

# Adding value to life with value-added glass



# AIS Glass

## Enabling a future that sees more

AIS is India's leading integrated glass company. Being a leader, AIS delivers top-of-the-line products and solutions through four Strategic Business Units (SBUs) of Automotive Glass, Architectural Glass, Consumer Glass, and Solar Glass.

We use our glass product portfolio – which is the biggest in the country – to meet functional needs in an aesthetic and contemporary manner. With products that provide next-generation solutions, AIS brings new ideas to life – enabling an

age of 'green buildings' and the dawn of a truly sustainable future.

Taking the versatility of glass to the next level, AIS today has unmatched glass processing capabilities, including the processing of special glass products, that enables us to meet your every need, and fulfil every requirement.

And help you realize your dream house in glass.

**At AIS, we offer end-to-end solutions as a part of our 4G Solutions, which encompass:**

#### **Glass Products**

Wide range of high-performance products that include features like, optical comfort, thermal comfort, safety, indoor environment quality, and aesthetics

#### **Glass Processing**

Provides all kinds of processing of glass as per your requirements

#### **Glass Selection**

Guidance in the selection of the right product depending on your requirements

#### **Glass Integration**

From consultation and design to installation & pre-installation support, AIS presents superior service in every part of the value chain



# Glass:

One material.  
Multitude of benefits.

Glass has become an essential component in today's architecture. Its versatility allows designers and architects to explore endless possibilities in creative designing. Moreover with today's technology, glass is manufactured to perform beyond the ordinary. It helps control energy usage, protects against fire, insulates against noise, provides safety, privacy, and so much more. Glass is quite literally redefining the perception of traditional work and living spaces.

And of course, it also enhances the aesthetic appeal of any building by adding a touch of elegance and modernity. Used widely in both interior and exterior applications, glass is the perfect material that delivers excellent form and function.

# Our Products:

Designed to Deliver Performance  
Beyond the Ordinary



## AIS Heat-Strengthened Glass

Heat-strengthening is a process where glass is first heated slowly and then cooled down gently. This process makes it twice as strong as annealed glass. It is also standard to heat-strengthen reflective glasses since wave formation is minimal when compared to the fully tempered process.

- ▶ This glass can withstand high temperature differentials
- ▶ Wave formation is minimal



AIS Strongglas™ is a very high-grade tempered glass that is significantly stronger than ordinary glass. It goes through a toughening process which makes the glass invulnerable to tensile stresses.

- ▶ Lowers the risk of impact-related breakage and provides enhanced safety, as it is 4–5 times stronger than normal annealed glass
- ▶ The glass can withstand heat up to 300°C, hence there is no danger of the glass breaking due to thermal stress
- ▶ Even in the unlikely case of breakage, the glass breaks into small blunt pieces, causing no or minimal damage



AIS Securityglas™ is a specially toughened, laminated safety glass that provides greater impact resistance and strength. It is manufactured with a specialized PVB interlayer between two sheets of glass, which provides a high level of intrusion-resistance.

- ▶ Provides Level 2 and Level 3 protection from burglar attacks
- ▶ Eliminates the need for grills or shutters, without compromising on safety
- ▶ Finds application in windows, roof lights, canopies, domes, skylights, glass lifts, etc.
- ▶ In the unlikely event of breakage, the PVB interlayer acts as an extra layer of protection
- ▶ Effectively reduces sound for better acoustic performance



Reinforced by a layer of DuPont Sentry Glass™, AIS Securityplus is up to five times stronger than conventional laminating materials. This special interlayer increases the tolerance to greater loads while enabling a design of aesthetically pleasing and complex elements.

- ▶ Its enhanced strength eliminates the need for grills
- ▶ Requires minimal structural support
- ▶ Retains clarity, even after years of use
- ▶ Superior noise reduction for better acoustics

Used for various applications like façades, walkways, glass flooring, stairways, hurricane-resistant windows & doors, and explosion-resistant windows, doors, & facades



## **valuglas**

AIS Valuglas is a distortion-free, heat-strengthened, laminated glass that delivers superior strength. With a 1.14 mm PVB interlayer for greater stability, it is a highly secure laminated unit that combines pleasing aesthetics with enduring strength.

- ▶ Eliminates the need for grills and shutters
- ▶ Reduces external noise
- ▶ Unbeatable quality at unmatched value-for-money
- ▶ Ideal for doors & windows, canopies, stairways, skylights, domes, overhead glazing, etc.

