



PRODUCT BROCHURE



WELCOME TO TOUGHGLAZE

British Glass, Built to Last

At ToughGlaze, we believe glass should do more than just fill a frame. It should elevate a project, protect people and perform under pressure — all while looking flawless.

We've been doing just that since 1993. Based in Bedford and supplying clients across the UK and beyond, we process, toughen, laminate, fireproof, print, cut and deliver thousands of square metres of commercial glass every day — all from under one roof.

From architects and contractors to glaziers and interior specialists, we work with professionals who demand more than just "glass that fits". They need glass that's built to perform — structurally, aesthetically and operationally. That's why we've spent the past three decades investing in the UK's most advanced glass processing equipment, building in-house expertise and expanding our product range to cover everything from acoustic partitions and switchable privacy glass to high-performance walk-on floors and E1120-rated fire glass.

But for all the technology, there's a personal side too. We're proudly family-run, with a strong commitment to service, safety and sustainability. Whether you're ordering one panel or one thousand, we'll give you straight answers, fast quotes and glass that meets your spec — not just in theory, but in real-world installation.

We work fast. We think long-term. And we never compromise on quality. So whether you're here for something functional, decorative, structural or secure, we're glad you picked up this brochure. The pages ahead give a clear and honest overview of what we do — including technical insight, standout features and suggested applications.

Ready to see what glass can really do?
Let's get started.





TOUGHENED GLASS

Precision-cut. Professionally tempered. Made to last.

Toughened glass is at the heart of what we do – and we’ve spent the last three decades refining it. TG TOUGHENED is our premium range of BS EN 12600-certified toughened glass, made to measure and customised to your exact requirements.

Every sheet is fabricated, toughened and quality-checked at our Bedford facility – one of the most advanced tempering plants in the UK. That means less risk, faster turnaround and full accountability. From architectural glazing to commercial splashbacks, we process thousands of square metres every week, trusted by clients who need glass that performs first time, every time.

Choose from multiple sizes, thicknesses and finishes – including printed, laminated and fire-rated – all cut and processed under one roof. Whether you’re specifying safety glass for a housing project or sourcing panels for a commercial development, TG TOUGHENED is the go-to choice for performance, flexibility and peace of mind.

Why ToughGlaze?

- **Kitemark-approved** & BS EN 12150 / 12600 certified
- **Custom-made** to spec: cut, printed, curved or coloured
- **One supplier, all processes** – everything under one roof
- **UK-wide delivery**, built for trade and commercial scale
- **Trusted since 1993** by fabricators, architects & contractors

Technical Specifications

Max sheet size: 2800 x 6000 mm

Thickness range: 4 mm – 19 mm

Tested to: BS EN 12150, BS EN 12600

Material: BS EN 572 glass from Pilkington, AGC, Guardian, Saint-Gobain



Q&A: TOUGHENED GLASS, EXPLAINED

What is toughened glass?

Toughened glass (also known as tempered or safety glass) is thermally processed at 650°C and rapidly cooled to increase strength and safety. It's clearer, stronger and safer than standard glass — and is now required in many building regulations.

How strong is it?

TG TOUGHENED is 4–5x stronger than annealed glass and more resistant to impact, heat and stress.

Where is toughened glass required?

UK building regulations mandate toughened safety glazing in “critical locations” — including windows, doors, balustrades and side panels near floor level. For most domestic and commercial installations, it's a must.

What happens if it breaks?

Unlike standard glass, toughened panels shatter into small blunt granules rather than sharp shards — significantly reducing injury risk.

Toughened Glass Variants



Toughened Fire Glass: EI-rated fire protection, BS EN 1364-1 tested



Toughened Laminated Glass: Extra safety, decorative interlayers



Digitally Printed Glass: Ceramic ink printing, full colour + fade resistant



Heat Soak Testing: Optional for reducing nickel sulphide inclusions

Where It's Used

- Toughened Glass Windows
- Coloured Glass Splashbacks
- Architectural & Structural Safety Glass
- Specialist Applications (e.g. aquariums, partitions, furniture)



LAMINATED GLASS

Stronger, Safer, Smarter – Built the ToughGlaze Way

When safety matters, laminated glass is the clear choice. Built from two or more sheets bonded with a specialist interlayer, it offers superior strength, sound insulation and shatter resistance – making it ideal for both structural and decorative applications.

At ToughGlaze, we've been laminating glass in-house since 1993. Over the decades, we've refined our process, expanded our range and invested in the UK's most advanced lamination equipment – all to give you more choice, better quality and total reliability.

Every TG TL panel is Kitemark-approved and made to meet BS EN 14449 and ISO 12543 standards. We work with architects, fabricators and contractors to deliver laminated glass that doesn't just meet regulations – it meets expectations.

Whether you need safety glass for a balustrade, acoustic panels for an airport or mesh interlayers for a statement facade, ToughGlaze can help you get it made, fast.

Why ToughGlaze?

- **Custom-cut** laminated glass with total configuration control
- **Toughened, heat-strengthened or annealed** – your call
- **Decorative interlayers** (fabric, mesh, digital print & more)
- **UK-wide delivery**, fast turnaround
- **Trusted by industry professionals** since 1993

Technical Specifications

Max sheet size: 2600 x 5900 mm
Thickness range: 9.5 mm – 60 mm
Certified to: BS EN 14449 & EN ISO 12543



Q&A: LAMINATED GLASS, DEMYSTIFIED

What is laminated glass?

Laminated glass is made by bonding two or more panes together using a central interlayer, usually PVB. These layers can be made from annealed, heat-strengthened or toughened glass – depending on the application.

What are its advantages?

Even when broken, laminated glass holds together. This reduces injury risk, deters intrusion, and provides better UV protection than standard glazing.

Where is it used?

You'll find laminated glass in skylights, balustrades, car windscreens, shopfronts, security doors and decorative features across commercial spaces.

Can laminated glass be cut?

