Bostik
smart adhesives

Smart buildings!

INSULATING GLASS SEALANT TECHNOLOGY

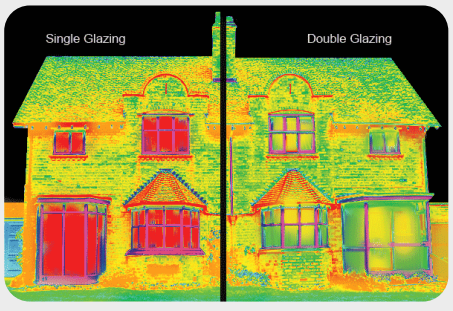
The rising world population and its increasing concentration in high-density urban areas is stepping up the depletion of natural resources and accelerating the pace of climate change. Buildings are responsible – from construction to running - for 30% of greenhouse gas emissions and consumes 40% of the world's energy. The industry has been therefore called on to rise up to the challenge of reducing energy use and greenhouse gas (GHG) emissions.*

Insulating glass represents a major asset to enhance thermal insulation, and Bostik offers the best sealant technology to build high-performance and easy-operating insulating glass units (IGUs).

** Source: United Nations Environment Programme*

A CRUCIAL POINT FOR **THERMAL EFFICIENCY**

Windows are one of the most significant areas of a building where warmth is lost - an average house can lose up to 30 per cent of its heat through poorly insulated windows.* Improving thermal efficiency allows not only to provide a more comfortable environment, but also to reduce the energy necessary to keep a building warm.



IGUs are composed of two or three pieces of glass separated by an aluminium spacer filled with moisture-removing desiccant. However, aluminium spacers present a significant problem as this is a highly conductive material which allows heat transfer between panes and condensation at the edges of a window, bringing cold and humidity in the building. To fix this issue and improve buildings thermal efficiency, IGU manufacturers can use Warm Edge technology which perform exceptionally well when used with hotmelt butyl sealants such as Bostik 5000.


Fig. 1 – Passive House Isothermal Window Section

* Source: Part L of the Building Regulations

Credits: brettsichellodesign

WARM EDGE **TECHNOLOGY**

WHAT IS WARM EDGE?

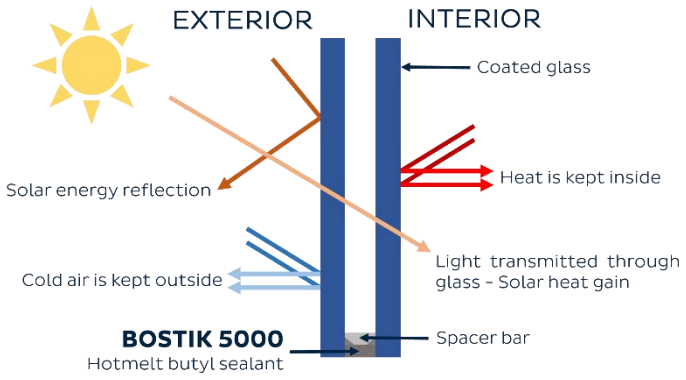
The term 'Warm Edge' refers to a spacer constructed of any material that conducts less heat than a conventional aluminium spacer at the edge of the glass. This is achieved by using low-conductivity material such as polymer foam to form the entire spacer system. Warm Edge technology has been shown to improve the U-value* of a window system by up to 10 per cent.

* The U-value of a window indicates the rate at which heat energy is lost through it

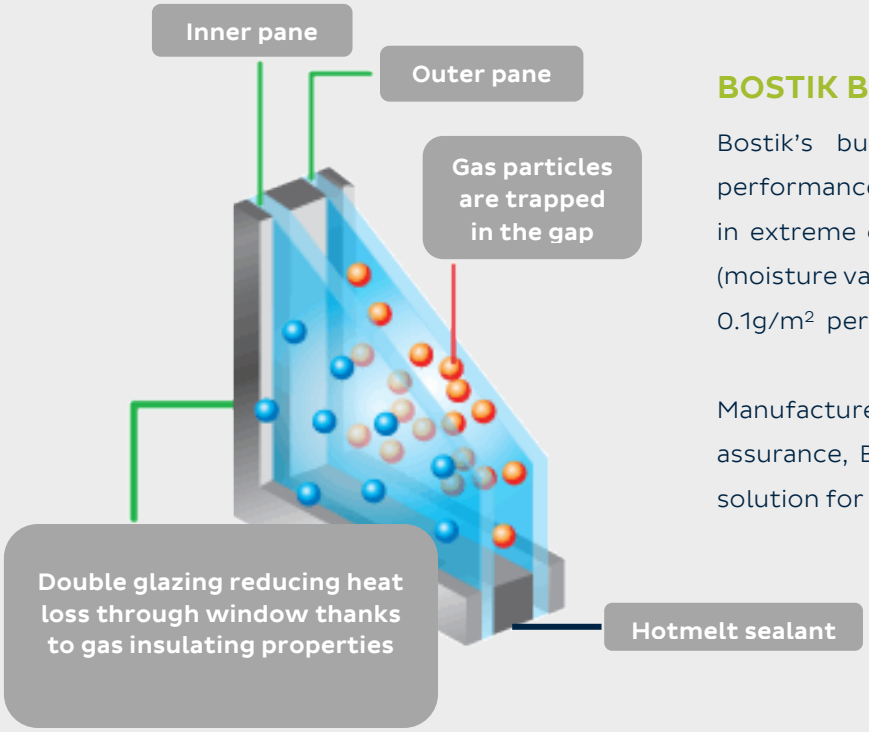
SEALANT, AN ESSENTIAL POINT IN WARM EDGE TECHNOLOGY

In the natural world, the best way to keep warm is to add layers which traps air - because air is a good insulator and when trapped, its ability to transfer energy is controlled. The same applies in glazing, however air has been replaced by Argon gas, a much better thermal barrier as it is fully inert.