## **acousticglas™** Noise-cancelling glass

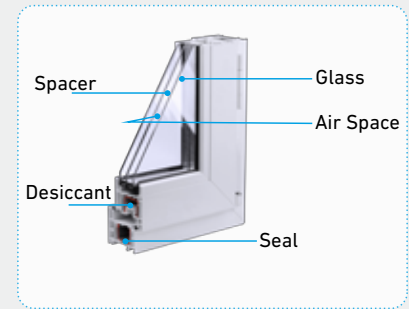
AIS Acousticglas™ is a laminated glass with a specialized PVB interlayer that significantly dampens external sounds and keeps the interiors calm and quiet.

- ▶ Reduces 90% of external noise
- ▶ Extremely durable with superior aesthetics
- ▶ Enhanced parameters for improved performance
- ▶ Ideal for homes, and businesses, especially in noisy areas

# AIS Insulated Glass Unit (IGU)

AIS IGU consists of two or more panels of glass separated by an air space and an aluminium or other type of spacer, around the edges, sealed to the perimeter in a controlled condition. The space contains a drying agent which eliminates moisture vapour in the cavity. This combination makes this product a superior energy-efficient method of glazing.

- ▶ Reduces heat build-up in summer and heat loss in winter
- ▶ Lowers UV transmission ▶ Lowers noise penetration
- ▶ Increases wind load strength ▶ Improves security



AIS Décor is a lacquered glass that has a unique, coloured, opaque appearance. It is manufactured using special, high-quality paint on one side of the glass and oven-cured through a unique process. This gives it a uniform feel and makes it highly resistant to heat, thus ensuring a lasting impression.

- ▶ Durable: Lacquering ensures long-lasting, beautiful colours
- ▶ Easy to use and maintain
- ▶ Environment-friendly paints used
- ▶ Processing: Can be cut, drilled, ground, bevelled, and edge-finished or polished
- ▶ Heat-resistant up to 80°C. (Slight fading of colour with prolonged exposure to high temperatures)
- ▶ Moisture-resistant for use in bathrooms and kitchens. (Avoid regular contact with water)
- ▶ UV resistance prevents discolouration
- ▶ Colours Available: Venetian Red, Black Pearl, Sterling Silver, Snow White, Chrome Yellow, Stone Grey, Turquoise Green, Hazel Brown, Sparkling Beige, Sparkling Snow White, & Sparkling Regal Gold.



Brilliant reflections, a unique icy appearance, and elegant accents characterize AIS Disegno. Essentially a laminated glass, this special range of glass adds a new dimension by transforming a living space into a work of art.

