

The logo for TWINFIX, featuring the word "TWINFIX" in a bold, sans-serif font. The "N" is stylized with a blue and white geometric pattern. A trademark symbol (TM) is located at the top right of the logo.

TWINFIX™

A large, bold, white sans-serif title "Multi-Link-Panel" is centered in the lower half of the page. The background behind the text is a dark blue, textured surface that resembles a corrugated metal roof, with diagonal lines creating a sense of depth and perspective. The overall design is modern and industrial, with a color palette of various shades of blue and white.

# Multi-Link-Panel

The innovative, modular rooflight system

# About Twinfix

## Experts in polycarbonate and developers of the Multi-Link-Panel system.

Twinfix, a family business, was formed in 1990 and, in an earlier life as Thermoclear UK Ltd, was the first company in Europe to develop a range of glazing bars and fixing accessories specifically designed for installing multiwall polycarbonate glazing.

Over the years we have evolved and whilst still offering polycarbonate glazing, structural and rafter gasket glazing bar systems, we continue to innovate and now have many more items in our portfolio, including canopies and walkways.

Many of these feature our modular polycarbonate roof panel system, the Multi-Link-Panel Non-Fragile. This features an innovative reinforcing technique that allows the glazed panels to pass the recommended HSE test procedure for Non-Fragile Roofing Assemblies (ACR[M]001:2014) as detailed in HSG33. Light in weight and available in a range of colours and tints, the Multi-Link-Panel Non-Fragile is also incredibly quick to fit.

### The sectors we work in include:

- Rail
- Education
- Industrial
- Commercial
- Healthcare
- Leisure

At Twinfix we are continually looking to the future, working to improve our current products and developing further offerings for the roofing arena. As accredited CHAS and ISO 9001 contractors and a member of Constructionline, Link-Up and NARM we are committed to Health & Safety and to working in an environmentally responsible manner.



# Multi-Link-Panel Roofglazing

## Multi-link™, innovative, quick to fit, safe roofglazing.

The Multi-Link-Panel is an innovative, modular rooflight system that is incredibly quick to install and that outperforms more traditional systems in terms of cost, performance and appearance.

These rooflights consist of pre-assembled modular, fix and link glazing panels, manufactured to size for each individual project. Each panel comprises structural aluminium glazing bars with lightweight, virtually unbreakable, multiwall or solid polycarbonate. The aluminium can be powder coated to a range of colours for a rust and maintenance-free life.

As panels are pre-assembled in our controlled factory environment possible contamination caused by on-site cutting of the glazing sheet can be avoided.

Our Multi-Link-Panels Non-Fragile are manufactured in such a way that they pass the Health & Safety Executive's recommended drop test ACR[M]001:2014 'Test for Non-Fragility of Profiled Sheeting Roofing Assemblies'.

Multi-Link-Panels are available with various types of polycarbonate glazing, from solid 6mm Georgian wired effect to multiwall structured options. The following pages outline the glazing material options available and their benefits.