In this system, a top quality sealant is essential for keeping Argon gas in and moisture out. Hotmelt butyl perimeter sealants in particular have been shown to produce impressive unit performance results.



IN-OUT HEAT INSULATION



BOSTIK BUTYL TECHNOLOGY

Bostik's butyl technology shows a great performance as moisture and gas barrier, even in extreme conditions, thanks to a low MVTR (moisture vapour transmission rate) lower than 0.1g/m^2 per day for 2mm film at 25°.

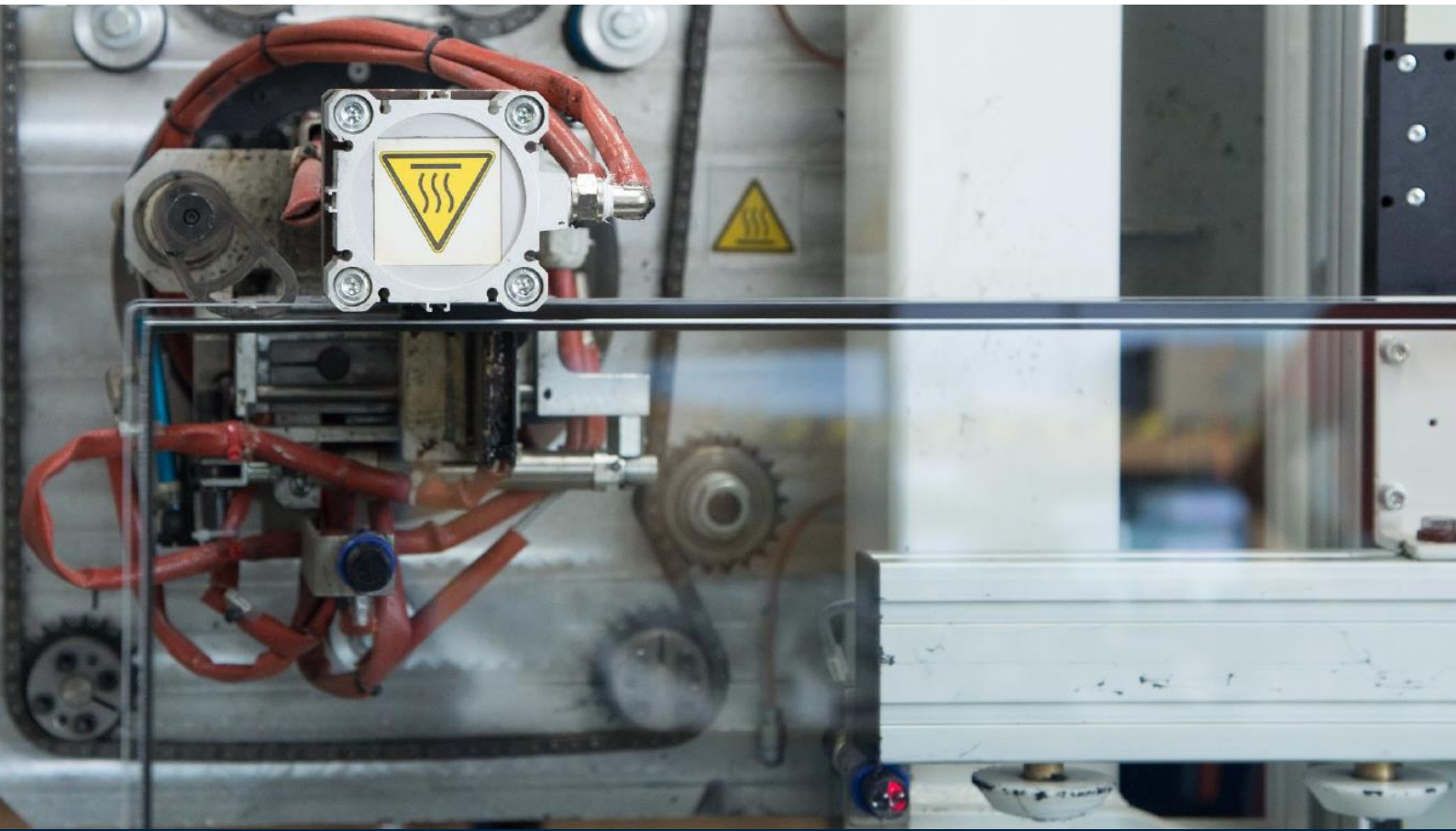
Manufactured under ISO 9001 for quality assurance, Bostik's butyl sealant is the smart solution for Insulating Glass.

MAKING THE **SMART SEALANT CHOICE**

As one of the largest European sealant and adhesive manufacturers, with over 120 years' experience, Bostik is also one of the longest established companies in the Insulating Glass industry.

Bostik 5000 is a premium hotmelt butyl sealant developed using over 35 years' experience of hotmelt technology in IGU manufacture. It is the market leading Hotmelt Butyl in Europe, and fully complies with both the European standard EN 1279 Parts 2, 3, 4 & 6 and the US/Canadian standard ASTM E2190.

- ✓ Can be used as a single seal
- ✓ Suitable for use on robotic, semi-automatic and hand gunning lines
- ✓ Suitable for use with all spacer systems
- ✓ No slumping or stringing
- ✓ Excellent moisture resistance and gas permeability
- ✓ Excellent movement accommodation / flexibility
- ✓ High temperature performance
- ✓ Low temperature performance
- ✓ Excellent adhesion and maintenance of seal in extreme shock loading tests



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Discover more about Bostik's adhesives solutions
www.bostik.nl/ig