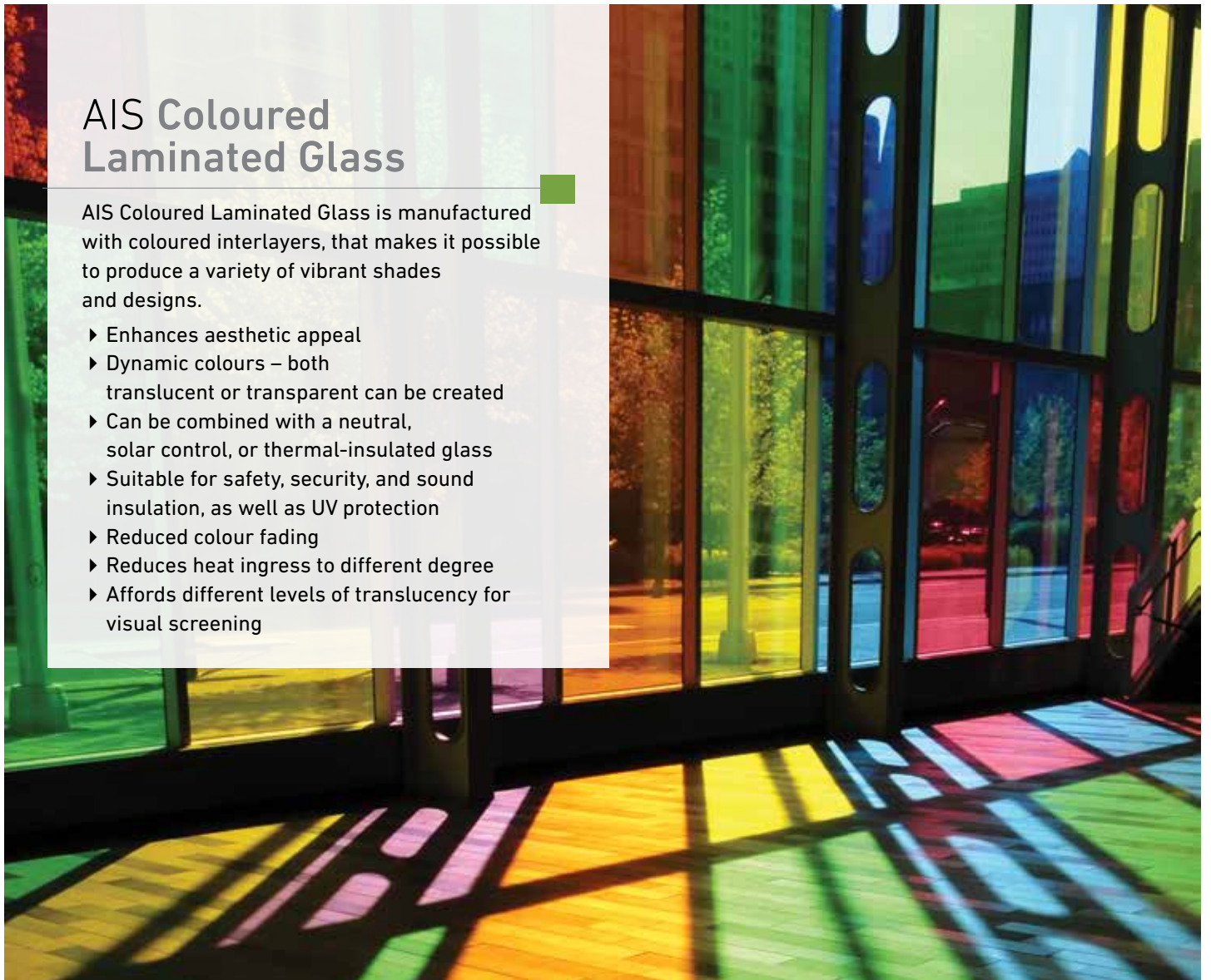
- ▶ Enhances the aesthetics of the interiors
- ▶ Ideal for ornamental and decorative use
- ▶ Finds application in tabletops, decorations, glass tiles, room separators, etc.
- ▶ Highly durable
- ▶ Has a transparent veneer with a distinctive crackled appearance



## AIS Coloured Laminated Glass

AIS Coloured Laminated Glass is manufactured with coloured interlayers, that makes it possible to produce a variety of vibrant shades and designs.

- ▶ Enhances aesthetic appeal
- ▶ Dynamic colours – both translucent or transparent can be created
- ▶ Can be combined with a neutral, solar control, or thermal-insulated glass
- ▶ Suitable for safety, security, and sound insulation, as well as UV protection
- ▶ Reduced colour fading
- ▶ Reduces heat ingress to different degree
- ▶ Affords different levels of translucency for visual screening



## AIS Integrated Blinds System

AIS Integrated Blinds System is a range of blinds that are in-built within a double-glazed, sealed unit. This type of glass comes with several advantages such as privacy, shading light, and reducing heat from direct sunlight.

- ▶ Requires zero maintenance, as they are sealed within the glazing of the window
- ▶ Can be operated with a remote control or a manual control at the window / door
- ▶ Provides control on privacy and can also help in reducing noise
- ▶ As they are incorporated within sealed units, they are totally hygienic making them perfect for use in hospitals, schools, and crèches, as well as for homes
- ▶ Suitable for conference rooms, offices, banks, laboratories, etc.

## AIS Fabric-Laminated Glass

AIS Fabric-Laminated Glass is manufactured by sandwiching layers of clear PVB / EVA to add texture, colour, and pattern to laminated glass. This product offers a wide range of fabrics within protective glass layers.

- ▶ Combines the beauty, colour, & texture of the fabric with the structural strength & practicality of glass
- ▶ The interlayer acts as a security film resisting any kind of intrusion or impact, thus ensuring safety
- ▶ Its acoustic property dampens outside noise



## AIS Etched Glass

AIS Etched Glass is a designer glass range from AIS. It is created by applying an acidic or abrasive substance on the glass surface to create artistic patterns or designs.

- ▶ Offers countless innovative ideas in glass
- ▶ A multitude of designs can be created as per customers' requirements
- ▶ Enhances aesthetic appeal
- ▶ Used for windows, façades, doors, partitions, etc.



## AIS Printed Glass

AIS Printed Glass is a modern alternative to canvas printing. This type of glass is created using digital graphics.

