### Disadvantages

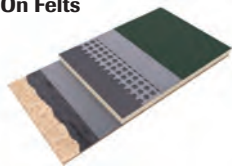
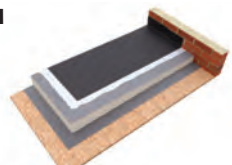
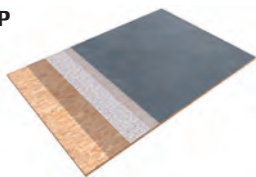
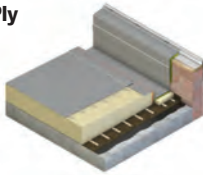

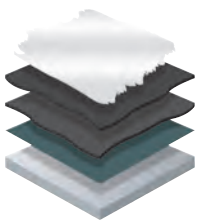

- ✗ Roof structure must be capable of supporting dead and live loads.
- ✗ Longer-term, maintenance inspections can be an issue.
- ✗ Drainage requires careful consideration.



# Flat Roofing Systems Comparisons




Helping you  
build flat roofing  
effectively

When working on flat roofing there are a range of product solutions you can lay to suit every type, scale and finish. Even if you prefer a certain method of working, there are several options you could consider.

Type of products	Ranges available at SIG Roofing	Warranties	Material Cost Comparison	Fitting Requirements	Fitting Accessory Cost
<b>Torch On Felts</b> 	FIX-R Classic, FIX-R, FIX-R 20, SIGnature, others available on request.	10 to 25 years	<b>Low - High</b>	Gas Tool Kit	<b>££</b>
<b>EPDM</b> 	FIX-R EPDM	20 years	<b>Medium</b>	Application Kit	<b>££</b>
<b>GRP</b> 	FIX-R GRP, Crystic Roof	10 to 25 years	<b>Medium</b>	Application Kit	<b>££</b>
<b>Single Ply</b> 	Armourplan PVC, Rhenofol PVC, Rhepanol FK	10 to 25 years	<b>Medium</b>	Hot Air Welder	<b>££</b>
<b>Liquid Coatings</b> 	FIX-R, SIGnature PU, AH25, others available on request.	10 to 25 years	<b>Medium - High</b>	Application Kit	<b>£</b>
<b>Asphalt</b> 	Mastic Asphalt, Permaphalt Modified Asphalt, FIX-R Classic	Up to 20 years	<b>Medium</b>	Application Kit	<b>££</b>
<b>Repair Compounds</b> 	FIX-Rcryl, FIX-R All Weather Roof Coat, Acrypol	5 years	<b>Low</b>	Application Kit	<b>£</b>



To help you choose, the table below outlines the most common solutions available through our branches, differences in cost, speed of fitting and tools required to get the job done. We recommend that you contact your local SIG Roofing branch, so they can help you choose the right fixings, build up and ventilation which could affect the water tightness and warranties.

Installation Speed	New Build or Retro	Fitting Skill Level	Hot Works Insurance	Heat Required	Low Odour	Approved Contractor Schemes Available	Storage & Reuse
	Both	Medium	✓	✓	✓	✓	✓
	Both	Medium	✗	✗	✓	✗	✓
	Both	Medium	✗	✗	✗	✓	✗
	Both	Medium	✗	✓	✓	✓	✓
	Both	Low	✗	✗	Dependent on product used	✓	Dependent on product used
	Both	High	✓	✓	✗	✓	✗
	Retro	Low	✗	✗	✗	✗	✓

# GRP Roofing Systems

**Strong, lightweight,  
long-lasting**

**A high-performance composite, GRP is ideal for creating flat roofing systems that are extremely strong, completely waterproof and long-lasting. A modern alternative to traditional materials such as bitumen, felt and lead, as it lasts a lifetime and looks great.**

**Can be finished with a range of trims and pigmented top coats - customers love the results it produces.**



## Ideal for...

- Extensions
- Garages
- Dormer Roofs
- Balconies  
(with anti slip)

## What is GRP?

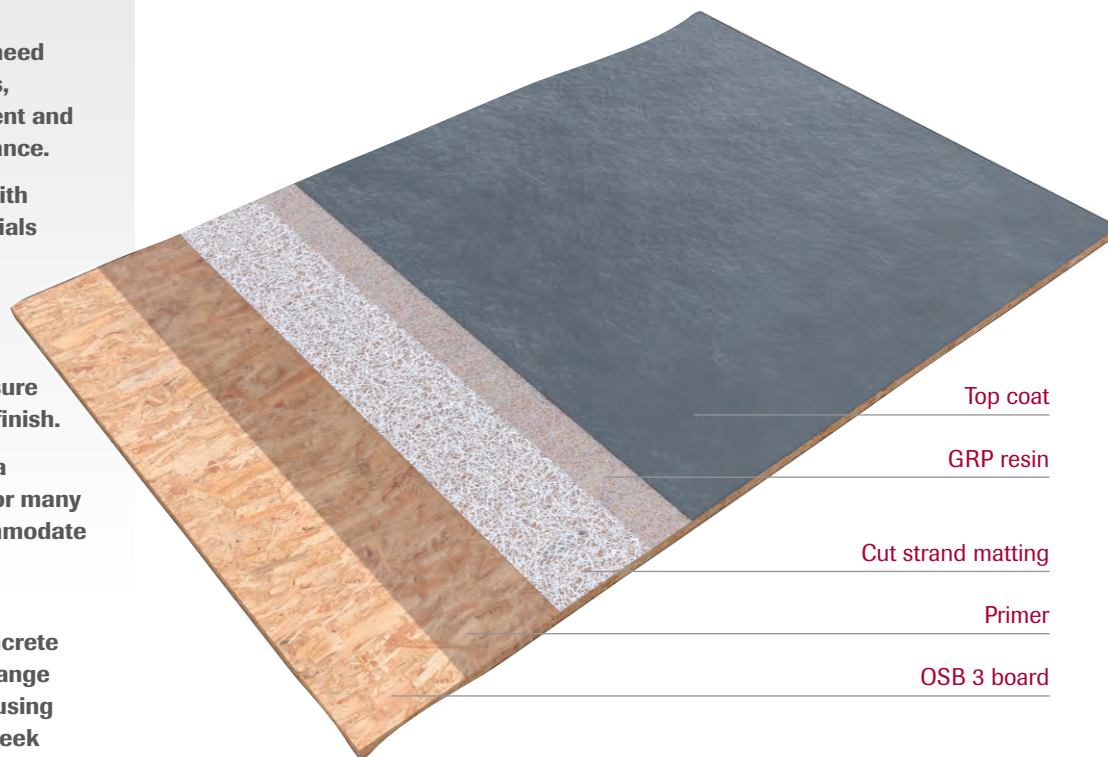
Originally developed as a replacement for moulded plywood used in aircrafts, GRP (Glass Reinforced Plastic) is a proven technology used on everything from boats and water tanks to ponds and pools, keeping water in as well as out.