Only if it hasn't been toughened. Toughened laminated glass cannot be cut once manufactured – it must be custom-shaped from the start. That's why we offer cut-to-size solutions using specialised machinery.

What thicknesses are available?

From 9.5 mm to 60 mm – depending on your interlayer and performance requirements.

Laminated Glass Variants



Toughened Laminated Glass – for strength and safety under pressure



Heat-Strengthened Laminated Glass – perfect for overhead glazing



Annealed Laminated Glass – strength without optical distortion

Glass Lamination Options

- **Fabric Interlayers** – custom colours, textures & effects
- **Mesh Interlayers** – metal gauzes for architectural standout
- **Digital Printing** – high-resolution, ceramic-based durability
- **Switchable Security Glass** – from clear to tinted on demand

Trusted Applications

- **Laminated Glazing Units** – regulation-ready for domestic and commercial installs
- **Glass Balustrades** – strength, safety, style
- **Splashbacks** – with stunning customisation options
- **Acoustic Panels** – quieter interiors without compromise



FIRE-RATED GLASS

When Protection Matters Most, TG FR Delivers

When lives, buildings and reputations are on the line, there's no room for compromise. That's why we created **TG FR** – a breakthrough in fire-rated glass technology, offering up to **120 minutes** of certified integrity and insulation, without sacrificing optical clarity.

TG FR combines the strength of toughened glass with the protection of laminated fire-rated technology. Developed and manufactured in-house at ToughGlaze, it's one of the few UK-made solutions tested and approved to **BS EN 1364-1**, and compatible with all major profile systems including Jansen, Forster and Schüco.

From E30-rated single panels to full EI120 configurations, we supply a complete range of fire-rated glass solutions – cut to size, quality-checked and delivered with total confidence.

Why ToughGlaze?

- **EI-rated protection** up to 120 minutes (EI120)
- **Ultra-clear appearance** – no clouding or tinting
- **Compatible with major profile systems**
- **Tested to BS EN 1364-1** – trusted and certified
- **Cut, processed and fabricated in-house**

Designed for Demanding Environments

- **Fire-Rated Partitions** – office, healthcare, transport & more
- **Fire-Safe Windows** – compliant with glazing regs and tested systems
- **Walls & Ceilings** – ideal for fire-rated doors, floors, or feature panels

Q&A: FIRE-RATED GLASS, EXPLAINED

What is fire-rated glass?

Fire-rated (or fire-resistant) glass is tested to withstand fire, heat and smoke for a set period. It's classified into:

- E – integrity only (keeps flames out)
- EW – integrity and limited radiant heat
- EI – full integrity and insulation

Is toughened glass fireproof?

No. While toughened glass resists heat better than standard glass (up to 250°C), true fire-rated glass like TG FR withstands temperatures beyond **870°C** for 30–120 minutes.

Can fire-rated glass be cut to size?

Yes – but only before it's toughened. At ToughGlaze, we cut and process all panels before tempering to meet your exact specifications.

What makes TG FR different?

Unlike many fire-rated products, TG FR is **ultra-clear**, not tinted or opaque. It offers robust **impact resistance** and can be integrated into **double-glazed units** and **laminated formats**.

Fire Ratings & Specs

Rating	Type	Duration	Total Thickness	Max Size (mm)
E30	Toughened fire glass	30 mins	6 mm	1340 × 2389
EI30	Toughened laminated fire glass	30 mins	24 mm	1269 × 2389
EI60	Toughened laminated fire glass	60 mins	30 mm	1025 × 2525
EI90	Toughened laminated fire glass	90 mins	40 mm	1372 × 2260
EI120	Toughened laminated fire glass	120 mins	48 mm	1388 × 2297

*System compatibility: Janisol, Fire Economic, Schüco ADS80, Fuego Light (EI90/120)



ACOUSTIC GLASS

Quiet Confidence. High-Performance Noise Control.

Whether you're blocking out street noise, separating meeting rooms, or creating peaceful public spaces, **TG AG** acoustic glass gives you a sound solution — literally.

Manufactured in-house at one of the UK's most advanced glass processing plants, TG AG is a laminated, noise-reducing glass designed for commercial, retail and architectural applications. Each panel is precision-cut to your spec and built with a specialist **acoustic interlayer** that absorbs sound vibrations without compromising clarity or strength.

And because it's ToughGlaze, you get more than just silence. You get speed, quality and peace of mind — from one of the UK's most trusted independent processors.

Why ToughGlaze?

- **Noise-reduction performance**, verified and tested
- **Crystal clear appearance** – looks like standard glass
- **Laminated for strength and soundproofing**
- **Made-to-measure** – any shape, size or thickness
- **Kitemark-certified + ISO 9001:2015 approved**

Built Around Your Project

Acoustic performance isn't one-size-fits-all. That's why every TG AG panel is made to order — with specifications tailored to your environment, use case and desired dB rating.

Speak to our technical team for custom thicknesses, interlayer options and compatibility with fire resistance, switchable privacy, walk-on formats and digital printing.



Q&A: ACOUSTIC GLASS, DECODED

What is acoustic glass?

Acoustic glass is a specialist sound-insulating glass made from two or more panes bonded with a **polyvinyl butyral (PVB)** acoustic interlayer. It's engineered to reduce noise transfer while maintaining strength and clarity.

Does it look any different?

Not at all. TG AG acoustic glass looks identical to standard laminated glazing – it simply performs better, acoustically.

Is it laminated?

Yes. Every panel of TG AG uses a high-performance laminated construction, ensuring both noise reduction and added strength.

Will it reduce noise in real life?

Yes – but only when installed with a compatible framing system. The glass does the heavy lifting, but the full system matters.

Acoustic Glass Variants



TG FR – fire-rated, noise-resistant glazing



TG SWITCH – privacy on demand with sound control



TG DP – acoustic glass with printed branding or designs



TG WO – soundproof walk-on floors and ceilings

Trusted Applications

- **Acoustic Windows** – compliant, custom-cut units for manufacturers
- **Shopfitting** – display protection with noise control
- **Architectural Use** – partitions, facades and atriums
- **Glass Roof Panels** – light-filled, low-noise spaces



WALK-ON GLASS

Engineered Strength. Elevated Design.

