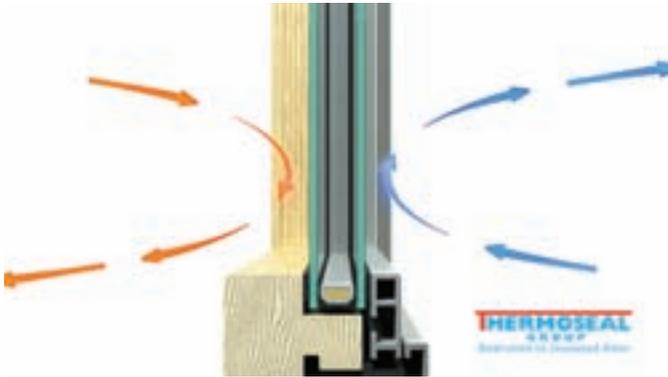


Seven step guide

The quality, performance, and application of molecular sieve desiccant in the manufacture of an insulated glass (IG) sealed unit is vital in helping to prevent its premature failure. Thermoseal Group offers technical guidance in relation to the selection and use of molecular sieve desiccants. Thermoseal Group's sales director, Mark Hickox, explains



The primary role of a desiccant in the manufacture of a sealed unit is to adsorb moisture that may be unavoidably trapped within the unit cavity during manufacture. The amount of moisture is dependent upon the relative humidity at the time that the double-glazed unit is sealed and so will vary from day to day. Desiccant is also there to adsorb the moisture which passes through the edge seal throughout its lifetime.

Quality tests

When constructing IG units using tube spacer systems, the spacer should be filled with a quality 3Ångstrom desiccant. Whilst there is a general assumption that if a desiccant is tested by a notified body (for moisture capacity) and the factory where the desiccant is manufactured has a recognised quality system (eg. ISO 9000) that the desiccant is of a high quality. This is not necessarily the case.

Steps to quality

We urge our customers to ensure that they read through our *Seven Steps to Selecting a Quality Desiccant* document and consider these indicators of a quality desiccant, including: 3Ångstrom pore size; good Delta T performance; low initial moisture content; good moisture adsorption capacity; low dust content; very low gas desorption and high bulk density.

Premature failure

If there are any sealed unit manufacturers who are concerned that the desiccant could be causing premature failure of units, then we would be happy to test any products on request, with anonymous samples if required.

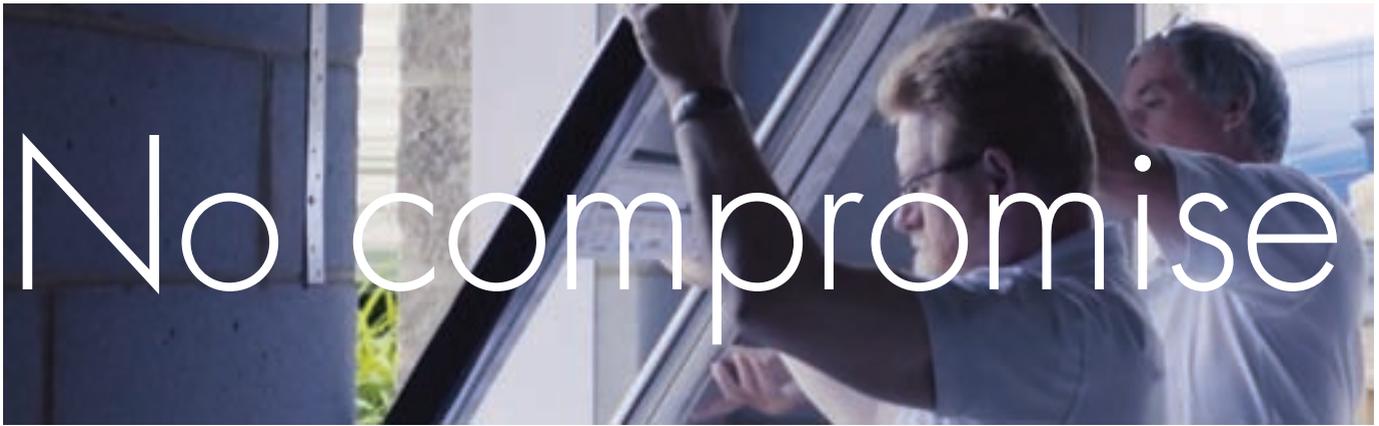
I would also remind sealed unit manufacturers that many warm edge spacer tube systems have a smaller internal dimension than traditional aluminium spacers, so rather than filling two sides of the spacer, warm edge



