

**BAUDER**



**TORCH-FREE**

BITUMEN MEMBRANE  
DETAILING

# TORCH-FREE DETAILING

## System overview

Our detailing solution is designed specifically to deliver secure torch-free detailing in the vicinity of combustible construction materials located on, or connected to, the roof such as timber substrates or upstands; abutments to cladding, roof tiles, slates or thatch; or even debris such as dry leaf material that is at risk from ignition.

The foundation for our torch-free detailing is the group of hot air welded, self-adhesive, SBS modified bitumen membranes for the vapour control layer, underlayer and cap sheet. These membranes and their application techniques conform to the recommendations given in the 'Safe2Torch' guidance published July 2017 by the National Federation of Roofing Contractors (NFRC).

Our torch-free detailing is integrated into all the Bauder bituminous waterproofing solutions, including Bauder hot melt, to give versatile safe installation techniques for all roof types, site conditions and the client's budget.

If a whole-roof, flame-free option is required, our established Airtech System only uses hot air welding for the sealing of the self-adhered membranes which can completely eradicate all naked flame from the waterproofing installation.

## Benefits

- Flame-free application reduces risk for contractors and clients.
- Practical solution so that installation programme times are achievable.
- Robust waterproofing without compromising system longevity.

## Key Features

- Complete range of self-adhesive bitumen membranes.
- Installation follows industry best practice and conforms to BS 8217:2005.
- 4.0mm thick elastomeric KSO SN and KSO-P SN cap sheets.
- Hot air welding of membrane laps in the torch-free zone.
- Bauder PIR insulation bonded with polyurethane adhesive in warm roof construction complies with Building Regulations Approved Document B – Fire Safety.
- Manufactured to BS EN 13707:2004 Reinforced Bitumen Membrane Sheets.



# INDUSTRY BEST PRACTICE

## Safe installation and detailing

The key to industry best practice for the application of bituminous membranes is the responsible identification of combustible construction materials on the roof and specifying the correct combination of detailing and field area membranes, accounting for specific installation methods to follow the British Standards 8217:2005 code of practice and NFRC guidelines.

Principally, this installation best practice will impact on refurbishment roof projects, though responsibilities also reside with all parties involved in the design and construction of a new build project under the Construction Design and Management (CDM) Regulation 2015 to ensure that hazardous details are fully considered or designed out. In some instances, this could impact on sequencing of construction works to ensure that the roof materials are installed prior to other combustible elements being constructed.

### Torch-Free Roof Zones

The roof areas which have details formed with, or are adjacent to, combustible construction materials require an exclusion zone to be identified in a minimum 900mm radius from the material. This sanction demands specific membranes, particular design, and accurate flame-free installation techniques.

Our torch-free detailing design utilises our self-adhesive membranes for all three built-up waterproofing layers comprising the vapour control layer, underlayer and cap sheet. All laps for these membranes are sealed using hot air welding.

In a warm roof construction, the insulation is bonded to the vapour control layer with Bauder PU Insulation Adhesive.

A completely flame-free installation option is available for an entire roof project with our Bauder Airtech System incorporating the KSO SN cap sheet in natural slate or brown.

### Safe to Torch Roof Zones

In certain situations, it is perfectly safe to use torch-bonded bitumen membranes and roof areas involving non-combustible materials.

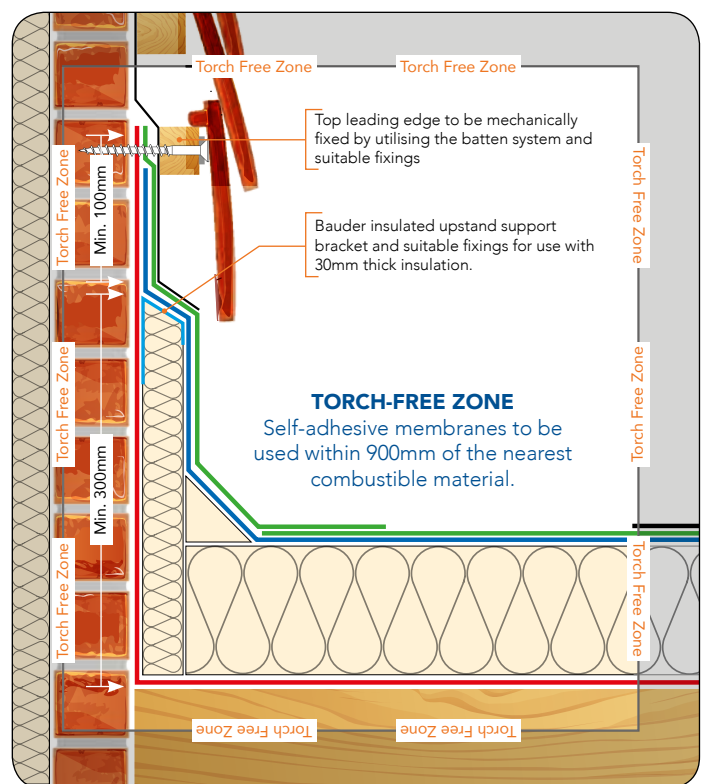
There are two options for safe to torch application and these are dependent on the specific detail and the construction materials used:

1. The roof area does not have any combustible materials within its construction and is safe to accept torch-applied membranes, such as a concrete deck.

or

2. Full encapsulation of the exposed combustible detail with self-adhesive vapour control layer or underlayer, installed using hot air welding so that the detail is now risk-free and a torch-bonded underlayer or cap sheet is subsequently safe to install.