## Warranties available



## Why use GRP?

- Cold applied - eliminating the need for naked flames, heating equipment and additional insurance.
- Manufactured with virgin raw materials in the UK to British/ISO quality and environmental standards to ensure the best quality finish.
- When you have a complex shape or many outlets to accommodate GRP will form to any shape.
- Excellent for concrete surfaces and a range of metals when using Primer (please seek advice or test a small application).
- Creates an attractive, seamless finish.
- Quick and easy to apply by both roller and brush for tack free finish once cured.
- For confidence in the curing process a colour change system indicates when catalyst addition to resin has taken place.
- Isophthalic topcoat gives superior performance in finish, long-term UV protection and weathering.
- Remains watertight and maintenance free for many years.
- Proven technology used in boat building.
- Wide choice of colour and non slip finishes.



## Ranges available from SIG Roofing

FIX-R GRP is a complete, high performance GRP roofing solution suitable for all kinds of complex structures. The FIX-R range consists of all items from resin and topcoat through to chopped strand mat and trims.

CrysticROOF from Scott Bader offers an alternative to the FIX-R range. It also consists of all components outlined above and comes from a UK manufacturer with over 80 years experience and quality to this range.

## Tools and essentials

We supply specialist tools such as a dosimeter for dispensing catalyst, metal consolidating rollers and application rollers for the resin and topcoat.

To complete your project we also supply Insulation, OSB 3 & Recovery Boards, Trims, Tapes, Outlets and PU Adhesive.

## Considerations

- GRP needs laying on a new dry deck in temperatures not less than 7.5°C (cold weather resin and catalyst available if required).
- Requires a longer weather window.
- Do not apply to wet boards or PVC / nylon substrates.



# Liquid Coatings

**Flame free,  
flexible, flawless**

**Built up to create a single-ply system, liquid waterproofing is clean and easy to apply, creating a tough, seamless membrane suitable for foot traffic. Incredibly versatile, it is suitable for any size and type of roof, whether for roof repair work or new build and gives excellent results on all types of surface.**



## Ideal for...

- **New build, repair or refurbishment projects**
- **Flat roofs, balconies, terraces & walkways**
- **Complex detailing, up-stands, penetrations & terminations**
- **Recoating failed singleply roofs**
- **Corrugated metal and cement fibre roofs**
- **Lead roofing or flashings**
- **Asphalt or existing felt roofs**

## What are Liquid Coatings?

Liquid waterproofing systems are simple to use straight from the bucket, applied by brush or roller, including a fabric for extra strength and protection. They are ideal for flame-free application where access is limited or where large amounts of detailing is required.

## Warranties available

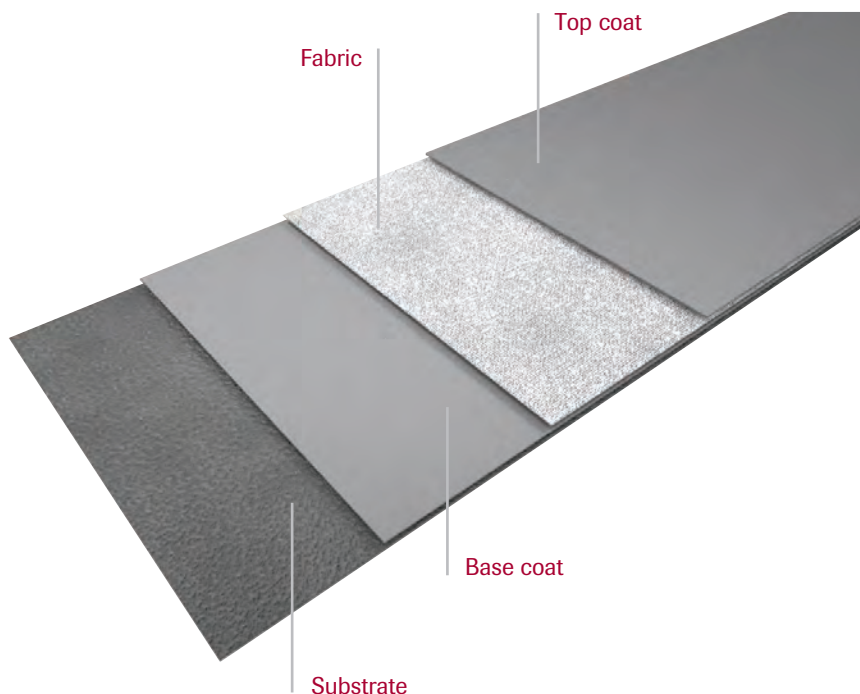


## Why use Liquid Coatings?

- Ready to use, single liquid component.
- Apply all year round above 0°C<sup>+</sup>.
- Water repellent on application.
- Minimum wastage, with unused product stored and reused\*.
- Fully reinforced with polyester fabric<sup>+</sup>.
- Cost effective wet-on-wet application.
- Creates a strong bond with most conventional substrates and can be recoated.
- Excellent elasticity and tensile strength.
- AH-25 is root resistant - ideal for 'green roof' projects.
- Resistant to standing water.
- UV stable, with no shrinkage and vapour permeable.
- Non hazardous - solvent-free and virtually odourless for application in sensitive locations like food processing sites and schools, with extremely low VOCs<sup>+</sup>.
- Extendable warranties up to 25 years available.

\* sealed and then stored between 4°C - 32°C

<sup>+</sup> AH25 & FIX-R Liquid Waterproofing



## Ranges available from SIG Roofing

There are a huge range of liquid waterproofing systems suitable for any size of roof, including:

- FIX-R Liquid Waterproofing
- FIX-R Classic Liquid 10
- AH-25
- SIGNature PU20

## Tools and essentials

We stock all the tools required such as application rollers, brushes, scissors and gloves.

To complete your project we also supply Primers, Stain Blockers, Jointing Tapes, Fibre & Quartz Reinforcement, as well as OSB 3, Trims and Outlets.

## Considerations

- You will need a good weather window.
- Minimum surface temperature of 0°C rising to a maximum surface temperature of 45°C.
- AH25 and FIX-R Liquid Waterproofing can be applied to a damp surface.
- SIGNature PU and FIX-R Classic Liquid 10 can only be applied at surface temperatures above 5°C.
- AH25 and FIX-R Liquid Waterproofing need abrading.
- FIX-R Classic Liquid 10 and SIGNature PU need re-priming.

# Single Ply

Quick, clean, stylish

As suppliers of the world's most advanced single ply roofing membranes, our brands create an impervious layer that is quick and clean to install with minimal environmental impact.



## Ideal for...

- Installing directly over existing bituminous roofs\*
- New builds
- Refurbishments
- Green roofs\*

\*Product & specification dependent

## What is Single Ply?

Formed by laying and joining strong, flexible sheets to create a continuous waterproof barrier, single ply is applied cold and can be mechanically fixed, bonded or ballasted.

