



# NATIONAL GLASS

D I S T R I B U T I O N

Johannesburg - Cape Town - Port Elizabeth - Pretoria - Nelspruit - East London - George

## COOLVUE LAMINATED (PVB) GLASS

### STANDARD SIZES

	6.76 mm	6.76 mm	8.76 mm
Sizes mm	2440x2000	2440x2000	2440x2000
Clear	S	R	R
Serene Green	R	R	R
Grey	S	R	R
Regal Blue	S	R	R

*S: Available as standard*

*R: Available on request subject to order quantity and sheet sizes*

## PRODUCT SPECIFICATIONS

PRODUCT	VISIBLE LIGHT		SOLAR ENERGY					SHADING CO-EFFICIENT	U VALUE	UV	NOISE CONTROL	SAFETY AND SECURITY
	transmission	reflection	Total elimination	reflectance	absorption	Direct transmission	Total transmission	ratio	(W/m2).K	Elimination %	ISO rating / STC value	rating
<b>COOLVUE</b>												
<b>CLEAR</b>	72%	8%	53%	26%	37%	37%	47%	0.54	5.8	>99%	35	2
<b>REGAL BLUE</b>	47%	7%	61%	26%	48%	26%	39%	0.45	5.8	>99%	35	2
<b>GREY</b>	35%	6%	66%	25%	55%	20%	34%	0.40	5.8	>99%	35	2
<b>SERENE GREEN</b>	63%	7%	59%	23%	50%	28%	41%	0.48	5.8	>99%	35	2

## **TERMS AND DEFINITIONS**

### **COATED GLASS**

Glass with a chemical coating applied to one surface of the glass.

### **COATED INTERLAYER**

Interlayer made from multiple stacks of coating also known as sputtered coated products.

### **SHADING COEFFICIENT**

Clear Float Glass (CFG) has a shading coefficient of 1. Therefore, a shading coefficient of 0.54 represents a reduction of 54% of the heat that would have been transmitted when compared to a single sheet of CFG.

### **GLAZING GUIDE**

CoolVue is a sided product, meaning that its appearance will vary when viewed from different sides. Care must be exercised when cutting and glazing to ensure a uniform appearance. Stock sheets are labelled by the factory to indicate the coated side. CoolVue must only be installed with the coating towards the sun.

### **SAFETY AND SECURITY RATINGS:**

1. Normal Strength (NS) for human impact safety (0.38 mm PVB interlayer);
2. High Penetration Resistant (HPR) for additional security (0.76 mm PVB interlayer);
3. High Impact (HI) for security in high-risk applications (1.52 mm PVB interlayer).

## EDGE WORKING

- Coolvue must be edge-sealed.
- Once Coolvue has been cut and polished, it has to be sealed with Betaseal. Product code: UCO.02
- Warranty will fall away if not used
- The edges of all heat absorbing glass must be polished to reduce the possibility of thermal breakage.
- Polished edges eliminate the presence of vented faults, chips and flaws.
- Smooth polished edges are best produced by a straight line polishing machine.

### **Visible Light**

This is made up of all colours of the rainbow, it is the light humans can see. It is also known as “white light”.

### **Visible Light Transmission**

The percentage of visible light transmitted through the glass when the sun shines at right angles to the surface of the glass. Higher visible light transmission makes a building look more transparent from the outside and creates a lighter interior.

### **Visible Light Reflection**

The percentage of visible light reflected from the surface of the glass, when the sun shines at right angles to the surface of the glass. The reflection increases as the angle of the sun decreases.

### **Solar Energy**

Solar energy is high temperature energy radiated by the sun. It is the energy received from the sun on the surface of the earth. This includes the energy from the ultraviolet, visible and infrared segments of the solar spectrum.

- **Solar Heat Elimination**  
The portion of the sun’s energy stopped by the glass or glazing system. This value will change when subjected to varying environmental conditions. The environmental conditions, which affect solar heat elimination, include air speed against both surfaces of the glass and temperature.
- **Solar Energy Control**  
A solar control glazing system **Reflects, Absorbs and Transmits (RAT)** solar energy. Laminated glass contains an interlayer. Energy that would pass through clear glass is absorbed by this interlayer. A variety of interlayer colours are available to absorb solar radiation – the darker the colour, the greater the solar control. The increased use of glass in architecture today makes it imperative to consider the comfort of a building’s occupants and energy efficiency.

*Example:*

**Grey Solarvue XHL RAT**

**Reflectance**            9

**Absorption**            63

**Direct Transmission**    28

**100 (RAT always = 100)**

- **Reflectance**

The parts of the sun's energy which is reflected by the glass.

- **Absorption**

The part of the sun's energy which is absorbed into the glass.

- **Direct Transmission**

The part of the sun's energy which passes directly through the glass.

- **Total Energy Transmission**

The sum of the direct energy transmission and the portion of the absorbed energy that is radiated to the interior of the glazing system. Also called Solar Heat Gain Coefficient (SHGC).

### **Shading Coefficient**

Shading Coefficient is a measure of the total amount of heat passing through the glazing system (known as the solar heat transmittance) compared to a single clear glass. Clear Float Glass (CFG) has a shading coefficient of 1. Therefore, a shading coefficient of 0.50 represents a reduction of 50% of the heat that would have been transmitted when compared to a single sheet of CFG. In other words the lower the shading coefficient, the less solar heat is allowed into the building.

*How to calculate?*

*SC = Total Energy Transmission (TET) of the glass (87 is the total energy transmission for CFG)*

### **U-factor (U-value)**

The lower the better!! The U-factor measures how well a product prevents the conductance/transfer of heat or cold through building material. A lower U-factor means a better insulated window or door.

### **Ultraviolet Light (UV)**

Ultraviolet rays are found in everyday sunlight and can cause fading of paint finishes, carpets and fabrics.

**Thermal Insulation**

The ability to restrict the flow of heat.

**Coated Glass**

Glass with a chemical coating applied to one surface of the glass. The coating can provide such enhanced performance characteristics such as privacy, solar control or mirror effects.

**Coated Interlayer**

Interlayer made from multiple stacks of coating also known as sputter soft coated products. The coating is encapsulated inside the interlayer.

**Coated Densities**

The thicker the coating, the less light is transmitted through the glass.

- High Light (HL) - 40%
- Extra High Light (XHL) - 50%
- Super High Light (SHL) - 60%
- Mega High Light (MHL) - 70%
- Ultra High Light (UHL) - 80%

**Annealed Glass**

To prevent or remove stresses in glass by controlled cooling. It is in fact “ordinary” glass as taken from the production line and stored in stock plates. Annealed glass, when broken, gives large fragments with sharp edges and so is not classified as a safety glass.