Transform spaces with **TG WO** – our premium range of walk-on glass, designed for strength, safety and visual impact. Whether you're specifying transparent stair treads, glazed walkways or architectural skylights you can step on, ToughGlaze has you covered.

All TG WO panels are **Kitemark-certified**, tested to meet **BS EN standards** and available with **R10 to R11 anti-slip ratings**. Every panel is processed in-house using state-of-the-art equipment, giving you full control over sizing, finish and safety features.

With one of the UK's widest selections of anti-slip patterns and over 30 years of experience, we've built a reputation as the go-to supplier for architects and installers looking to blend form with function.

Why ToughGlaze?

- **Anti-slip rated (R10–R11)**, BS EN compliant
- **Five unique patterned finishes** – dots, squares & more
- **Custom sizes & thicknesses**, cut to your spec
- **Built for foot traffic** – stairs, floors, bridges, roofs
- **Kitemark-approved & ISO 9001:2015 certified**

Technical Highlights

Max panel size: 3210 mm × 2250 mm

Finishes: 5 pattern options for anti-slip (viewable in our brochure)

Safety rating: BS EN compliance, R10–R11 surface performance

Use cases: Internal and external walkways, stair treads, rooflights, glass bridges

Q&A: WALK-ON GLASS, EXPLAINED

Are glass floors really safe to walk on?

Yes – when properly specified. TG WO glass is built for load-bearing applications and is tested to meet industry-wide safety standards. While we don't provide structural engineering advice, we follow all supplied designs to the letter.

What sizes are available?

Each panel is made to order. Our maximum sheet size is **3210 mm × 2250 mm**, and we offer full flexibility on thickness and processing.

Can I choose how the surface looks?

Absolutely. We offer **five anti-slip patterned finishes**, including dots, squares and more. These help meet safety regulations while maintaining visual clarity.

How much does walk-on glass cost?

Pricing depends on your chosen size, thickness and finish. Send us your requirements and we'll send you a fast, competitive quote.

Trusted by Architects Since 1993

TG WO is trusted by architects and contractors across the UK for stunning:

- **Glass Flooring Tiles** – stylish, durable, and safe
- **Walkable Rooflights** – perfect for modern flat roofs
- **Stair Treads & Bridges** – bold design with structural strength
- **Commercial & Retail Interiors** – where design and function meet



SECURITY GLASS

When You Can't Afford to Compromise, Choose TG SECURE

From banks and galleries to retail units and transit hubs, secure glazing isn't optional – it's essential. That's where **TG SECURE** comes in: our laminated, break-resistant glass designed to resist manual attack while maintaining crystal-clear clarity.

Lightweight, discreet and tough as they come, TG SECURE is tested to **EN 356** and manufactured right here in the UK at one of the most advanced processing facilities in the country. Whether you need extra protection for a retail frontage or peace of mind for a high-value commercial site, we'll help you specify, cut and install the right level of protection.

Because when it comes to glass security, second best won't do.

Why ToughGlaze?

- **Tested to EN 356**, from P1A to P8B
- **Lightweight yet impact-resistant** composite build
- **No compromise on clarity or finish**
- **Custom-made to spec** – size, shape and threat level
- **Over 30 years' experience**, ISO 9001:2015 certified

Built to Withstand the Worst

Test Type	Rating Range	Description
Drop-Ball Test	P1A-P5A	4.11 kg steel balls dropped from up to 9m
Hammer & Axe Test	P6B-P8B	Simulated axe and hammer attack – up to 71 strikes

TG SECURE panels are available in multiple thicknesses depending on your performance and weight needs. All panels are part of certified glazing systems for accurate threat-level testing.



Q&A: WHAT YOU NEED TO KNOW

What is security glass?

Security glass is laminated glazing designed to withstand deliberate attacks – such as break-ins, vandalism or forced entry. It's distinct from safety glass, which handles accidental damage but not intentional force.

How strong is it?

Strength varies by rating. For example, **P7B-rated** glass must withstand **51 to 70 strikes** in a hammer and axe test before an opening is formed.

What's it made of?

TG SECURE typically features **multiple laminated layers** of glass or polycarbonate, bonded with thick polymer interlayers.

Can I cut it to size?

Yes – before final lamination and tempering. We cut and finish all security glass in-house to your precise dimensions and threat spec.

How thick is anti-bandit glass?

Common configurations include **7.5 mm**, **9.5 mm** and **12.8 mm** thicknesses. The right choice depends on your environment and the level of security required.

Variants & Upgrades



Fire-Rated Security Glass – available as E30-rated, BS EN 12150:2015



Switchable Security Glass – privacy and protection in one



Mesh-Laminated Glass – design-forward with metal reinforcement



Digitally Printed Glass – brand-ready and highly resilient

Used Across Every Sector

- Airports & Transit Hubs
- Banks & Commercial Buildings
- Museums, Galleries & High-Value Retail
- Residential Security Applications
- Defence & Government Facilities



BLAST-RESISTANT GLASS

TG BOMB BLAST – Engineered for the Unthinkable

When the stakes are sky-high, you need glazing that can take the pressure – literally. That's why we developed TG BOMB BLAST: a lightweight, high-performance laminated glass designed to resist the devastating effects of explosions.

Tested to ISO 16933:2007, the international standard for blast resistance, TG BOMB BLAST delivers discreet protection for people, property and infrastructure – without compromising on optical clarity or adding unnecessary weight.

Every panel is custom-made in our UK facility, tailored to your threat level, use case and architectural specification. So whether you're securing a government building, retail frontage or gallery installation, you can be confident that TG BOMB BLAST is built to protect.

Why ToughGlaze?