There are two types of single ply in our range:

**PIB** - made from synthetic rubber it can be installed directly over bituminous membranes and requires no hot work

**PVC** - reinforced with polyester or glass fibre providing excellent strength, elongation and weathering characteristics

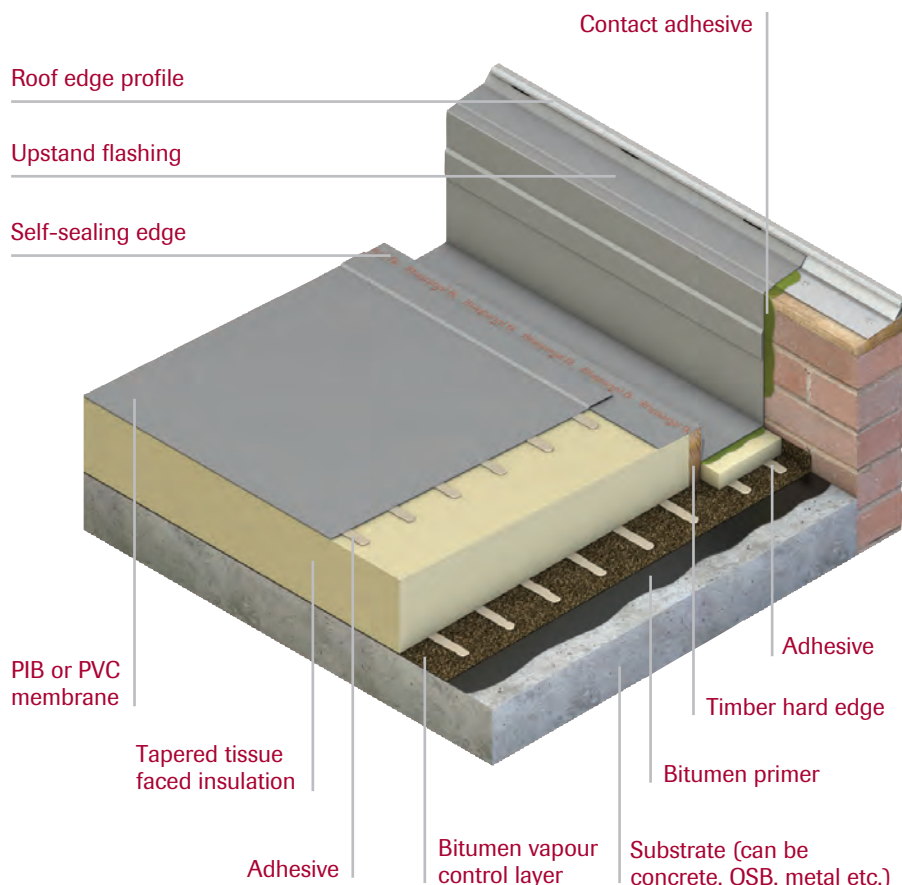
## Warranties available





## Why use Single Ply?

- Long life spans of over 30 years, remaining highly flexible and elastic requiring little or no maintenance.
- Quick and clean to install, perfect for covering large areas.
- Cold applied and safe installation with no need for naked flames.
- Can be overlaid on to existing roofs saving money and environmental impact.
- Superb finishes give a clean, attractive look.
- Can be fitted in most weather conditions.
- Our approved contractor scheme (DATAC) ensures contractors are fully trained and supported - giving customers peace of mind.



## Ranges available from SIG Roofing

- FDT Rhepanol PIB
- FDT Rhepanol fk
- FDT Rhepanol hg
- FDT Rhenofol PVC
- Armourplan PVC

## Tools and essentials

To complete your project we also supply Bitumen Primers, Flashings, Adhesives, Tapered Insulation, as well as Timber Edging, VCLs, Trims and Outlets.

## Considerations

- As a skilled installation process SIG provide all the necessary training on our trade association and product manufacturer approved courses.
- Relatively higher initial costs for the client but highly durable and long lasting.



# EPDM

**Simple, Reliable, Strong**

**Originally produced for the commercial flat roofing market, EPDM has now become a suitable solution for domestic as well as commercial flat roofing projects. FIX-R EPDM membrane is strong, lightweight, easily installed and a great solution for flat roof renovation and new flat roof installations.**



**Ideal for...**

- **Small or large flat roofs**
- **Refurbishment jobs**
- **New build**
- **Commercial flat roofing projects**
- **Intensive or extensive green roof systems\***

\*Root barrier required

## **What is EPDM?**

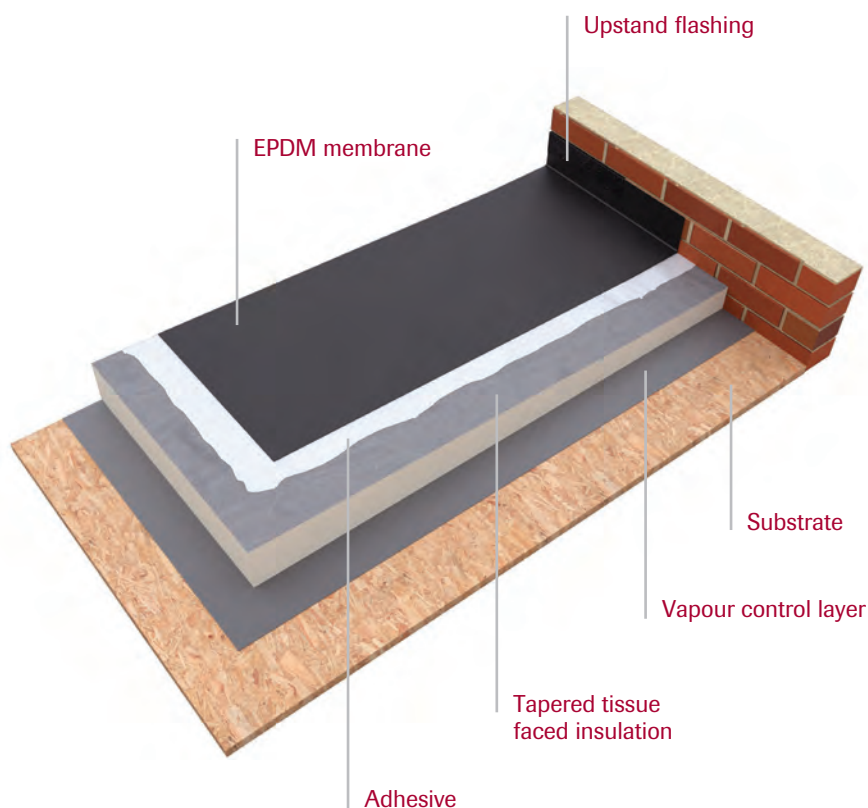
FIX-R EPDM membranes are competitively priced, and may be used for new single ply roof construction and re-roofing applications. All membranes are dusted and are available as part of our cut to measure service, as well as in standard widths of up to 15m (50') and lengths of up to 30.5m (100') and thicknesses of 1.2mm and 1.5mm which achieve a B<sub>ROOF</sub>(t4) fire rating. FIX-R EPDM roofing membranes are non-reinforced Ethylene Propylene Diene Terpolymer (EPDM) based elastomeric which creates a uniform roof covering.

