

TRANSPARENT SHEET

# TRANSLITE

# FIBREGLASS REINFORCED POLYESTER

## Extra Strength & Durable




- Fire resistant
- High weather resistance
- Big saving in energy costs
- Easy installation and maintenance
- Resistant to numerous kinds of chemical
- High impact resistance (Rigid construction)
- No direct sunlight "shading or spotting" effect
- Filter almost 99% of the harmful ultraviolet rays
- Excellent reflection of solar heat and reducing heat transmission






For more info, please reach us at:

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SIRIM QAS INTERNATIONAL

Certified to ISO 9001:2008

*Another* ***quality product*** *from*

COLFORM

Extra Strength & Durable

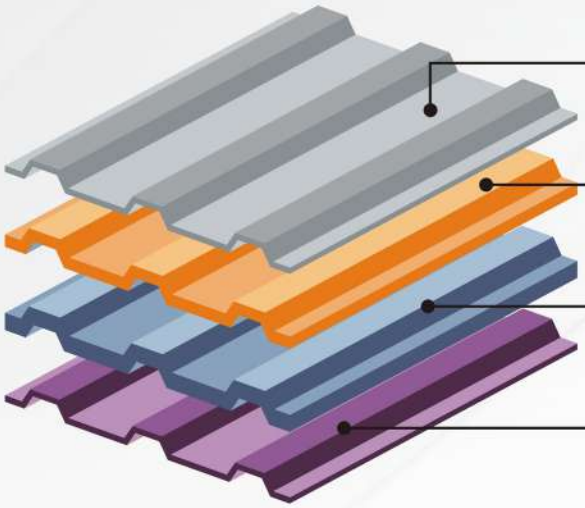
# Fibreglass Reinforced Polyester

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## PRODUCT SPECIFICATIONS

| Weight | Colour | Thickness (tolerance of +/- 10%) | Standard Length |
|---|---|---|---|
| 1800 GSM | Ice Clear | 1.2 MM | 11.9 M |
| 2400 GSM | Ice Clear | 1.5 MM | 11.9 M |

## TOTAL 4 LAYERS



**1ST LAYER**
UV Polyester Film

**2ND LAYER**
E-Glass Chopped Strand Mat

**3RD LAYER**
Special Formulated Resin System

**4TH LAYER**
Standard Polyester Film

## PHYSICAL PROPERTIES

| Properties | 1800 GSM | 2400 GSM | Method |
|---|---|---|---|
| Tensile Strength (MPa) | 80 | 99 | ASTM D 5083 |
| Impact Strength (KJ/m²) | 55 | 65 | ASTM D 256 |
| Modulus of Elasticity (MPa) | 6480 | 7840 | ASTM D 5083 |
| Flexural Strength (MPa) | 295 | 216 | ASTM D 790 |
| Specific Gravity at 23°C | 1.08 | 1.44 | ASTM D 792 |
| Thermal Conductivity (watt/mK) | 0.029 | 0.031 | ASTM D 177 |
| Water Absorption in 24hrs/23°C (%) | 0.17 | 0.20 | ASTM D 570 |

## LOAD DEFLECTION PROPERTIES

| Properties | 1800 GSM | 2400 GSM | Method |
|---|---|---|---|
| Load Deflection ≤15 mm | 10.0 mm | 6.3 mm | BS 4154 : Part 1 : 1985 |

## LIGHT TRANSMISSION PROPERTIES

| Colour | 1800 GSM | 2400 GSM | Method |
|---|---|---|---|
| Ice Clear | 67% | 63% | ASTM D 1003-2007 |

## SOLAR TRANSMISSION PROPERTIES

| Colour | Grammage | Solar Direct Transmittance | Ultra Violet Transmittance | Total Solar Energy Transmittance | Method |
|---|---|---|---|---|---|
| Ice Clear | 1800 GSM | 11.4% | 0.01% | 0.32 | ISO 9050: 2003 |
| Ice Clear | 2400 GSM | 6.34% | 0.01% | 0.30 | ISO 9050: 2003 |

### UV Polyester Film — 1ST LAYER

Weather surface polyester film incorporates UV inhibitors and offers protection against early yellowing and degradation of surface of the sheet.

### E-Glass Chopped Strand Mat — 2ND LAYER

Reinforced with high quality E-glass chopped fibre strandmat that has the ingredient of high quality binder which acts as the interlink for their own strength and has a good ability to extend and shrink according to the weathering condition.

### Special Formulated Resin System — 3RD LAYER

Orthophthalic Resin offer good mechanical properties, moderately reactive for general usage. Light diffuser additive enables distribution of light evenly.

### Standard Polyester Film — 4TH LAYER

Weather surface polyester film incorporates profile stability properties.

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## FLAMMABILITY PROPERTIES

| Colour | Grammage | Linear Burning Rate | Method |
|---|---|---|---|
| Ice Clear | 1800 GSM | 25 mm/min | ASTM D 635-2010 |
| Ice Clear | 2400 GSM | 21 mm/min | ASTM D 635-2010 |

## THERMAL INSULATION PROPERTIES

| Colour | Grammage | Thermal Conductivity (k - value) | Resistance of Heat Transmission (Ra - Value) | Thermal Transmittance (U - Value) | Method |
|---|---|---|---|---|---|
| Ice Clear | 1800 GSM | 0.04 W/m.k | 0.16m².K/W | 6.21 W/m².K | ISO 8990 : 1994 |

### SCREW SYSTEM PROFILE: TL 01




### CLIP SYSTEM PROFILE: TL 02




## PERFORMANCE COMPARISON



TRANSLITE FRP SHEET
- after 2 years



OTHER BRAND FRP SHEET
- after 2 years

## COMPARISON BETWEEN
## FIBREGLASS REINFORCED POLYESTER (FRP) & POLYCARBONATE

Transparent Roofing Sheet materials will categorize all transparent sheet to be of same product, but it is important to know that there are great differences between these products.

