

# Pilkington

## SAFETY FIRST FOR ARCHITECTURE, BUILDING CONSTRUCTION AND INTERIOR DESIGN

In today's world of 'bigger, better, more technological and environmentally-protective, architects, builders and designers are continuously looking for materials to respect and satisfy these requirements. In this article, Pilkington gives us an overview of its laminated glass range that responds to these multiple requests.



### PILKINGTON OPTILAM™

Optilam™ is Pilkington's range of laminated glass to meet the multiple safety requirements of consumers. In fact, in the fields of architecture, building construction and interior design, safety is a very important factor to consider, not only in the design of spaces and in the choice of products, but also with regards to security against vandalism or break-in attempts.

The Pilkington Optilam™ glass range is able to fulfil both safety and security demands, while maintaining the fundamental characteristic of transparency and several other extraordinary material properties of glass.

### WHAT IS PILKINGTON OPTILAM™?

It is a range of laminated safety and security glass, able to withstand accidental impacts, vandalism attempts and firearms. This type of product consists of two or more panes of glass bonded together with one or more sheets of flexible PVB (polyvinylbutyral) interlayer.

PVB is a plastic material which, in the event of breakage, retains the glass fragments and any splinters, preventing them from becoming dangerous. Another well-known application of laminated safety glass is for car windshields.



Depending on the type of protection to be obtained, specific types of laminated glass can be produced, by varying the thickness and the number of each ply, as well as the coating applied to the glass surface and, consequently, the photometric properties.

Pilkington can therefore offer a very wide range of products suitable for many applications, such as solar control (with Pilkington Suncool™ or Pilkington Eclipse Advantage™), thermal insulation (with Pilkington Optitherm™ or Pilkington K Glass™ range), anti-reflective (with Pilkington OptiView™ range) essential to provide shop windows with security and high transparency, or self-cleaning functions (with Pilkington Activ™ range).

### PILKINGTON OPTIPHON™

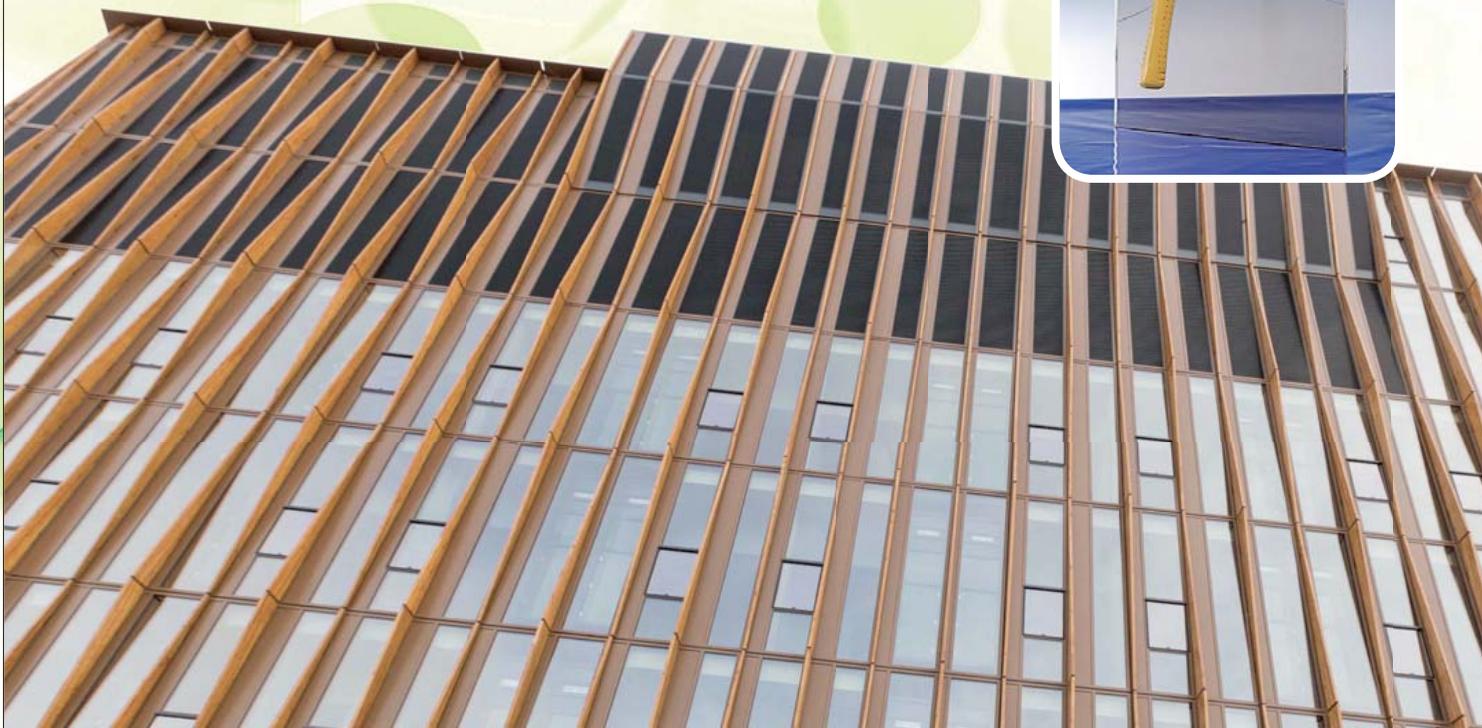
Pilkington Optiphon™ is a high quality acoustic laminated glass that offers excellent noise reduction in limited thicknesses, without significant weight increase and without compromising on light transmittance or impact performance.

The desired acoustic performance can be achieved through combining various thicknesses of glass with a special PVB interlayer. With a large variety of product combinations, Pilkington Optiphon™ offers the opportunity to achieve specific noise reduction requirements, and security as well.

The Italian legislation states that only safety glass may

be used in critical locations, such as in the glazing of residential homes (windows, doors, railings, stairs, etc.), but also in commercial environment, in shop windows, in schools, hospitals, public places, etc. In order to fulfil the protection from falls function, a laminated glass shall be used. The Italian reference standard is UNI 7697, defining the Safety criteria in glass applications.

Most of Pilkington Optilam™ and Pilkington Optiphon™ products bear a distinguished marking – CSICERT UNI – which certifies their performance in terms of safety and security from vandalism, deliberate physical attack and even from firearms.



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## NSG GROUP

The NSG Group is one of the world's leading manufacturers of glass and glazing systems in three major business areas: Automotive, Architectural and Technical Glass. Automotive serves the original equipment, aftermarket replacement, and specialized transport glazing markets. Architectural supplies glass for architectural applications, solar energy and digital signage and displays. Technical Glass products include very thin glass for displays, lenses and light guides for printers, and glass fiber, used in battery separators and engine timing belts. We have major market shares in most building and automotive product markets of the world, with a broad geographic reach, enabling us to respond to customers whose operations, particularly in the case of Automotive OE, are increasingly global.

Today, NSG Group has manufacturing operations in around 30 countries on four continents and sales in some 105 countries. In the fiscal year ending 31 March 2018, the Group reported revenue of JPY 603.9 billion (approximately Euro 4.65 billion). Of this, 38 per cent was generated in Europe, 27 per cent in Japan, 13 per cent in North America and 22 per cent in the rest of the world.