## **Warranties available**



## Why use EPDM?

- With a range of membrane widths available, a one piece fit can be achieved (3.05m, 4.57m, 6.1m, 7.63m & 9.15m).
- Cut to size service available to reduce cost & waste.
- Two choices of thicknesses: 1.20mm & 1.50mm for greater strength and peace of mind.
- Unmatched weatherability, with resistance to ozone, UV radiation and extremes of temperature.
- Highly flexible for ease of installation.
- Faster installation reduces labour costs.
- Little or no maintenance roofing system.
- Pressure Sensitive (P.S.) accessories available for virtually any penetration or detail.



## Ranges available from SIG Roofing

- FIX-R EPDM is a complete, high performance roofing membrane suitable for all kinds of roofs.

## Tools and essentials

As a complete solution FIX-R EPDM has a huge range of components to finish the perfect roof. Tools available include adhesive spray sets, rollers, knives and gloves.

Essential ancillaries including Pressure Sensitive Tapes, Primers & Adhesives, Trims, Termination Bars and Fastenings.

## Considerations

- For cold weather splicing below 5°C, a hot-air gun should be used to heat the primed area of the bottom membrane. Care should be taken to avoid burning or blistering the membrane.
- Pressure Sensitive (P.S.) Accessories should not be exposed to prolonged jobsite storage temperatures in excess of 90°F (32°C), otherwise the shelf life may be affected.
- Ponded water, snow, frost and ice must be removed from the roof surface before installation of the membrane.



# Torch On Bituminous Membranes

**Tried, tested, tough**

**Torch On bituminous waterproofing systems are a proven technology used over thousands of years. With a wide range of products available it's a flexible option that suits most applications.**



## Ideal for...

- **Any flat roof where flame can be used**
- **Small or large projects**

## What is Torch On?

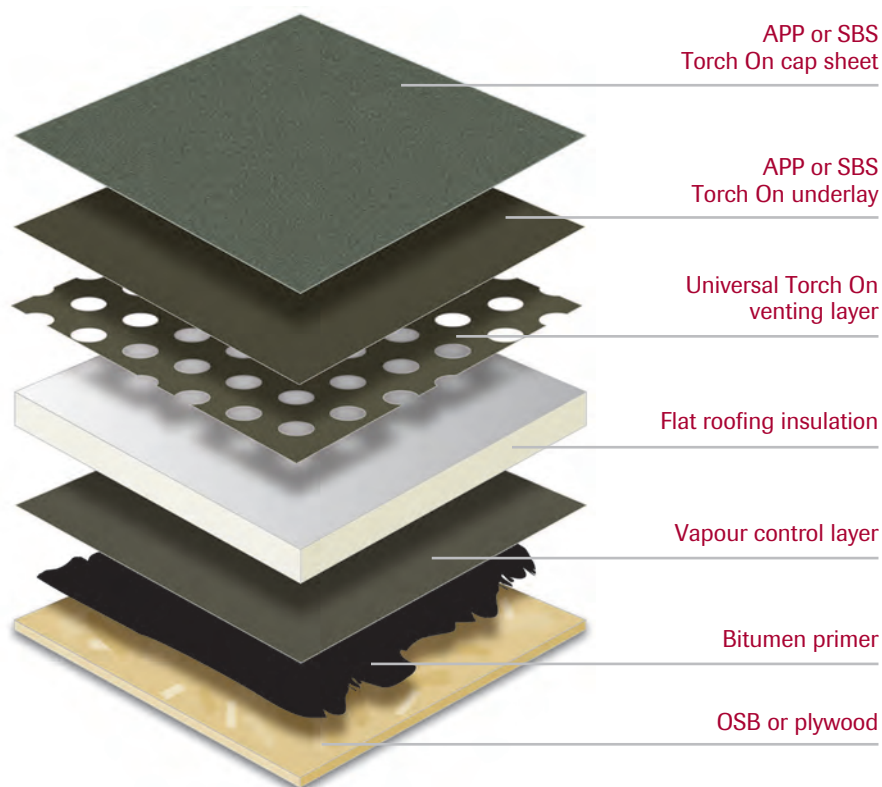
Combining bitumen with additives such as styrene butadiene styrene (SBS) or atactic polypropylene (APP) and a carrier such as fibreglass or polyester produces a waterproof material on a roll. With new membranes providing increased resistance to ageing and weathering they continue to be suitable for all roof sizes, easy to install and low in cost.

## Warranties available



## Why use Torch On?

- Tailor the build up to your project criteria.
- APP offers toughness, can be applied in a range of temperatures and gives easier application.
- SBS is better able to deal with weather stresses and temperature fluctuations.
- A variety of new bituminous membranes are now available and offer application advantages over the traditional fibre based felts.
- Torch On - underside is treated with thermofusible bitumen, heated with a propane torch as it's rolled and applied hot, so no bonding bitumen is required.
- Self-adhesive - no need for heating, backing strips away, it will always require a specialist primer.
- SIGNature Cap Sheet is a high-performance Torch On system with specially formulated fire retardant coating, providing a Cap Sheet with B<sub>ROOF</sub>(t4) fire rating as standard.



## Ranges available from SIG Roofing

- SBS Membranes
- APP Membranes
- Self-Adhesive Membranes
- Vapour Control Layers
- Pour and Roll Felts (3B, 180 Sanded, 250 Green)

## Tools and essentials

Our propane gas is available in a range of sizes along with torch kits and hoses.

We offer a wide range of essentials including Insulation, Drip Formers, OSB 3 Adhesives and Aggregates.