- **ISO 16933:2007 certified blast resistance**
- **Lightweight composite construction** – ideal for structural integration
- **Visually clear** – indistinguishable from standard laminated glass
- **Made to measure for your exact spec and threat level**
- **Trusted by security-conscious clients** since 1993

Built to Withstand Real-World Threats

ISO 16933 testing replicates the pressure and fragmentation effects of real explosive blasts – not just lab simulations. That means you get confidence grounded in field-tested data.

Each TG BOMB BLAST panel is:

- Laminated using multi-layered composites
- Designed with flexibility and absorption zones
- Customised to withstand specific overpressure ratings

And because we cut and process all glass in-house, we can deliver fast, accurate lead times – even on complex or high-spec orders.

TG BOMB BLAST



Q&A: BLAST-RESISTANT GLASS ESSENTIALS

What is blast-resistant glass?

Blast-resistant glass is a form of laminated glazing designed to maintain structural integrity during an explosion — while reducing injury risk from glass fragmentation.

What's it made of?

TG BOMB BLAST uses multiple layers of glass and polycarbonate, bonded with tough polymer interlayers. These soft and hard layers work together to flex and absorb explosive force.

Does it look different?

No. Our blast-resistant glass is visually clear and can be installed in settings where discretion or aesthetics are critical — including retail and public spaces.

How thick is it?

Panel thickness varies depending on the required blast rating. Generally, it features more glass layers and thicker interlayers than standard safety glazing.

Can it be customised?

Yes. TG BOMB BLAST can be integrated with fire-rated, switchable, digitally printed, or mesh-laminated features — all processed in-house.

Blast Resistance + Design Freedom

We don't do off-the-shelf. You can specify:



Fire-rated variants (e.g. E30 certified)



Switchable privacy & security in one



Decorative mesh laminates



Digitally printed protection

Secure the Unexpected

Trusted across a wide range of high-risk environments:

- Government Buildings & Military Bases
- Banks, Museums & Galleries
- Airports & Transport Hubs
- Retail Frontages
- Private Residences with Elevated Risk



STRUCTURAL GLAZING

Frameless. Flawless. Built to Bear the Load.

For architectural statements that combine strength with sleek design, there's no better choice than TG SGF – our high-performance structural glazing system.

ToughGlaze is the exclusive UK licensee of the Fischer secret fix system – an undercut structural glass fixing method that creates a seamless, modern appearance without visible brackets or framing. It's a game-changer for architects, façade designers and contractors who demand strength without compromise on aesthetics.

From glass balustrades and partitions to floor panels and atriums, our structural glass is made to measure, processed in-house and delivered with expert support at every stage.

Why ToughGlaze?

- **Exclusive UK supplier of Fischer's secret fix system**
- **Discreet undercut fixings** – perfect for modern glass architecture
- **Tested and trusted** structural performance
- **Design flexibility** – coloured, printed, textured or acoustic
- **ISO 9001:2015 certified** and trusted since 1993

Key Specifications

Max panel size: 2400 × 3800 mm

Thickness range: 9.5 mm – 60 mm

Fixing system: Fischer secret fix (undercut mechanical anchors)

Processing options: Silkscreen, digital print, Vanceva, acoustic interlayers, fabric lamination



Q&A: STRUCTURAL GLASS, EXPLAINED

What is structural glass?

Structural glass is glazing that bears load as part of a frameless or semi-frameless assembly. It's used in floors, balustrades, partitions, roof panels and other features where both strength and visual clarity are required.

What's the Fischer secret fix system?

It's a concealed fixing solution that uses precision-engineered undercut anchors for structural strength without visible bolts or clamps. ToughGlaze is exclusively licensed to use this system in the UK.

Is it safe for structural use?

Yes — when specified and installed correctly. We fabricate structural glass to the highest safety and durability standards, working closely with specifiers and structural engineers.

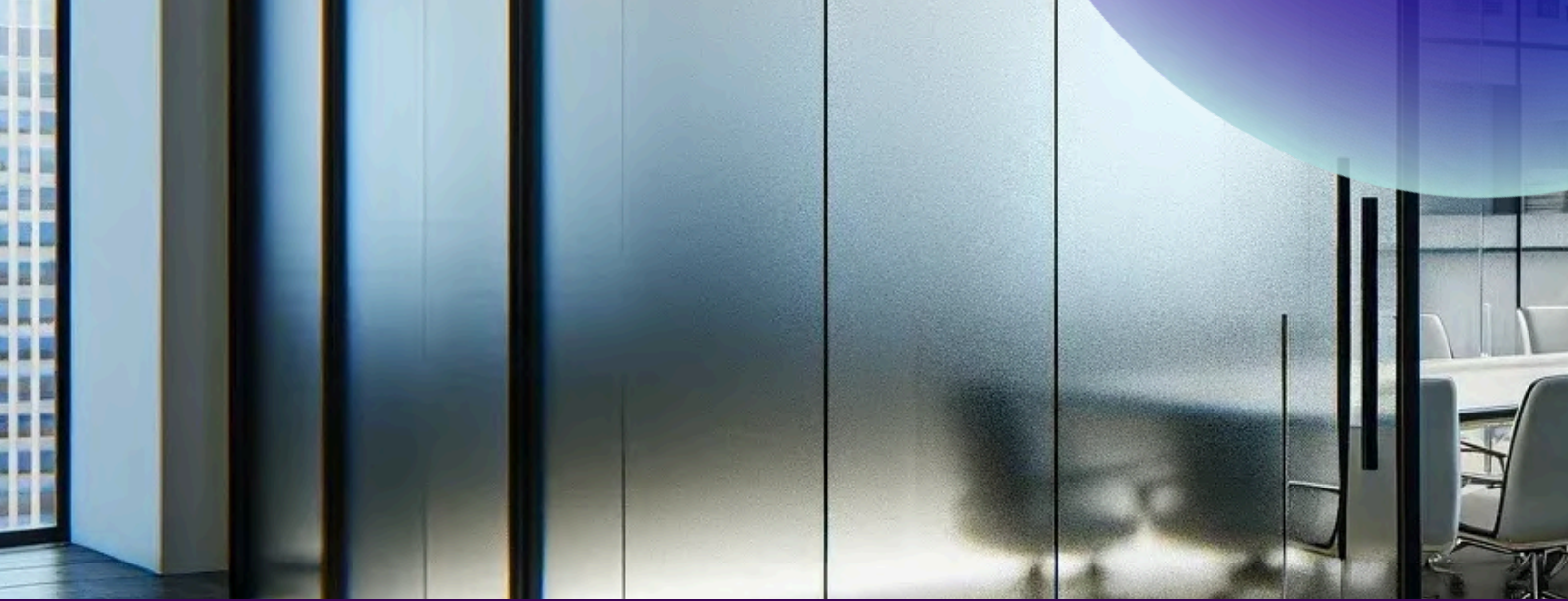
Can I customise the look?