**Be safe, make safe, is safe**



# TORCH-FREE SPECIFICATION

Supporting safety through survey and design

The CDM regulations 2015 state that everyone involved with a construction project has a responsibility to communicate accurate information about any potential risks and how they are being managed.

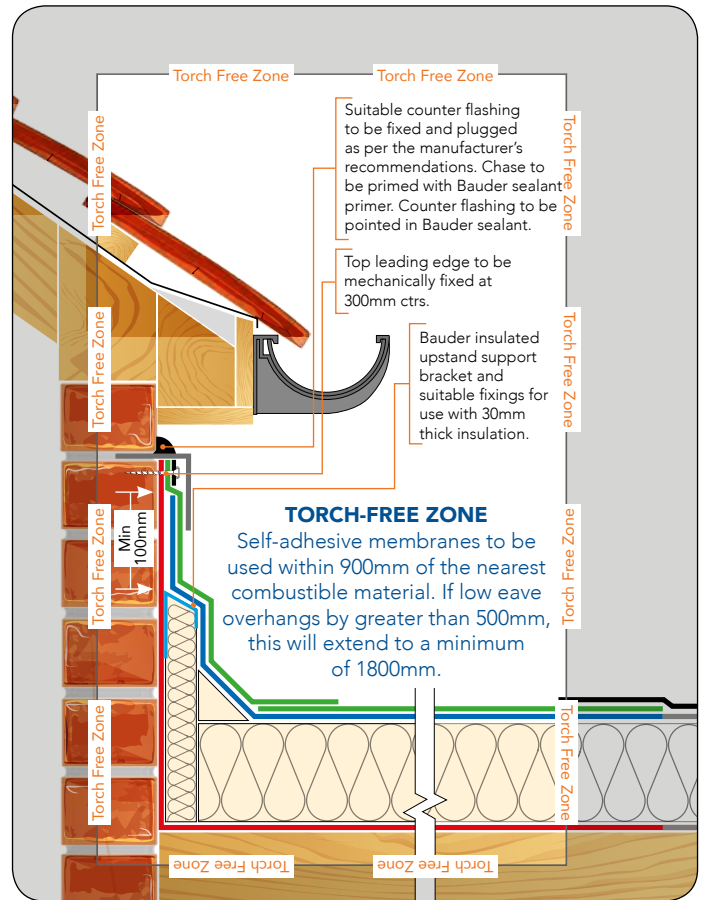
At Bauder, we fully support these safety principles and recognise our role as an industry leading manufacturer to endorse safe best practice through our products and to promote to our approved contractors the safest installation methods possible in every flat roof project they are involved in.

Critical to us achieving this is being able to differentiate between areas of potential risk and those that are safe to torch, which is why our no obligation roof evaluations are conducted by your area technical manager, who will produce a bespoke specification that draws attention to the details that would be at risk if torch bonded application was considered. In some circumstances, the vulnerability of a detail is not fully known until it is exposed by our approved contractor during the course of works.

The site survey of an existing roof is just one of the many measures we take to ensure our clients receive the highest quality and safest roofing solution possible.

Our refurbishment Roof Survey Report is produced once a full inspection of the roof's condition has been completed by your area technical manager and encompasses:

- Analysing the current roof covering and investigating the deck structure.
- Clear identification of torch-free zones on each roof area.
- Consideration of insulation upgrades to achieve required U-values.
- Consideration of drainage falls.
- Detailing of all roof penetrations and abutments.
- Implications of any additional weight loading.
- Wind uplift calculations and required fixing methods and restraint.
- Thermal analysis and calculations.
- Recommending the correct course of action and remedial measures necessary.
- Roof plans and tapered insulation layout.
- Specifying the right waterproofing system to meet building needs and budget.
- Recommending our best suited approved contractors to install the new waterproofing system on your project.
- Confirmation of the guarantee offer.