## Considerations

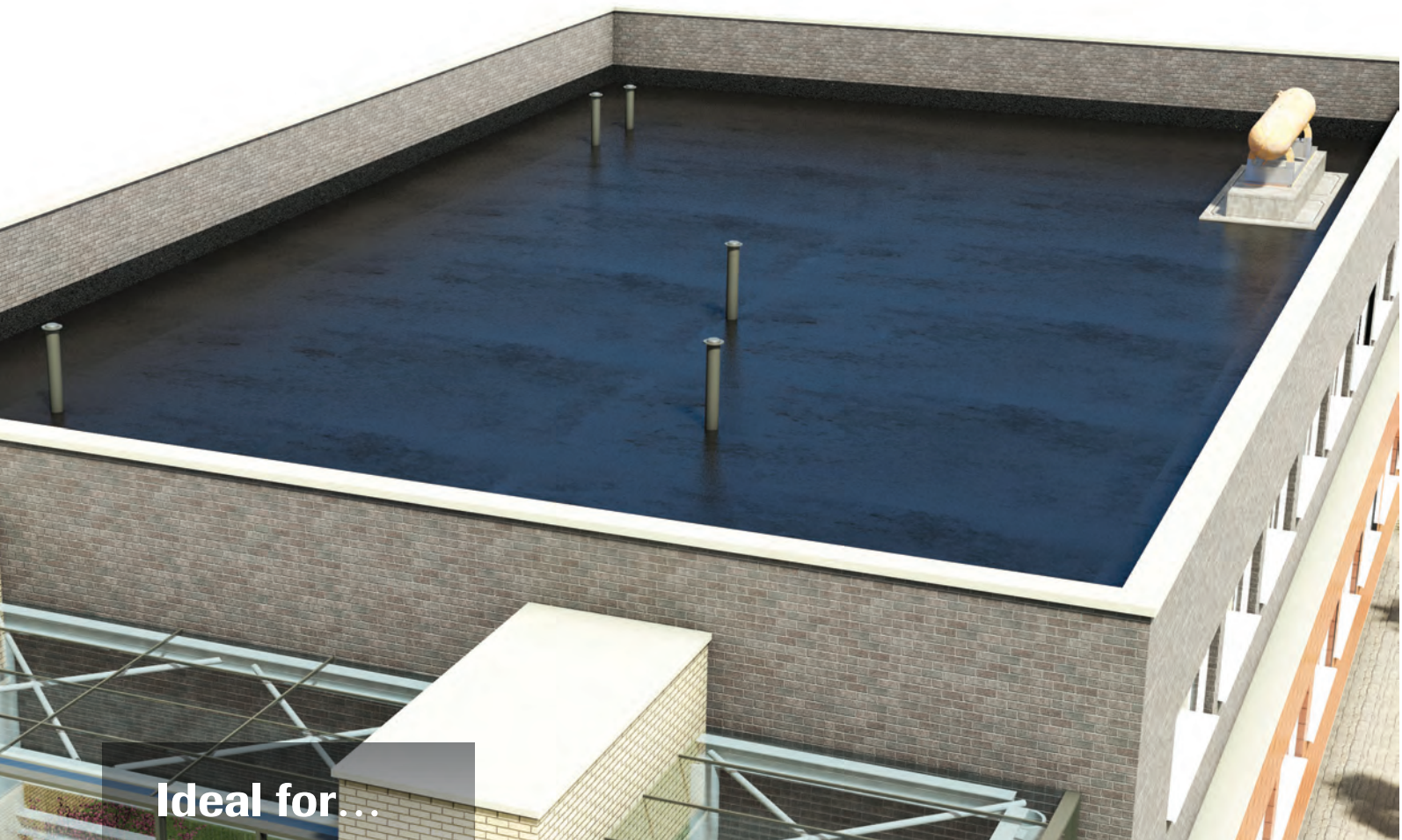
- Traditional pour and roll membranes still require temperatures of over 200°C and heavy heating equipment.
- SBS membranes are not as forgiving as APP products if too much heat is applied.



# Asphalt

**Smooth, seamless, durable**

**Asphalt is a traditional material that continues to develop with today's technology. It is ideal for waterproofing flat, sloped or curved surfaces and working around pipes, roof lights and other details.**



## Ideal for...

- Concrete
- Pre-cast concrete deck units
- Timber boarding
- Metal decking

## What is Asphalt?

Modern mastic asphalt contains graded limestone aggregates bound together with asphaltic cement with highly advanced polymer formulations. Perfect for both new build and refurbishment it is spread by a hand float rather than rolled and can be laid on most types of rigid structure.

## Warranty available

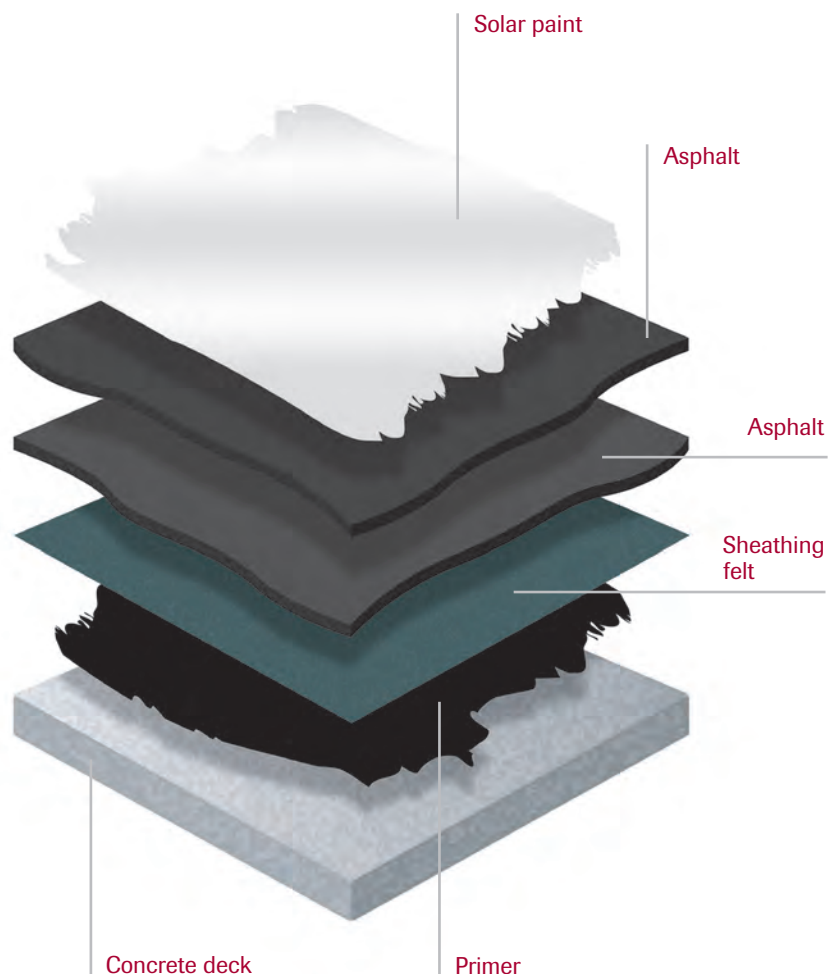


Dependent on build up and subject to conditions and is 20 years for MAC members.



## Why use Asphalt?

- A proven technology tested over many years.
- Quick and easy to install.
- Flexibility means it is suitable for moulding around irregular shapes.
- Can combine with thermal insulation to achieve a required U-value.
- Different treatments can provide a surface suitable for foot traffic.
- Increase solar reflectivity and give a more decorative finish, if painted with a specialist solar reflective product.