Absolutely. Choose from:

- Digital or silkscreen printing
- Acoustic interlayers
- Vanceva coloured films
- Bespoke fabric laminates

Where It's Used

- **Structural Partitions** – clear or patterned, frameless room dividers
- **Balustrades** – toughened laminated safety glass with clean lines
- **Glass Bridges & Floors** – transparent but incredibly strong
- **Roof Panels** – daylight-friendly, structurally sound
- **Facades & Atriums** – for a striking exterior without visible frames



SWITCHABLE GLASS

TG SWITCH – Smarter Glass. Instant Privacy. Zero Compromise.

Smart glass shouldn't mean sacrificing clarity, safety or speed. That's why TG SWITCH is the UK's most advanced switchable glass – engineered for total privacy at the flick of a switch, without the haze or yellow tint you'll find elsewhere.

Made with next-gen NPRLC technology, a unique water-resistant interlayer, and a raft of precision options, TG SWITCH is ideal for everything from luxury interiors and bathrooms to high-security environments and smart workplaces.

We don't just supply switchable glass – we cut, print, process, laminate and deliver it, all from under one roof. So you get full control and fast turnaround from a trusted UK glass processor.

Why ToughGlaze?

- **NPRLC smart tech** – instant clarity-to-privacy control
- **Water-resistant interlayer** – suitable for bathrooms and external use
- **Smart home compatible** – Alexa, Google Home, app and web controls
- **Made to measure** – any shape, thickness or finish
- **Over 30 years of expertise** in specialist glass solutions

Tech Specs at a Glance

Max size: 1840 × 4200 mm

Thickness range: 10 – 60 mm

Light Transmission: >78%

Haze: <5% (crystal clear in 'on' mode)

View angle: 150°

Power consumption: 5W/m²

Acoustic rating: >38dB (varies by config)

Running voltage: 30–90V AC (adaptors supplied)

TG SWITCH



Q&A: SMARTER GLASS, EXPLAINED

What is smart glass?

Smart glass (also called switchable or LCD glass) turns from clear to opaque at the touch of a button — using a layer of liquid crystal molecules activated by electricity.

How fast does it switch?

TG SWITCH changes state in 0.01 seconds — faster than the human eye can register.

What makes TG SWITCH different?

- Uses third-gen NPRLC tech
- Water-resistant interlayer
- Smart assistant & mobile app integration
- Anti-haze, low-energy and precision-cut to fit

Is it better than electrochromic glass?

Yes. Electrochromic glass is outdated — it's slower, yellower and often uneven. TG SWITCH is clearer, faster and far more energy-efficient.

Make It Yours



Anti-Reflective Glass — extra clarity, especially for display use



Switchable Security Glass — privacy + manual, ballistic or blast resistance



Electric Tinted Glass — 50+ custom tints and shades available

Designed for Everywhere

- **Smart Glass Windows** — U-values as low as 0.2, great thermal performance
- **Privacy Doors & Screens** — ideal for bi-folds, showers, clinics and retail
- **Partition Walls** — responsive zones for offices and open-plan spaces
- **Projection Surfaces** — works as an opaque display screen
- **Security Environments** — banks, prison and jewellers



FABRIC LAMINATED GLASS

TG FI – Texture. Colour. Clarity. Captured in Glass.

Looking to make a visual statement? TG FI is where fabric meets function. Our custom-made fabric laminated glass allows architects, designers and specifiers to embed textile interlayers between glass panes – combining bold design with structural resilience.

From woven balustrades and art-glass partitions to splashbacks and signage, TG FI unlocks creative freedom across architectural and interior applications. With waterproof, UV-resistant and structural-grade interlayers all processed in-house, your options are as open as your imagination.

Why ToughGlaze?

- **Fabric + glass** – fused for lasting design impact
- **PVB, ionoplast & waterproof interlayers** – built for performance
- **3,000+ colour options** – plus digital print & edge-lighting effects
- **Cut to size, shaped and processed entirely in-house**
- **BSI-approved and ISO 9001 certified since 1993**

Design Meets Durability

Max panel size: 2600 × 4300 mm

Thickness range: 9.5 mm – 60 mm

Interlayer types: PVB, SGP (ionoplast), waterproof resin

Glass types: Toughened, annealed, heat-strengthened

TG FI is suitable for both interior and exterior use when installed in an insulated glass unit (IGU). Every piece is crafted to spec – and available with full project sampling to preview before production.



Q&A: FABRIC ON GLASS, EXPLAINED

What is fabric interlayer glass?

It's laminated glass with a textile interlayer, sandwiched between glass panes. The result? A design-forward material that brings colour, pattern and texture to architectural glazing.

Can it be used outside?

Yes. TG FI includes a waterproof laminated interlayer, making it suitable for exterior installs such as glass facades, balconies or roofing (when part of an IGU).

What interlayers are available?

Choose from:

- **PVB** – clear, coloured, acoustic
- **Water-resistant resin** – for wet areas or outdoors
- **SGP ionoplast** – for structural strength

You can also add printed, mirrored or coloured glass for enhanced visual effect.