### The Multi-Link-Panel system features the following benefits:

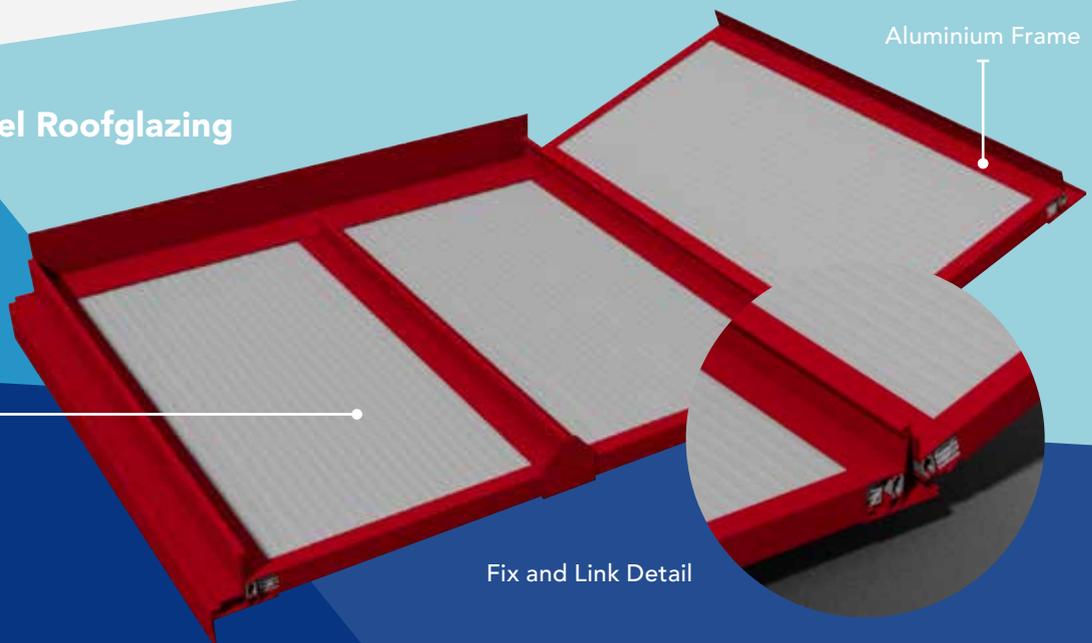
-  Fast installation
-  Non-Fragile
-  Modular pre-assembled panels
-  Long lasting and durable glazing
-  UV coated
-  Light weight
-  Low U value option available
-  Virtually unbreakable polycarbonate
-  Recyclable

## Multi-Link-Panel Roofglazing

Polycarbonate Glazing

Aluminium Frame

Fix and Link Detail



# Solid Polycarbonate

**The Multi-Link-Panel can be glazed with solid polycarbonate, giving the appearance of glass but with the benefit of being virtually unbreakable.**

Our 6mm solid polycarbonate is transparent glazing that has UV protection on both sides offering excellent weathering properties. With its exceptional impact resistance, it is ideally suited to a wide variety of applications.

Multi-Link-Panels glazed with solid polycarbonate are classified as Non-Fragile to the ACR[M]001:2014 drop test.



# Georgian Wired Polycarbonate

**Georgian Wired Polycarbonate (Twinfix GW Polycarbonate™) is solid polycarbonate glazing from Twinfix that mimics the appearance of traditional Georgian wired glass.**

Usually 6mm thick and with a hammered surface, our Georgian wired polycarbonate is safe to handle, is virtually unbreakable and has all the benefits of solid polycarbonate, but looks just like Georgian wired glass, making it the perfect and ideal alternative for refurbishment projects. Georgian wired polycarbonate is especially good for listed buildings and heritage sites where a sympathetic refurbishment is required, but where modern day standards of health and safety are also needed.

Multi-Link-Panels glazed with Georgian wired polycarbonate are classified as Non-Fragile to the ACR[M]001:2014 drop test.



**Solid Polycarbonate and Georgian Wired Polycarbonate glazing both offer the following:**

### Weight:

6mm solid polycarbonate weighs 7.2kg/m<sup>2</sup>, substantially less than the glass alternative - 7.5mm laminated glass weighs 18.75 kg/m<sup>2</sup>. Use of polycarbonate glazing can therefore offer a safer long-term solution for a building due to reducing the strain imposed on its existing structural steelwork.

### Durability/sustainability:

Unlike its glass counterpart, polycarbonate is virtually unbreakable, meaning no costly replacement of panels is required in the future, contributing to a lower whole life cost of the roof. It will withstand natural forces like severe wind, hail, and snow storms as well as building movements caused by such weather, or by trains moving underneath.