## Ranges available from SIG Roofing

Our mastic asphalt range offers a choice of British Standards and BBA approved products including: Permaphalt, the high end polymer modified product used by members of the Mastic Asphalt Council (MAC).

- Mastic Asphalt
- Permaphalt Modified Asphalt
- Sheathing Felt

## Tools and essentials

Specialist hot works tools available to order or in branch, including Heavy Duty Buckets, Bucket Heaters, Asphalt Cauldrons, Pointing Trowels, PVC and Wooden Floats.

## Considerations

- Asphalt roofing will take occasional maintenance traffic.
- Regular foot traffic or use on balconies will require protective treatment.

# Repair Compounds

## Proven Protection

For cost-effective, all-weather application, our range of non-bituminous and bituminous repair compounds offer proven long-term protection in even the most demanding conditions.



## Ideal for...

- Metal and asbestos roofs
- Sealing seams, fasteners and penetrations
- Box gutters
- Flat roofs
- Flashings and parapets
- Day-to-day maintenance and emergency repairs
- Priming prior to installation
- Increasing UV resistance to reflective coatings

## What are Repair Compounds?

Cold applied and exceptional value for money they are ideal for day-to-day maintenance or emergency repairs, prolonging the life of damaged roofs. With a range of paints and primers each offering an ideal solution to a specific maintenance or roof preparation requirement from felt adhesives to a solar reflective paint.

## Warranty available



## Why use Repair Compounds?

- Cost-effective, giving exceptional value for money.
- Suitable for wet weather application.
- Unaffected by temperature change.
- They give outstanding adhesion.
- Ready to use, giving instant waterproof protection.
- Solar reflective paint provides maximum solar reflectivity.
- Form an incredibly tough, fibre reinforced, seamless, flexible membrane.
- Brush or roller applied and easy to use.



## Ranges available from SIG Roofing

Our highly advanced systems offer proven protection for all types of roofs and surfaces.

- FIX-Rcryn
- FIX-R Bitumen Primer
- FIX-R Black Bitumen Paint
- FIX-R Quick Dry Bitumen Primer
- FIX-R Aluminium Paint
- FIX-R Roofing Felt Adhesive
- FIX-R All Weather Roof Coat

## Tools and essentials

We stock all the tools required such as application rollers, brushes, scissors and gloves.

To complete your project we also supply Solvent Cleaners, Heavy Duty Wipes, as well as Dust Sheets, Tarpaulins and Rubble Sacks.

## Considerations

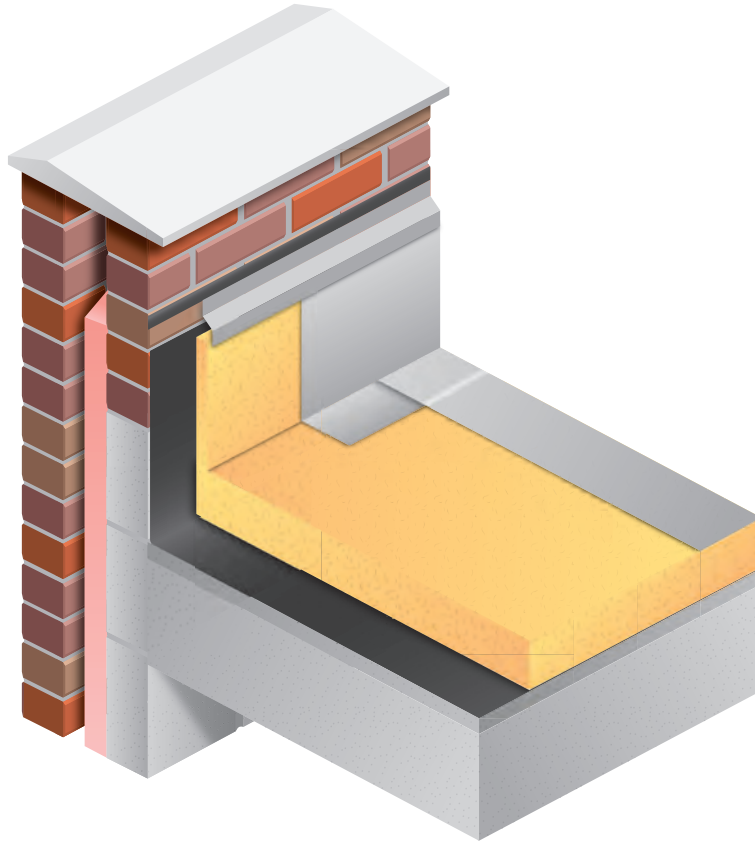
- Not recommended for use on wood, tanking, fishponds or internal use.
- You may need to use a primer or sealer if applying to highly porous surfaces such as concrete, asbestos or where stone chippings have been removed.
- Air conditioning should be turned off for 24 hours after application.
- Not suitable for foot traffic.
- Fix-Rcryn is more appropriate as a short-term measure rather than a long-term solution.



# Flat Roofing Insulation

## Warm, Cold Roof Solutions

Ensuring you choose the right insulation for your project can seem daunting, with a vast choice of product ranges available, legislative and building requirements and new products constantly being introduced.



## Use for...

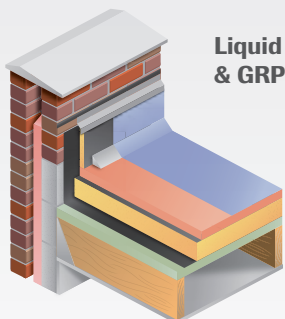
- Warm Roofs
- Inverted/Upside Down Roofs
- Cold Roofs
- Mechanically Fixed
- Fully Adhered
- Tapered Roofs

## What is Insulation?

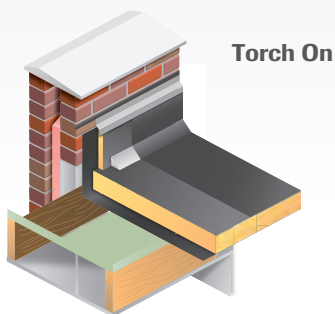
Polyisocyanurate (PIR) is one of the most efficient insulation materials used in construction and is the most common flat roofing insulation. Typically produced as a foam and used as rigid thermal insulation. Most popular types of PIR insulation board are comprised of a rigid PIR insulation core sandwiched between two high performance aluminium foil facings to create a tough, durable, light weight insulation board that performs whilst reducing the overall cost to build.



