



## **WORKING WITH LIQUIDS IN WINTER: WHAT YOU NEED TO KNOW**

***Paul Franklin, Technical Secretary at the Liquid Roofing and Waterproofing Association (LRWA), dispels misconceptions about using liquid waterproofing systems in winter and offers advice on safe and effective application.***

As the fastest growing part of the flat roofing sector, the liquid waterproofing industry has changed dramatically in recent years. Now an effective alternative to other flat roofing systems, liquids are being specified on a much wider scale than ever before.

Yet despite this growth, there is still a misconception among some contractors that liquid systems are not appropriate for winter use. However, as long as the roof area is prepared appropriately, a wide range of liquid products can be applied in even the harshest weather conditions.

### **Drying a Roof**

One of the biggest challenges in winter is the potential for increased rainfall, frost or snow, which can leave standing rainwater on a substrate. This must be thoroughly cleaned and dried before a liquid waterproofing system is installed.

Although gas torches are still commonly used for drying a roof, there is a growing demand for solutions which do not involve hot works and this has led to a variety of alternative methods.

### **Removing Standing Water**

If there is a lot of standing water, it is possible for contractors to use a Bowdry sponge roller to remove it.

This tool is used extensively for drying cricket pitches but works equally well on roofs. The sponge collects the water off the roof and deposits it into the water collection receptacle.

This way of drying can work even when the standing water is deep, and any excess moisture can be removed using a rag and mop or allowing the substrate to dry naturally. The sponge roller also allows for drying off quite rough substrates, such as scarified and de-chipped surfaces, however, operatives will need to re-sponge the roller more frequently on rough surfaces.

Another option is to use a roof pump. There are several different types available ranging from electric to hand powered and even solar powered. Roof pumps are best used when placed in the centre of a large ponded area whilst work continues on other areas of the roof. They reduce the pond to around 2mm which can then easily be dried using other methods.

New technology is also being brought to market which can make the drying process even quicker, easier and safer. These include the E-torch, which is an electrically powered, computer controlled, high speed torch used to dry roofs replacing the need for conventional LPG gas torches.

Technology such as this is playing a vital role in encouraging the industry to implement a broader range of solutions for drying roofs, which can be used all year round.

### **Removing Residual Water**

Once the standing water has been removed, contractors can use conventional leaf blowers to remove any residual water. Alternatively, a Hot Air 'Gun' or 'Blower' could be used. As this is electrical equipment, site electricity supply and guidelines should be considered to ensure compliance which may affect the choice of different hot air equipment.

Furthermore, some of these machines emit considerable amounts of heat and extra care should be taken in certain circumstances as they could also cause deleterious materials to combust. Additional attention to detail should be expected on roof junctions, changes in level and around plant and roof mounted equipment.

### **Daily Planning**

In winter conditions, pre-planning can be extremely beneficial. Sheeting out a roof area at the end of a day will enable work to begin promptly at the start of the next,

preventing the need for further drying or waiting for frost and ice to melt before the liquid system is applied.

However, operatives must ensure sheeting is weighted down to avoid wind uplift and this should be avoided altogether if there is a chance of extremely windy conditions. The correct material must also be used as polythene sheeting for example can become very slippery when exposed to wet or frosty conditions.

### **Rapid Curing Options**

In the past, one of the biggest concerns about using liquids in winter was that cold temperatures could slow cure times.

However, there are now various quick curing options available. PMMA systems for example, are proving particularly popular for winter use as most can dry in 20 – 40 minutes even at temperatures of around 0°C.

These systems tend to have a minimum of two components. The cold-applied liquid resin cures following an extremely rapid in-situ polymerisation, which is activated by the addition of a peroxide catalyst.

Other options include polyurethane liquid systems and flexible polyester, which can both be applied with an activator or accelerator to speed up cure times in colder weather.

Hot melt systems are also suitable for winter installation as can be applied in low temperatures. These are applied directly to a prepared structural deck to create a completely seamless, monolithic layer.

### **Making the Right Choice**

Before specifying or using a liquid waterproofing system, seek advice from a trusted trade association such as the LRWA. It is advisable to select manufacturers which have the ISO 9001 standard and products which have independent accreditations such as BBA and ETA certificates.

Making the right choice combined with thorough planning and preparation, will ensure you benefit from a highly-effective waterproofing solution which can be used for a diverse range of projects and applied in all weather conditions.

For more information or advice, please contact us at [technical@lrwa.org.uk](mailto:technical@lrwa.org.uk)