### Impact resistance:

During transit, installation and in situ the impact resistance of polycarbonate means there is very little risk of it cracking or breaking. Glazing with polycarbonate eliminates the possibility of any falling glass dust, shards or particles landing on people underneath it. When fitted within our Multi-Link-Panel Non-Fragile system the use of polycarbonate also makes a significant contribution to compliance with working at height regulations.

### Access Panels:

At the request of Network Rail we have designed an in-line access hatch that can be fitted easily into our polycarbonate glazed Multi-Link-Panel system. This allows safe access through the glazing from below in order to carry out maintenance tasks. This would not be possible in a glass roof where trying to remove a panel of glass for this purpose would prove both challenging and dangerous.

### Temperature resistance and fire performance:

Polycarbonate retains its properties at both high and low temperatures, +100°C to -40°C. This helps to eliminate the maintenance costs involved in replacing broken glazing. Both of our solid polycarbonate products achieve a Class 1y when tested to BS476: Part 7.

### Environment:

Our solid polycarbonate products are light in weight, and are therefore beneficial to the environment due to less energy being used in their manufacture, transportation and installation. In addition they can be recycled at the end of their long life span.

### Benefits:

-  UV coated
-  Long lasting and durable
-  Light weight
-  Impact resistance
-  Transparent like glass
-  Recyclable



# Multiwall Polycarbonate

## High quality, incredibly tough and versatile.

Multiwall polycarbonate is a fluted and incredibly light weight roofglazing material that offers remarkable impact resistance and withstands extreme weather conditions. In addition, it has high levels of light transmission and superb heat insulation characteristics, both of which offer cost savings by conserving energy. It is available in a range of thicknesses, tints and light transmissions and features a proprietary UV coating that is designed to protect it against the degrading effects of ultra-violet radiation in natural sunlight. UV will not be transmitted through this glazing.

The very light weight of multiwall polycarbonate when compared with glass makes it much easier and safer to lift on to a roof. It also means it does not require heavy supporting structures. All of the above properties make it a particularly good fit for Rail Depots and northlight glazing.

Multi-Link-Panels glazed with multiwall polycarbonate are classified as Non-Fragile to the ACR[M]001:2014 drop test.

### Benefits:

-  UV coated
-  Long lasting and durable
-  Light weight: 25mm weighs 3.4 kg/m<sup>2</sup>
-  Impact resistance
-  Heat insulating
-  Recyclable



# Multi-Link Thermal

## Improved U value for reduced heat loss whilst allowing natural daylight to flood in.

Our Multi-Link Thermal™ is an evolution of our tried and tested Multi-Link-Panel. It provides an improved U value to help prevent heat loss from buildings.

Well insulated rooflights are rightly seen as an invaluable aid in the drive to construct or modify buildings in a manner that achieves maximum sustainability. In many commercial buildings such as schools, hospitals and offices, artificial light consumes the majority of the energy that contributes to the building's carbon footprint.

Designers who are looking for ways to reduce energy consumption need to use natural daylight where possible as the primary means of lighting. They find that rooflights have a lot to offer - allowing daylight into buildings. In many cases walkways and corridors can also be supplied effectively with natural light.

The psychological and physiological benefits of natural light in building environments is well researched, from the improved performance of students in schools and colleges to the quicker recovery of patients in hospitals, as well as many other commercial applications.

So with its high thermal performance the Multi-Link-Thermal roofglazing system offers an attractive solution and added value to some significant design problems.

Multi-Link-Thermal glazed with multiwall polycarbonate is classified as Non-Fragile to the ACR[M]001:2014 drop test.

### Benefits:

-  UV coated
-  Long lasting and durable
-  Light weight
-  Impact resistance
-  Energy efficient: U Value of 1.3 W/m<sup>2</sup>K
-  Recyclable



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As our policy is one of continuous improvement we reserve the right to change specifications without prior notice. All information, recommendations or advice (written or verbal) given by Twinfix is given in good faith and to the best of our knowledge.

Multi-Link Thermal™: European Patent 2604769

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