Mark Hickox

spacers must be filled on 3-4 sides if a 10 year warranty is being given. □

Download Thermoseal Group's '7 Steps to Selecting a Quality Desiccant' document now at:
www.thermosealgroup.com/contentfiles/downloads/7%20Steps%20to%20selecting%20a%20quality%20desiccant%2015.03.22.pdf



Changes to part L of the building regulations, which come into effect from June 2022, will see the provision for stricter standards and compliance procedures around energy and ventilation performance, writes Andy Swift

Specifically, to ensure continuity of the air barrier, window and door units will have to connect to the primary air barrier and the frames will need to be taped to surrounding structural openings using air sealing tape.

This comes against the backdrop where evidence points to doors and windows as the main source of the nation's chronic energy-inefficient homes. Indeed, it could be said that in the light of product innovation over the years, it is perhaps 'criminal' that the hundreds of thousands of new or retrofit installations completed each year go unchecked or unregulated, producing a legacy of problems for years to come and costing millions of pounds to rectify. This is a pity because with advancements in cost effective, easy-to-use technologies, there is never a justifiable reason for delaying or avoiding the specification of better energy-efficient window and door sealing solutions.

Air tightness improvements

In this respect, the changes to Part L will have to be seen as a step in the right direction for the new build fenestration sector. It will see requirements for improvements in air tightness, forcing them from 10 air changes per hour down to eight air changes per hour and also the U-value on windows shifting from 1.6 to 1.2w/m²k/H, which will require more energy efficient sealant solutions such as thermal foam tapes. The requirement also now states that the frame should be linked back to the wall with an air-tight tape.

Heat will always find the fastest exit as it comes up against the 'A' or 'A+' rated window. This invariably emanates from the 10mm or so expansion gap left around the window following fitment. This is normally left empty, yet some amount of spray foam can be injected to fill the void before a silicone trim is applied as a finish. Unfortunately, as expedient as this might seem, none of these solutions create a measurable, long term, high performance thermal, acoustic or airtight barrier – the U-



Value of the installed window is simply reduced, which leads to heat escape and, ultimately, financial loss.

Modular building

In modular construction, which is gaining increasing traction and will see continued integration with the more traditional methods of building in 2022, designers and specifiers are looking at new ways to deliver low carbon structures, which use sustainable technologies to deliver measurable airtight, acoustic and thermal sealing benefits. And this is where self-adhesive foam sealing tapes can add real value, enabling developers to bring forward housing projects more expeditiously.

Smart foams which are impregnated with different substances can create a measurable U-Value as low as 0.6w/m²k. They offer superb thermal insulation and can contribute to acoustic sound reduction by 63dB. These installation tapes are completely weather tight against driving rain up to hurricane force wind speeds and can be fixed around the frame during initial fitting. This means the installer will have completed a comprehensive 'A' rated installation rather than just supplying an 'A' rated window.

Technical innovation

Building regulation changes will have an unequivocal impact as energy ratings for buildings and property become stricter.

Technical innovation through sealing technologies is one way that those responsible for fenestration specification can do more to support greater energy efficiency and meet the requirements of part L. In the future we will see technologies such as energy foam tapes grow in importance as the most effective solutions for sealing window and door frame expansion joints and gaps in houses. □

<https://www.iso-che>