Can I preview the design before ordering?

Absolutely. We offer a bespoke sampling and mock-up service to help you finalise the fabric, colour and layout before committing to a full production run.

Design Options Galore



Digital Printing – add patterns, branding, or custom artwork



Edge Lighting – create illuminated wall or ceiling features



Coloured Interlayers – 3,000+ shades to choose from

Applications that Inspire

- **Partitions** – turn plain panels into architectural features
- **Splashbacks** – textile glass with mirrored or opaque backing
- **Balustrades** – beauty and safety in one system
- **Exterior Glazing** – texture-rich facades with weatherproof finish



COLOURED GLASS INTERLAYERS

TG CI – Bring Colour to the Surface

If you can imagine it, we can laminate it. TG CI from ToughGlaze offers vibrant, durable colour interlayers for architectural and decorative glass – perfect for adding personality to partitions, facades, balustrades and more.

Using Vanceva's full colour studio, we combine up to four interlayers to create over 3,000 unique shades in transparent, translucent or opaque finishes. Whether you're after subtle tonal glazing or a bold design feature, TG CI gives you full freedom to specify, combine and control the effect.

And like every ToughGlaze product, all cutting, toughening and processing is handled under one roof – ensuring quick turnaround, tight tolerances and unrivaled consistency.

Why ToughGlaze?

- **3,000+ colour options** using Vanceva's interlayer system
- **UV-stable pigments** – built to resist fading
- **Transparent, frosted or opaque** – total design flexibility
- **Custom-cut, toughened and laminated in-house**
- **Trusted for 30+ years**, ISO 9001:2015 certified

Technical Overview

Max panel size: 2600 × 4300 mm

Thickness range: 9.5 mm – 60 mm

Glass types: Toughened, annealed, heat-strengthened

Compliance: EN 12600, EN 14449

Finish options: Transparent, translucent, opaque

Q&A: COLOUR, CUSTOMISED

How is coloured glass made?

TG CI is created by laminating tinted interlayers between glass sheets — using Vanceva’s colour system. The result is vibrant, durable colour glass, suitable for almost any commercial or architectural application.

Will it fade in the sun?

No. We use lightfast pigments designed for long-term clarity and fade resistance — even in full-sun installations like skylights and curtain walls.

Can I control the level of opacity?

Yes. Choose transparent, frosted or fully opaque using colour combinations like:

- **Arctic Snow / Cool White** – for soft translucency
- **Polar White** – for total opacity

Is it compatible with other ToughGlaze products?

Absolutely. TG CI can be combined with:

- **TG AG** (Acoustic Glass)
- **TG SB** (Sandblasted Glass)
- **TG SP** (Screen-Printed Glass)
- **TG MI** (Mesh-Laminated Glass)

Designed to be Seen

TG CI brings standout colour to:

- Curtain Walls & Façades
- Glass Balustrades & Partitions
- Splashbacks & Shower Panels
- Coloured Glass Doors
- Roof Panels & Skylights
- Aquarium Features
- Shopfitting & Display Installations



MESH LAMINATED GLASS

TG MI – Metal Meets Glass in Stunning Harmony

When you want architectural glass with edge, choose TG MI. This unique laminated glass features decorative metal mesh interlayers, delivering a distinctive fusion of structure, shine and texture. Whether you're working on bold interior features or high-end facade design, TG MI helps you build spaces that stand out.

Available with a wide variety of mesh materials and patterns – from brass and bronze to stainless steel – TG MI brings contemporary elegance to partitions, splashbacks, balustrades and more. All fabricated in-house by ToughGlaze, with precision cutting and specialist lamination included.

Why ToughGlaze?

- **Woven metal mesh interlayers** – from bold to refined
- **Waterproof & UV-resistant** – suitable for exterior use
- **Custom-processed in-house** – no third parties, no guesswork
- **Combine with colour, print or light for dramatic**
- **BSI-tested and ISO 9001:2015 accredited since 1993**

Specification Snapshot

Max size: 2600 × 4300 mm (subject to mesh width)

Thickness range: 9.5 mm – 60 mm

Glass types: Annealed, toughened, heat-strengthened

Interlayer options: Waterproof resin, SGP ionoplast, PVB

Applications: Interior & exterior (IGU-compatible)



Q&A: WHAT TO KNOW ABOUT MESH GLASS

What is mesh laminated glass?

It's a laminated glass panel with a metal mesh interlayer, pressed between two sheets of safety glass. These layers are bonded using robust structural interlayers, resulting in a decorative yet highly durable material.

Can I use it outside?

Yes. TG MI is made with a special waterproof interlayer, and can be incorporated into insulated glass units (IGUs) for long-term outdoor use – even in high-humidity zones.

Is it fire-rated?

No – TG MI is not a fire-rated product. It's a decorative structural laminate, different from traditional wire mesh fire glass. If you need fire resistance, ask about our TG FR (E30 to EI120-rated) range.

What mesh types are available?

We offer dozens of curated mesh styles, including:

- Brass
- Bronze
- Stainless Steel
- Aluminum

All in a variety of patterns, weaves and finishes. Samples available on request.

Ready to Customise

Take TG MI even further with:



Screen Printing – for colour, branding or layering effects



Coloured Interlayers – 3,000+ tones, translucent or opaque



Edge Lighting – make your mesh glass glow

Designed for Impact

- **Partitions** – striking office or retail feature walls
- **Splashbacks** – shine and shimmer meets easy clean
- **Balustrades** – blend safety with modern flair
- **Exterior Glazing** – mesh + glass + light = serious wow factor



LED GLASS

TG WOL – Light. Colour. Glass. In Perfect Sync.

For installations that demand impact, TG WOL delivers. Our LED glass range fuses custom digital design with edge-lit brilliance, creating stunning illuminated glass panels that transform the everyday into something extraordinary.