- ▶ Useful for decorative purposes
- ▶ Aesthetically pleasing
- ▶ Play with various colours and shades

## AIS Ceramic Frit

AIS Ceramic Frit is a type of enamel-painted tempered glass that can be used for decorative purposes. It can be used in curtain walls, glazing systems, shower cubicles, glass doors, and partitions in architectural interiors & exteriors.

## AIS Mesh-Laminated Glass

AIS Mesh-Laminated Glass combines transparency, rigidity, and the encapsulating qualities of glass, with the depth, added strength, and decorative qualities of the meshes. It encapsulates mesh inside sheets of laminated glass where a special grade of PVB interlayer is sandwiched between the glass.

- ▶ It is durable, secure, & safe, and requires low maintenance
- ▶ The PVB interlayer ensures better adhesion, and acoustic & impact toughness
- ▶ Can be used for a wide range of applications such as glass flooring, decorative glass doors, etc.



## Swytchglas

AIS Swytchglas, which has the power to control transparency, is the cutting-edge in glass technology making it the smartest glass around. It turns from transparent glass to translucent, at the flick of a button.

- ▶ Works with an electric switch or a remote-control device
- ▶ Activates in less than 10 microseconds
- ▶ Works in temperatures ranging from -10°C to 50°C
- ▶ Blocks harmful UV rays and up to 50% light in 'Off' mode
- ▶ The interlayer behaves as a security film ensuring safety
- ▶ Its acoustic properties dampen outside noise
- ▶ A variety of colour tints are possible



**ecosense**  
The green standard in glass

The Ecosense range of soft-coated glass products provide the right blend of daylight and energy saving, visual comfort and thermal control, technology and eco-sensitivity.

Our Ecosense range includes:

- ▶ Enhance – Solar Control
- ▶ Exceed – Solar Control Low-E
- ▶ Essence – Low-E
- ▶ Edge – Solar Control & Thermal Insulation (Can be used as SGU)
- ▶ Excel – Double Low-E



**renew**  
retrofit solutions

AIS Renew is a retrofitting solution, specially designed to give old buildings a new lease of life. This unique product is attached on top of an existing glass window, to convert it into an energy-saving insulated glass. AIS Renew effectively reflects the sun's heat away from the building and keeps the interiors cool. This helps in reducing the usage of air-conditioning, thus conserving electricity.

- ▶ Protects the building from sun's heat
- ▶ Offers excellent noise-reduction as it has acoustic properties
- ▶ Significant reduction in dew condensation
- ▶ Short installation period (30 to 60 minutes per window)
- ▶ Low cost installation & no periodic replacement
- ▶ Quick payback period



# State-of-the-art facilities

---

Until recently, glass was considered a fragile material, and its usage was therefore limited. Today, with the development of innovative construction techniques and glass-processing methods, glass is manufactured to deliver superior performance and added value.

Our manufacturing units are equipped with state-of-the-art machinery that deliver a whole range of high quality processed and value-added glass products that meet international standards. These plants are located at:

- ▶ Roorkee, Uttarakhand (North)
- ▶ Taloja, Maharashtra (West)
- ▶ Chennai, Tamil Nadu (South)

Roorkee



Chennai



Taloja



## Capabilities of our facilities

- ▶ Glass preprocessing is carried out in all these facilities with multiple lines of machinery for drilling, cutting, and grinding to ensure seamless and end-to-end glass solutions.
- ▶ Highly trained technicians who conduct stringent quality tests.
- ▶ State-of-the-art machinery to offer a wide variety of shapes and sizes, customized to precise requirements.
- ▶ World-class drilling, grinding, and cutting equipment to provide quick and precise holes and edges as per requirement.
- ▶ Fully equipped to handle both soft-coat as well as hard-coat glass products.
- ▶ To improve efficiency, we use specialized equipment such as:
  - ▶ Forvet Drilling Machines that have the capacity of drilling up to 70 panels / shift
  - ▶ Tamglass Tempering Furnace that can temper glass products including clear float glass, ultraclear glass, coloured glass, Low-E glass, and hard- and soft-coated glass