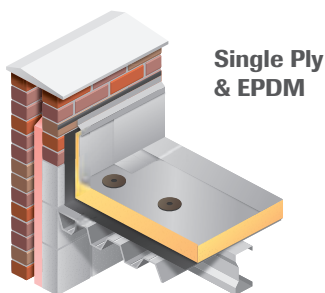
## Typical Insulation Build-ups



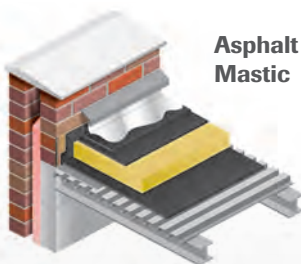
Liquid  
& GRP



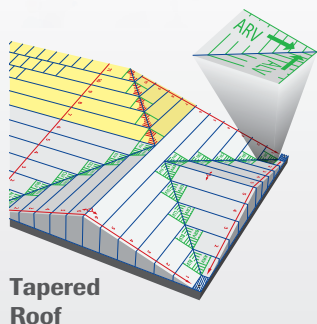
Torch On



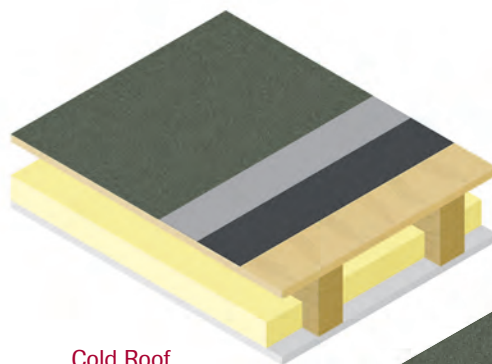
Single Ply  
& EPDM



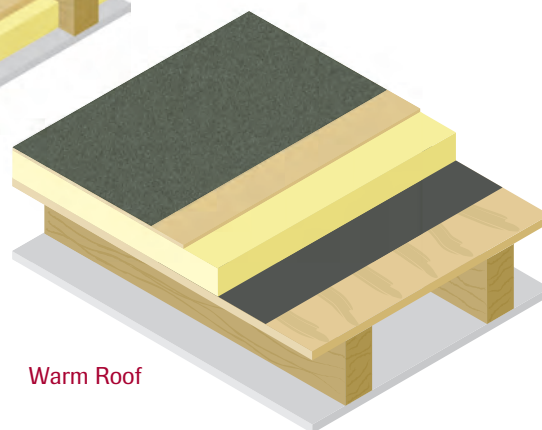
Asphalt  
Mastic



Tapered  
Roof



Cold Roof



Warm Roof

## Ranges available from SIG Roofing

We offer a range of PIR Insulation boards from leading manufacturers including Recticel, Celotex, Kingspan and Dow.

It is available in thicknesses from 25mm to 200mm in full and half sheets.

## Tools and essentials

When fitting insulation we can supply specialist fixings from Soudatherm Roof Adhesives to Mechanical Anchors, Fasteners and Retaining Clips.

To complete your project we also supply OSB 3, Vapour Barriers, Flashings, Drip Formers, Trims, Tapes, Outlets and Roof Access Hatches.

## Considerations

- The deck may be metal, concrete or timber and insulation can be mechanically fixed or adhered to the vapour barrier.
- With warm roofs, the principal thermal insulation material lies immediately beneath the weatherproof covering and on top of the roof deck and any vapour control layer necessary.
- Mechanically fixed Single Ply requires separate fixings for both the insulation and the membrane.

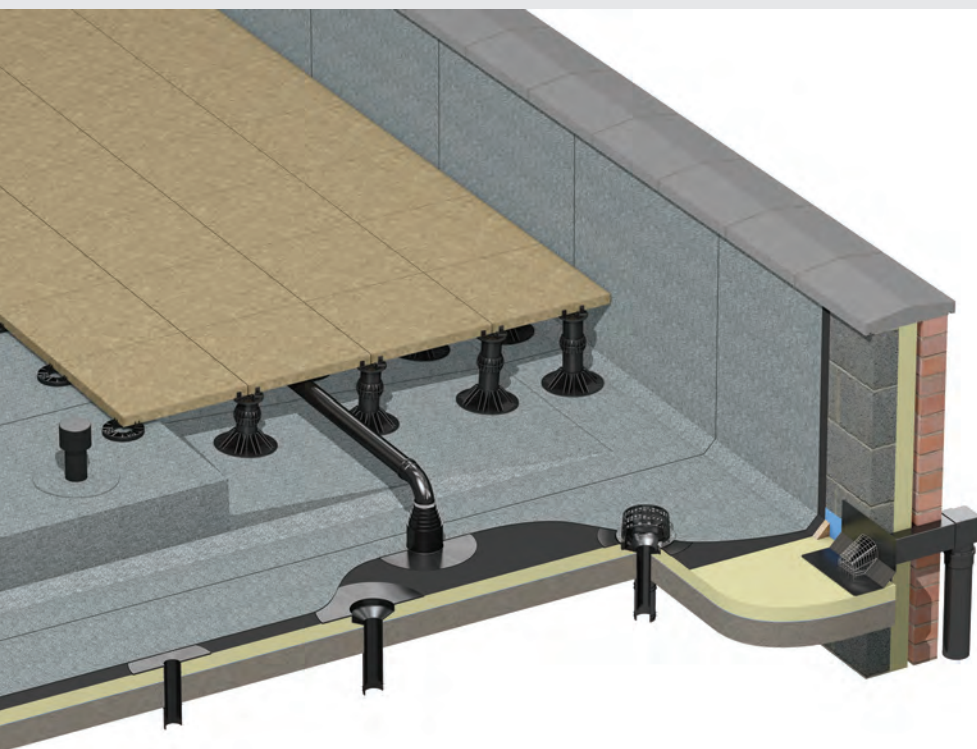
## Key Manufacturers:



# Flat Roofing Essentials

Everything required to get the job done right

The correct build-up of the roof is essential to its longevity and success. Below we've outlined some of the key products we can supply to complete your roofing project.



## Build-up essentials...

- Decking
- Vapour Control & Barriers
- Insulation Adhesives
- Rooflights & Access Hatches
- Vents & Outlets
- Flashing & Trims
- Paving & Aggregates

### OSB 3

It's highly engineered, moisture resistant and specifically designed for the most demanding roofing applications. Perfect for cold or warm deck flat roofs it's easy to work with, simple to fix and cheaper than structural plywood.



### Vapour barriers

Consists of a reinforced composite aluminium foil with a self-adhesive backing and removable release film. Quick to install, creates an airtight/vapour-tight seal, and if installed correctly, remains weathertight for up to 5 weeks.



### Insulation Adhesives

Liquid ready-to-use for bonding insulation materials such as extruded polyurethane foam, polystyrene, phenolic foam or mineral wool onto horizontal surfaces, aged bituminous roofing membranes.





## Roof Domes, Roof Lights & Access Hatches

Add light to your project, by installing the right windows for your flat roof. Opt for dome shape modular roof lights made from either polycarbonate or acrylic UV protected sheet. Access hatches give easier access to flat roof spaces.



## Tubular skylights

Allow additional natural light to enter rooms that would not be possible with traditional skylights. They can be fitted in flat or pitched roof applications.