Whether you're designing bold lightbox displays, subtle ambient partitions or fully branded stretch ceilings, TG WOL gives you unmatched flexibility – all backed by ToughGlaze's 30+ years of expertise in architectural glass.

Printed, toughened, edge-lit and made to measure. This is light, reimagined.

Why ToughGlaze?

- **Spanlite edge-lighting** for crisp, even illumination
- **Digitally printed ceramic inks** – vivid, durable, scratch-proof
- **Custom size, shape and finish** – everything processed in-house
- **Fast turnaround and full support**
- **ISO 9001:2015 certified** and trusted since 1993

Technical Overview

Max size: 1200 × 3600 mm

Lighting range: Up to 3.5 m high (with dual sources)

Glass options: Toughened, laminated

Thickness: Project-specific (varies with use case)

Print Quality: Dip-Tech or SentryGlas Expressions

Light transmission: 92%

Energy use: LED: ~80% more efficient than fluorescent

Strength: Flexural: 116 MPa



Q&A: ILLUMINATING THE DETAILS

What is LED glass?

It's glass that integrates LED edge lighting, used in architectural features like partitions, ceilings, doors and display panels. Designs are digitally printed, then fired into the glass, making them fade-proof and incredibly durable.

Can I print any image or logo?

Yes — TG WOL supports high-resolution graphics, branding, patterns and even backlit text, all with ultra-fine detail thanks to our Dip-Tech digital ceramic print.

Is it energy efficient?

Absolutely. LED glass uses up to 80% less energy than fluorescent light, with minimal heat output and long-lasting performance.

What's the maximum size you can supply?

Panels can be fabricated up to 1200 × 3600 mm, with lighting effective up to 3.5 metres high when dual-lit.

Creative Applications

- **Backlit Partitions** – modern, light-filled dividers with printed design
- **Feature Walls** – showstopping branded interiors or hospitality decor
- **Illuminated Doors** – ideal for retail, luxury and corporate spaces
- **Glass Ceilings** – bring light and visual drama overhead
- **Lightbox Signage** – precision-lit, design-forward, unforgettable
- **Transport Hubs** – wayfinding or advertising with real visual punch



SCREEN-PRINTED GLASS

TG SP – Print Permanence in Every Pane

Looking to make a bold impression with custom glazing? TG SP from ToughGlaze delivers screen-printed glass with unbeatable durability, colour depth and design flexibility. Using ceramic inks fired directly into the glass, your graphics are locked in – built to withstand time, weather and wear.

From full-height partitions and decorative balustrades to bespoke doors and signage, our in-house team screen prints, toughens and finishes every panel to your exact specification. No middlemen. No shortcuts. Just glass, printed to last.

Why ToughGlaze?

- **Colour-fast for life** – ceramic inks fused into the glass
- **Patterned, solid, or branded** – RAL & Pantone matching available
- **Cut, printed and toughened in-house** – no outsourcing
- **Fast turnaround**, expert-led service
- **Trusted by Heathrow**, certified by BSI and ISO 9001

Technical Overview

Max size: 1700 × 2900 mm

Thickness range: 4 mm – 19 mm

Colour systems: RAL, Pantone

Applications: Internal & external

Durability: Life-of-glass colour warranty

Compatible with: Digital printing, lamination, etching



Q&A: SCREEN PRINTING ON GLASS

How does it work?

We apply your design via a precision-cut silkscreen stencil, then transfer ceramic ink through the screen onto glass. After that, it's fired in a furnace to fuse the ink permanently. The result? Vibrant, weather-resistant glass with guaranteed longevity.

Can you print solid colours or patterns?

Yes – choose full-coverage blocks, repeat patterns or logos/text. We'll match your vision to RAL or Pantone colours and apply it with perfect clarity.

How long will it last?

Unlike surface-printed or vinyl-applied graphics, TG SP uses ceramic inks that are fired into the glass – so the colour won't peel, fade or scratch. It's guaranteed to last as long as the glass itself.

Can it be used outdoors?

Absolutely. TG SP is weather-resistant and trusted for high-profile exterior applications, including Heathrow's Terminal 2 entrance.

Made for More Than Decoration

TG SP is more than good looks. It's a practical, permanent solution for:

- **Partitions** – privacy or branding with lasting impact
- **Balustrades** – patterns, gradients or full colour blocking
- **Doors & Shopfronts** – from elegant signage to bold design
- **Architectural Glazing** – create identity through glass

Combine TG SP with:

- Etching or sandblasting
- Digital ceramic printing
- Coloured interlayers
- Laminated or toughened glass options



DIGITAL PRINTED GLASS

TG DP – Bold Designs. Fired to Last.

Make your mark with TG DP, our digitally printed glass range that brings bold vision and precise branding to life – in full photographic detail.

At ToughGlaze, we don't just print on glass. We fire your design into it using ceramic inks and state-of-the-art digital printers. That means colour that lasts a lifetime, resistance to scratches and fading, and true creative freedom.

Whether you're crafting retail signage, branded partitions, splashbacks or entire feature walls, TG DP is built for impact – and built to last.

Why ToughGlaze?

- **Up to 720 DPI resolution** for high-definition results
- **Heat-fired ceramic inks** – bonded for durability
- **Everything in-house** – printing, cutting, toughening
- **Maximum panel size:** 2800 × 4300 mm
- **Guaranteed for the life of the glass**

Technical Overview

Max panel size: 2800 × 4300 mm

Max weight: 150 kg

Thickness: 4 mm to 19 mm

Resolution: Up to 720 DPI

Inks: Heat-fired ceramic, fade-proof

Applications: Interior & exterior, architectural-grade



Q&A: PRINTED GLASS ESSENTIALS

How does digital glass printing work?

We print your design directly onto glass using ceramic inks, then fire it at 650°C in our toughening plant. The result is a permanent, high-resolution finish that won't fade, crack or peel – even outdoors.

Can I use my own design?

Absolutely. You can submit logos, photos, text or custom graphics – or choose from our TG Pattern or TG Interiori catalogues for a ready-to-go design.