Torch-free insulated upstands to existing low eaves



# IDENTIFYING THE TORCH-FREE ZONES

Communicating potential risk to the project team

## Labelling the Torch-Free Zones

Our Roof Survey Report identifies the areas where:

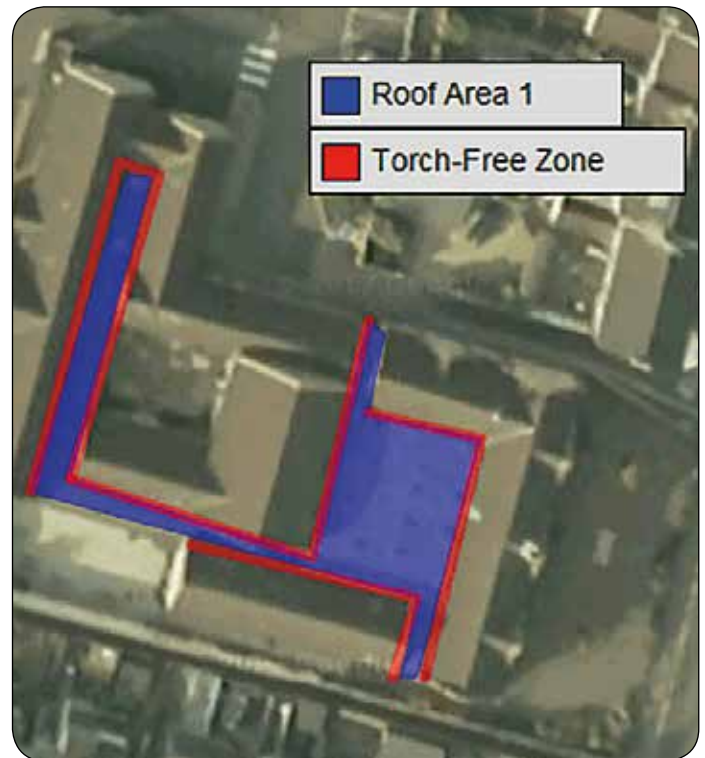
- Combustible materials are present and need to have torch-free installation.
- Combustible materials might be exposed but could be made safe through the application of self-adhesive membranes to encapsulate them.
- Construction materials are non-hazardous and are therefore safe to torch.

Individual schematic roof plans are denoted with red boundary lines to indicate the torch-free zones and included in both the survey report and the specification so that all connected with delivering the project have our perception of the hazards. Our information will combine with the assessments completed by others in the project team in an alignment of responsibilities to identify and communicate potential risks.

Our installing approved contractor will refer to the specification and corresponding schematic roof plans to incorporate the correct combination of membranes to deliver the torch-free requirements when submitting a tender document.

## Installation in the Torch-Free Zones

The torch-free zones are marked out precisely by our approved contractor during the installation of the self-adhered waterproofing membranes so that the operative knows which laps require hot air welding and which are suitable for application with a gas torch.



# SYSTEM PRODUCTS

The Bauder torch-free detailing incorporates self-adhesive membranes, primer-activators and insulation adhesives for cold applied bonding; and hot-air welding for sealing the membrane laps.

## Self-Adhesive Membranes

The system membranes use advanced adhesive technology which is factory applied and covered with a thin release film to prevent it from sticking to itself inside the roll. This peel-back release film is used during application to unroll the membrane onto the surfaces.



## Spray-Applied Primer-Activator

The deck is primed to ensure a satisfactory bond of the first layer and provides resistance against wind uplift throughout the system's lifespan. The same product is also utilised to activate the bitumen on the underlayer when applying to the PIR insulation to give greater adhesion.



## Insulation Adhesives

These adhesives are available with different installation techniques and grab/cure times to suit the project requirements and insulation type.



# BAUDER INSTALLATIONS

## Installations

All our waterproofing installations will be of the highest quality, as we only allow fully trained and certified Bauder approved contractors to install our roofing solutions.

## Badged Operatives

High-quality workmanship is crucial to the guarantee that accompanies Bauder installations and so we have always operated a policy to train and approve the individual installer, and not simply the contracting roofing company. Each individual fixer is required to display their approved operative badge at all times showing photographic identification, name, badged operative number and the systems that they are trained to install.

## Bauder Site Technicians

Once your roofing works commence, one of our experienced team of site technicians will monitor and inspect the workmanship at key stages to ensure that the standards required to meet our guarantee are fulfilled, as well as providing you with concise reports on how the works are progressing.

Our national team of site technicians is one of the largest in the UK, offering local coverage and ensuring all our roofing projects receive the attention they deserve.



# QUALITY GUARANTEED

## Guarantees

Your completed roof project will be backed up by what we can confidently claim to be the most comprehensive guarantee range in today's roofing industry, giving you total assurance with regards to the future performance of your building's roof.

We offer a full range of guarantees that can provide you with complete satisfaction and will be bespoke to your project and its requirements.

## Guarantee Cover Options

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- Products supplied by Bauder.
  - Workmanship and installation of Bauder products by our approved contractors.
  - Defective design and / or specification where Bauder products are concerned.
  - Financial loss from building damage due to faulty manufacture or installation of Bauder products.
  - Consequential damage through Bauder waterproofing system failure due to faulty manufacture or installation of Bauder products.
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