Single ply's flexible growth

The single ply market is currently one of the fastest growing sectors within the roofing industry, experiencing growth of 15% between 2000 and 2004. This pattern has continued in recent years with six million m² installed during 2007 alone. Anthony Carlyle of SpectraROOF explains why the single ply market has a bright future.

A key factor in the growth of the single ply market is the increasing demand for rapid, lightweight construction. As the economic climate becomes increasingly uncomfortable, the pressure for projects to be completed on time and within budget becomes even more important. The latest, state-of-the-art single ply membranes are quick to install, with minimal disruption in adverse weather conditions, ensuring ambitious programmes remain achievable.

Polymeric single ply membranes are among the most technically advanced of all the waterproofing options available today. The versatile nature of the product ensures excellent design flexibility, with single ply being installed in an increasing number of applications. An example of this is the growing number of single ply roofs installed to replicate metal alternatives, with lead, aluminium and even copper appearance finishes achieved using the rapidly expanding range of single ply membranes available.

The roof at Stroud College demonstrates the impressive finish that single ply can deliver.

Good track record

The long life expectancy of polymeric membranes, now being successfully demonstrated in the field, is another key reason the sector continues to thrive. Single ply can now demonstrate a track record of over 40 years, and the British Board of Agrement has assessed some established systems to have a life expectancy in excess of 30 years.

There are many different materials available in the single ply market including pvc, EPDM, TPO and TPE. While pvc has historically dominated the sector and remains the market leader, significant advances in the technology applied to other materials means more viable options are available, providing specifiers and contractors with attractive alternatives to the established pvc systems.

For example, TPE membranes use the very latest in advanced polymer technology and are increasingly regarded as the 'next generation' of single ply membranes. TPE combines thermoplastic (like pvc) and elastomeric (such as EPDM) characteristics to provide optimum results both during installation and in performance, without any of the perceived disadvantages associated with other membrane types.

TPE membranes are free from plasticisers, chlorine, (H)CFCs, halogens and heavy metals and are also readily recyclable, often for use in other primary products such as food packaging and even the footwear industry. Like many single ply materials, TPE membranes have achieved an 'A' rating award in the BRE Green Guide to Specification.

Critically for contractors, TPE membranes are resilient and exhibit superb welding characteristics in the most demanding site conditions. Even where dust, moisture or dirt is present, there is no need for solvent preparation or cleaning. Experienced contractors can achieve weld speeds of up to 6m per minute and this quick installation, combined with flame free application, offers an efficient and cost effective solution to many roof requirements.

Wood Green Apartments: an example of single ply being used to replicate standing seam.

Unsurprisingly, as technology advances and the market continues to flourish, the number of alternative products within the market will grow significantly. There are currently around 30 options available. This presents a new challenge to the industry, with quality of both material and workmanship of paramount importance to the continued success of the sector.

Much of the positive development of the single ply market can be attributed to the way in which it is regulated and managed by the membrane manufacturers who insist on high quality products, effectively managed installation procedures, and good standards of workmanship. These quality standards, typified by the requirements of the Single Ply Roofing Association (SPRA), are implemented rigorously through a process of audit and continuous assessment.

By upholding such quality standards, manufacturers are instilling confidence within the industry and single ply is successfully growing a reputation for reliability and performance. As the needs of the roofing industry change, products that can respond quickly to demand and meet new requirements will become the products of tomorrow. ■