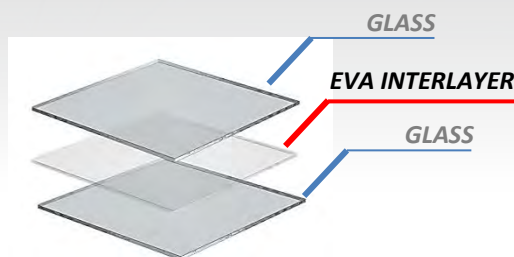


High Performance “Thermosetting” Interlayer  
for Architectural and Design Lamination

## INTRODUCTION

**VISTASAFE™** is a series of innovative EVA copolymer-base interlayers developed by TPI All Seasons Company Limited, specifically for the laminated safety glass industry. Made from world class quality EVA resins, **VISTASAFE™** is formulated for ease in processability, excellent optical properties, and long term stability.



### Super Clear Series

| VS102    | VS103                 | VS104           |
|----------|-----------------------|-----------------|
| Standard | Premium Architectural | PDLC Lamination |



#### VS102 Standard :

VS102 offers good fluidity, which works well with patterned glass and fabric insert application. It additionally offers high clarity, excellent adhesive strength and long term durability suitable for both interior and exterior applications.

#### VS103 Premium Architectural :

VS103 offers special physical properties, specifically its adhesive, cohesive and tensile strengths, while provides superior optical properties. It is suitable for both interior and exterior architectural applications. It additionally offers ease in operation allowing for lower edge flow-out.

#### VS104 PDLC Lamination :

VS104 is engineered for PDLC lamination with good fluidity, excellent adhesive strength and clarity.

### White Series

| VS301                                | VS401                             |
|--------------------------------------|-----------------------------------|
| Premium Architectural - Winter White | Premium Architectural - Sandblast |



#### VS301 and VS401 : Premium Architectural

The White Series offer white (VS301) and sandblast (VS401) visuals, allowing for varying degree of privacy.



## INTRODUCTION

### Specifications

| Grade | Color                                    | Optical properties               |                    |                        |                  | Mechanical properties       |                          |                            |                                    | Other properties        |                                |                 |
|-------|--|----------------------------------|--------------------|------------------------|------------------|-----------------------------|--------------------------|----------------------------|------------------------------------|-------------------------|--------------------------------|-----------------|
|       |  | % Transmittance<br>(360-1100 nm) | UV cut off<br>(nm) | % Haze<br>(LG 33.1)*** | Refractive index | Adhesion to glass<br>(N/cm) | Young's modulus<br>(Mpa) | Elongation at break<br>(%) | Tensile strength at<br>break (Mpa) | Water absorption<br>(%) | WVTR<br>(g/m <sup>2</sup> 24h) | % Cross-linking |
| VS102 | Super Clear<br>Standard                  | ≥ 97                             | 360                | ≤ 0.3                  | 1.481            | ≥ 70                        | 9                        | > 450                      | ≥ 11                               | < 0.1                   | ≤ 30                           | ≥ 90            |
| VS103 | Super Clear<br>Premium<br>Architectural  | ≥ 97                             | 380                | ≤ 0.2                  | 1.481            | ≥ 70                        | 9                        | > 600                      | ≥ 18                               | < 0.1                   | ≤ 30                           | ≥ 90            |
| VS104 | Super Clear<br>PDLC lamination           | ≥ 97                             | 360                | ≤ 0.2                  | 1.481            | ≥ 70                        | 9                        | > 450                      | ≥ 11                               | < 0.1                   | ≤ 30                           | ≥ 90            |
| VS301 | Winter White<br>Premium<br>Architectural | 10-13                            | -                  | 100                    | -                | ≥ 60                        | 10                       | > 500                      | ≥ 11                               | < 0.1                   | ≤ 30                           | ≥ 90            |
| VS401 | Sandblast<br>Premium<br>Architectural    | ≥ 70                             | -                  | 100                    | -                | ≥ 60                        | 10                       | > 600                      | ≥ 15                               | < 0.1                   | ≤ 30                           | ≥ 90            |







\* Gel content and Haze are varies depending upon temperature and time of laminating condition.

\*\* Specimens were cured at proper condition. \*\*\* Low-Iron glass 3+3 mm with 1 layer of VS102&VS103 (0.38m) , VS104 (720g/sqm).

### Dimensions

| Grade                   | Thickness<br>(mm)         | Weight<br>(g/sqm) | Width<br>(mm) | Roll length<br>(m) | Core diameter<br>(inch.) |
|-------------------------|---------------------------|-------------------|---------------|--------------------|--------------------------|
| VS102, VS103            | 0.38 / 0.76 / 1.14 / 1.52 | N/A               | Max. 2600     | 100 / 50 / 40 / 20 | 3                        |
| VS301, VS401            | 0.38                      | N/A               | Max. 2200     | 100                | 3                        |
| VS104 (PDLC lamination) | 0.87                      | 720               | Max.2600      | 40                 | 3                        |

### Additional test reports and certificates

|   |   |   |   |   |   |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| SGCC Listing<br>ANSI Z97.1<br>By SGCC and Intertek                                  | Ball drop<br>EN 356<br>By F&K   | Pendulum test<br>EN 12600<br>By F&K   | Durability test<br>EN ISO 12543-4<br>By F&K   | Sound Insulation test<br>EN ISO 10140-2<br>EN ISO 717-1<br>By IFT Rosenheim         | Glass for building<br>TIS 1222-2539<br>By Thailand automotive<br>institute            |