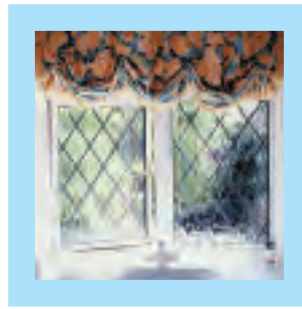
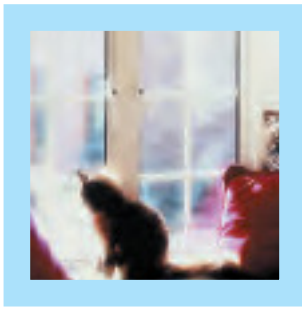


Low Emissivity Glass

and the Conservation of Fuel and Power



Glass and Glazing Federation



The Visual Quality of Low Emissivity Glass

New thermal insulation regulations

The changes to Part L (Conservation of Fuel and Power) of the Building Regulations come into force on 1 October 2010. Part L has covered replacement windows, since 2002 so they have to meet more rigorous standards of thermal insulation. Without low emissivity (Low-e) glass in your windows, you have little prospect of meeting the new requirements.

What is low emissivity (Low-e) glass?

Low-e glass is a vital component of energy efficient windows. It has a surface coating that operates as follows:

- It allows short wavelength heat from the winter sun to enter your home through the glazing.
- This solar energy works with your domestic heating system to warm up your room, which then gives off long wavelength heat radiation.
- A large proportion of that long wave heat would vanish back out through windows made of ordinary glass. However, the Low-e coating reflects that heat back into your room, i.e. the coating traps the heat in your home.

However, the low-e coating reflects the majority of this heat back into your room, so the heating system does not have to work as hard to maintain a comfortable room temperature.

Will Low-e glass meet the Building Regulations?

Better than merely meeting the Regulations, Low-e glass is essential to enable you to achieve the new targets for windows.

Are there any disadvantages?

We have explained the significant advantages to your pocket and comfort. As a result of the legislation, to achieve the required improvements in the thermal efficiency of your home there are requirements for the use of Low-e glass within new or replacement windows.

Whilst there are significant advantages to glazing with a thermally efficient glass there are occasionally some undesirable side effects which are as follows:-

Tint - some light coloured materials (such as net curtains) may appear slightly darker when viewed directly through the glass.

Haze - there is a potential for the windows to display the phenomenon known as 'Haze' at some times of year, when the sun is at a particular angle or when viewed under some lighting conditions.

External condensation - thermally efficient windows are so good at keeping the heat in that the outer pane can get cold as it is no longer being warmed by wasted heat. Under some weather conditions, this can result in the formation of condensation on the outside surface of the glass, which is seen as a positive sign of having a superior insulating window.

The above potential are not considered to be faults in any way.

Dependent on coating type, glass substate and thickness type, slight colour/hue differences may be noticeable on low-e glass. These are not detrimental to the functioning of the unit and are deemed not to be a defect.

How is visual quality assessed?

The visual quality of a window is assessed by looking through it from the room side, at right angles to the glass, standing at a distance of not less than 3 metres from the glass, under natural daylight and not direct sunlight, with no visible moisture on the surfaces of the glass. Provided your vision through the glass is not impeded under these conditions, for example, by scratches, bubbles, or distortion of external objects, your windows are of good visual quality.



...you will feel much warmer during the winter, and your pocket will feel the benefit of reduced heating costs.

Supplied by



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