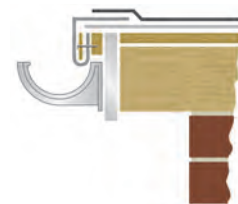
## Vents & Outlets

While the requirements for roof drainage will vary depending on the type of roof, it's essential to get a watertight connection between the water/damp proofing membrane and the drainage pipework.



## Trims

Roof edge trims and termination bars tidy up waterproofing membranes on flat roofs and are available in a range of sizes in either GRP or aluminium. They're an alternative to lead flashing and extremely durable and economical.



## Flashings

Lead is the traditional material for this and is still one of the most popular methods of sealing the joint between walls and flat roofs.

Lead substitutes have become increasingly common and, depending on the life expectancy and budget of the job you are working on, they might be just what you need.



## Bitumen

Used for bonding roofing membranes in roll and pour built up roofing specifications. Bitumen adheres bituminous roofing to itself, structural decks or a variety of insulation materials.

When using bitumen we recommend that you follow the requirements of BS 8217: 2005 Code of Practice for reinforced bitumen membranes for flat and sloping roofs.



# Flat Roofing Tools

Everyday tools and accessories

Whatever your flat roofing project involves, our high quality tools, PPE and accessories help you get the job done.



## Gas & kits

### ■ Propane Gas

Available in a wide range of sizes to suit all types of roofing application. We can advise on the regulations and recommendations regarding the use, storage, handling and transportation of gas products.

### ■ Self-igniting Gas Torch Kit

With 10m hose and regulator.



## GRP Accessories

### ■ Acetone Brush Cleaner

Used to clean uncured resin from brushes, tools and equipment.

### ■ Virgin Acetone

### ■ GRP Catalyst Dispenser

1 litre body with 80ml measuring capacity.

### ■ Resin Roller Refill

18mm pile, nylon, recommended for resins.

### ■ Topcoat Roller Refill

Velour, recommended for gelcoats.

### ■ Roller Frame



### ■ **Fin Roller**

With vertical grooves for best air release. Much less resin splashing than paddle rollers. No loose washers that clog.

### ■ **Plastic White Buckets**

With handles for mixing or storing resins. Available with or without lids.

### ■ **Latex Gloves**

Available in boxes of 100.

### ■ **Swivel Pole Sander Head**

For sanding off large areas - use with an extension pole and simply clamp on your sand paper.

### ■ **Metal Telescopic Pole 80-135cm (32-53 inches)**

Comes with a screw and taper cone compatible with the majority of handles.



## Tools

### ■ **Hammer Tacker**

Heavy duty steel construction with anti-slip soft rubber grip. Type 11 Staples 10mm & 12mm high quality, strong staples, packs of 2000.

### ■ **16oz Claw Hammer Steel Shaft**

Allows nails to be driven in and also extracted by the claw.

### ■ **Double Tip Scriber**

Is ideal for scribing laminates and hard surfaces.

### ■ **Trimming Knives**

With fixed or retractable blades. Heavy duty blades, hooked and straight packs of 10.

### ■ **Tar Brush**

To paint tar along seams and joins for a quality waterproof finish, featuring a turned wooden handle.

### ■ **Economy Paint Brushes**

50mm, 76mm & 100mm, with wooden handles.

### ■ **Universal Hand Saw**

Perfect for cutting a wide range of materials.

### ■ **22" Hand Saw**

Hardpoint saw for cutting UPVC and hard plastics.

### ■ **Extra Cut Snips**

Multi-purpose snips for most sheet materials.

### ■ **Steel Forks and Tarmac Rakes**

### ■ **30m Chalk Reel**

Achieve perfectly accurate chalk lines over long distances, chalk refills also available.

### ■ **Black Plastic Bucket**

3 gallon, reinforced upper rim for extra strength.

### ■ **Bass Broom with 450mm head (18 inches)**

Heavy duty, suitable for outdoor use.





## Fasteners

### ■ BS-5.5 Fasteners

For securing insulation & membrane to steel & timber roof decks.  
To be used with appropriate pressure plate.

### ■ SP-70-D4 Pressure Plates

Load bearing washers for securing insulation boards with BS-5.5 fasteners.

### ■ SP-8240-S3 Pressure Plates

Load bearing washer for securing the membrane, with BS-5.5 fasteners.

### ■ RS-SS Stainless Steel Fastener

Load bearing washer designed for securing membrane, used with BS-5.5 fasteners.

### ■ TS-PA-System

A pre-assembled combination of a 40mm diameter pressure plate & a 35mm long fastener. Designed for securing membrane to ply or OSB roof decks. Setting tool also available.

### ■ Sip Fasteners

Large washer type head, for fastening ply faced insulation panels to timber joists.

### ■ Iso-Tak

Range of tube washers, pressure plates and fasteners for attaching insulation and membranes to steel, aluminium, concrete and timber decks.

### ■ Stainless Steel Banding

Used for clamping and retaining roof membranes around a penetration.



## General Accessories

### ■ 2 Ply Paper Roll (White)

150cm, made from recycled tissue paper ideal as a general tissue wipe.

### ■ Super Strength Rubble Sacks

Pack of 10.

### ■ Standard Ratchet Tie Down

Used for securing products on vehicles.



#### ■ **Tarpaulin 3.5 x 5.4m**

High strength woven plastic with seamed edges with metal eyelets.

#### ■ **Bungee Strap**

High quality 1220mm (48 inches) Bungee Cord/Strap provides an effective way of securing loose items.



### **Clothing & PPE**

#### ■ **Mini Gel Knee Pads**

With air injected gel foam for increased comfort and longer life. Super lightweight design. Ideal for indoor and outdoor use. Complete with an adjustable elasticated strap.

#### ■ **Standard Build Grip Glove**

Latex coated, crinkle finish, polyester/cotton liner.

#### ■ **Smart PVC Coated Glove**

Red fully coated PVC 35cm gauntlet. Suitable for general handling, maintenance and assembly. Manufactured to EN388.

#### ■ **Nitrile Coated Glove**

100% Black seamless nylon liner 13 gauge. Solid nitrile coated to palms and fingers. Ventilated back for extra comfort. Manufactured to EN388.

#### ■ **Polyester Tool Pouch & Belt**

Featuring a hammer sling, two screwdriver / pencil pockets and a large tool pouch. Made from high strength woven polyester.

#### ■ **Hard Wearing Jackets, Waterproofs, Shirts, T-Shirts and Trousers.**

#### ■ **A Large Range of Boots**

Including safety, rigger, welted and derby styles.

#### ■ **Head Protection Equipment**

Including safety helmets, goggles, ear muffs, ear plugs, respirators, masks and hats from leading manufacturers.

#### ■ **Platforms and Ladders**

Available as extension, combination and roof ladders with accessories including stand off, roof hooks and roof rack clamps.





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