Is it suitable for splashbacks or facades?

Yes – we regularly supply printed splashbacks, signage, multi-panel facades and more. We'll match the glass type to your spec.

What's the difference between screen and digital print?

Screen printing uses stencils and solid colours – ideal for large-scale coverage. Digital printing allows for full-colour, photo-grade detail and gradient effects.

Applications & Inspiration

From understated to unmissable, TG DP is designed to elevate your project:

Office partitions – branding or pattern work

Retail windows & signage – weatherproof and sharp

Kitchen & bathroom splashbacks – easy to clean, impossible to ignore

Architectural facades – multi-panel masterpieces

Balustrades & balconies – decorative meets durable

You can even combine TG DP with:

- Laminated or acoustic glass
- Coloured interlayers
- Smart or soundproof solutions
- LED backlighting (TG WOL)



SANDBLASTED GLASS

TG SB – Textured, Tactile, Timeless

For more than 30 years, ToughGlaze has been sandblasting glass to specification — from fine privacy textures to bold brand stencils.

TG SB delivers striking, etched effects using precision sandblasting techniques. Whether you're after subtle frosting, privacy screening or a logo that leaves a lasting impression, our in-house sandblasting team has the tools and experience to make it happen.

Why ToughGlaze?

- **Professionally sandblasted**, in-house
- **Stencilled logos & patterns or full-surface effects**
- **Optional non-stick coating** (Ritec Clearshield)
- **Suitable for toughened, annealed, laminated glass**
- **Max size:** 2300 × 4000 mm | **Thickness:** 4–19 mm

Applications

From understated to unmissable, TG DP is designed to elevate your project:

Office partitions – privacy with personality

Glass balustrades – clean, consistent frosting

Balconies & terraces – stylish and safe

Commercial exteriors – branded glass facades

Retail displays – subtle texture with sharp identity

Q&A: SANDBLASTING WITH CONFIDENCE

What is sandblasted glass?

Sandblasting is a glass finishing process where fine sand is fired at high pressure onto the surface of the glass. The result is a soft, frosted texture that can be used for branding, privacy or decoration.

Can toughened glass be sandblasted?

Yes. In fact, it often is. At ToughGlaze, we toughen and sandblast glass on-site, making the process faster and more consistent.

Can you protect the surface after sandblasting?

Absolutely. We offer Ritec Clearshield as an optional non-stick coating. It makes the frosted surface easier to clean and more resistant to staining or fingerprints.

Is it suitable for external use?

Yes – provided it's properly sealed and installed. ToughGlaze sandblasted glass is often used in balconies, balustrades and facades.

Made to Spec. Made to Last.

From subtle to standout, TG SB can be tailored to your vision:

- Custom logo & brand motifs
- Privacy glass for partitions & meeting rooms
- Safety manifestation dots
- White acid tone finishes for a satin look
- Edge-to-edge frosted coverage or precision detailing

Every panel is designed and approved in-house – so what you see is exactly what you get.



MIRROR GLASS

TG REFLECT – Where Vision Meets Precision

ToughGlaze mirror glass is made to reflect the best of your project. Whether it's for bathrooms, wall panels, shopfitting or statement architecture, TG REFLECT gives you the finish, the quality and the service your specification deserves.

Why Choose TG REFLECT?

- Kitemark-approved mirror glass
- Custom cut, shaped, drilled and polished
- Toughened mirror options available
- Available with sandblasted or digitally printed detailing
- Stock size: 6000 × 3000 mm | Thickness: 4–6 mm

Reflective Glass, Refined Service

TG REFLECT is a smart, versatile product – perfect for everything from shop displays and hospitality interiors to architectural installations.

Working from our advanced glass processing facility, we shape and cut your mirror glass to exact specification, all under one roof. That means fewer delays, fewer errors and a mirror finish you can rely on.

Whether you want standard silver, low-iron clarity or tinted reflections in grey, bronze or blue – we'll deliver mirror glass that meets your brief, every time.

Q&A: REFLECTING THE FAQs

What is mirror glass?

Mirror glass is standard or low-iron glass that's been treated with a reflective coating. This coating is usually applied to the back of the glass, creating a crisp, consistent reflection.

Can mirror glass be toughened?

Yes – our toughened mirror glass is thermally strengthened to withstand high temperatures and sudden impact. It meets BS EN 12150 standards and is perfect for high-traffic or high-heat environments.

Can you add logos or patterns?

Definitely. Choose sandblasting for subtle brand detailing or digital ceramic printing for bold, full-colour visuals fired directly into the mirror surface.

What edge finishes are available?

We offer both polished and bevelled edges, depending on your aesthetic or application.

How big can you go?

Our stock sheets go up to 6000 × 3000 mm. We'll cut your mirrors to size – just tell us what you need.

Applications

- **Bathrooms** – crisp, moisture-resistant mirror finishes
- **Retail fit-outs** – large-format displays & partitions
- **Interior walls** – mirrored panels for commercial interiors
- **Furniture design** – cut-to-size inserts for tables, dressers and more
- **Corporate spaces** – boardroom, lobby and lift mirrors
- **Hospitality** – elegant accents for hotels, restaurants and spas

THANK YOU FOR READING

Whether you're specifying glass for a landmark project or sourcing a reliable partner for ongoing trade orders, we hope this brochure has shown you what makes ToughGlaze different.

- ✓ Precision-made products
- ✓ Processed under one roof
- ✓ Delivered with care
- ✓ Backed by 30+ years of expertise

Above all, we're here to make your job easier — with fast lead times, exceptional customer service and glass you can rely on.

READY TO TALK?

We'd love to hear about your next project — no matter how big, small or bespoke. Speak to one of our experts today and discover how ToughGlaze can help you deliver on spec, on time, and without stress.

 Call, email or request a quote at: www.toughglaze.com/contact-us

TOUGHGLAZE – BUILT FOR PROFESSIONALS. TRUSTED WORLDWIDE.