# Quality Standards

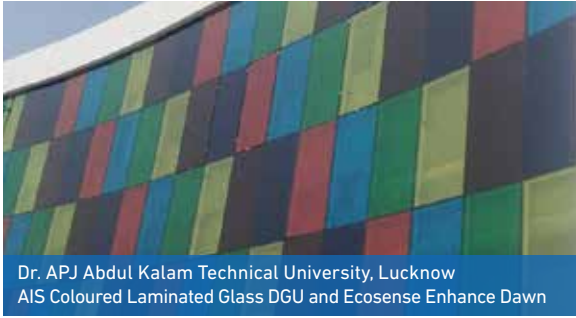
## Certified to the highest levels of quality

At AIS, we do not compromise on quality of the product that we deliver. Our products are put through stringent inspections in our well-equipped laboratory and testing facilities, to ensure highest quality. After inspection, they are stored in a clean environment. All our products adhere to the following international standards:

- ▶ ISO 9001:2008
- ▶ TS 16949:2009
- ▶ OHSAS 18001:2007
- ▶ IS 2553 Part 1
- ▶ IS 2553 Part 2 (Tempering)
- ▶ ECE Marking for lower thickness (Cat. I, II, & III)

Product Name	Test Conducted	Reference Standard
Toughened Glass	Thickness & Dimension Test	IS 2835
	Roller Waviness Test	ASTM C 1651
	Compressive Stress Measurement	EN 12150-1
	Fragmentation Test	IS 2553-1
	Ball Drop Test	IS 2553-1
	Bend / Bow Test	IS 2553-1
	Shot Bag Test	ANSI Z97.1
	Local Bow	IS 2553-1
	Overall Bow	IS 2553-1
Insulated Glass Unit	Thickness & Dimension Test	EN 1279-1
	Climate Test	EN1279-6
	Initial Dew / Frost Point	JIS R 2309
	Initial Moisture Content	EN1279-2
	Climatic Exposure (Part-1 & Part-2)	EN 1279-2 & EN1279-6
	Final Dew / Frost Point	JIS R 2309
	Final Moisture Content	EN 1279-2
	Butterfly Test	ASTM E 2190-02
	Desiccant Test	ASTM E 2190-02
	Hardness Test	ASTM E 2190-02
	Peel Off & Pot Life Test	ASTM E 2190-02
Laminated Glass	Boil Test	ASTM C 1172-03
	Bake Test	ASTM C 1172-03
	Pummel Test	ASTM C 1172-03
	Ball Drop Test	ASTM C 1172-03

# Landmarks in Glass with AIS



Dr. APJ Abdul Kalam Technical University, Lucknow  
AIS Coloured Laminated Glass DGU and Ecosense Enhance Dawn



Maruti Nexa Showrooms, Multiple cities across India  
AIS Décor Sparkling Snow White and Black Pearl



An office in Gurugram  
AIS Coloured Laminated Glass Ruby Red



Kochi Airport  
AIS Décor Sparkling Snow White and Black Pearl



Reliance, Mumbai, AIS Clear Essence,  
Ecosense Enhance – Nectar & Snow



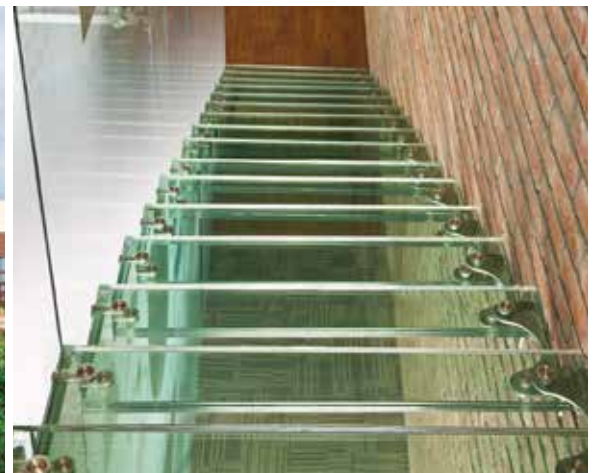
Suratwalla, Pune  
Ecosense Enhance – Cove



Residence in Bengaluru  
AIS Fabric-Laminated Glass



Farmhouse  
AIS Stronglas & AIS Securityglas



Showroom in Gurugram  
AIS Securityplus



Asahi India Glass Ltd.



**AIS Glass Solutions Ltd.**

Unit No. 209–210, Tribhuwan Complex,  
Ishwar Nagar, Mathura Road, New Delhi – 110 065

Tel: (011) 4945 4900

E-mail ID: [seemore@aisglass.com](mailto:seemore@aisglass.com) | [www.aisglass.com](http://www.aisglass.com)

Experience glass in a whole new way!  
Download the **“AIS – World of Glass”** app from