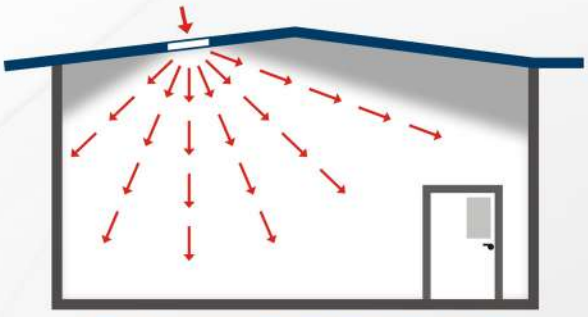
Fibreglass does not rot and remains unaffected by the action of rodents and insects and has low thermal conductivity making it highly useful in the building industry.

+ **More Durable with higher gauge thickness compare to Polycarbonate.**

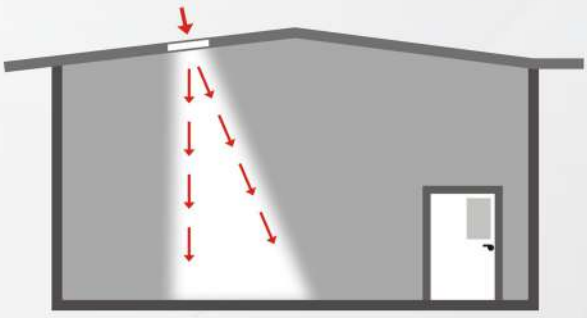
+ **Higher Mechanical strength properties**
compare to Polycarbonate.

+ **High Ultra Violet light resistance feature**
Filter 99% of the harmful ultraviolet rays
compare to Polycarbonate.

+ **Scattered Light For Wider Area**
FRP is a skylight panel that can refract sunlight into the scattered light. But polycarbonate or acrylic will allow the direct sunlight pemetrating through the sheet without any refraction that may cause us uncomfortable feeling and glazing surrounding.



FIBREGLASS REINFORCED POLYESTER SHEET
(Wider Light Area)

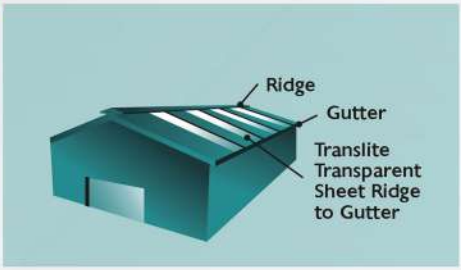


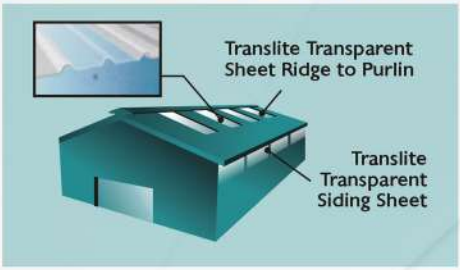
POLYCARBONATE SHEET
(Narrow Light Area)

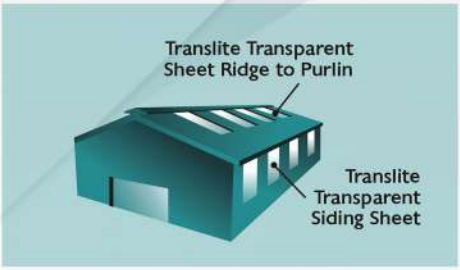
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## ✓ RECOMMENDED DESIGN TIP

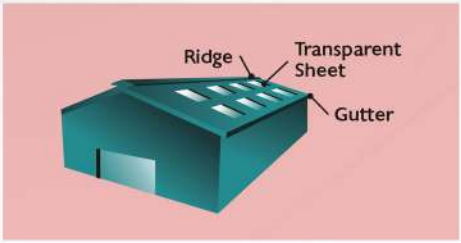


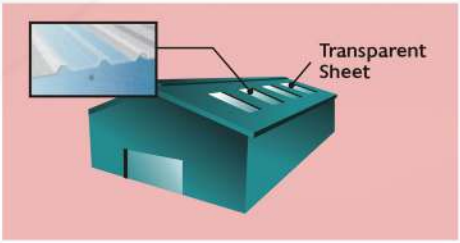



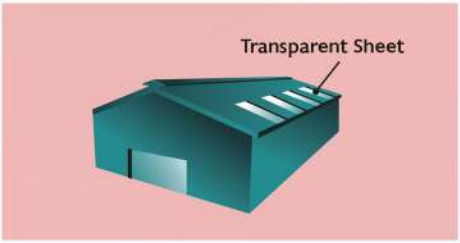




1. It is recommended to start fiberglass sheeting installation from the ridge capping will help prevent leak.
2. Fiberglass transparent sheeting must be placed above metal roof due to its thermal expansion is higher than metal sheet's thermal expansion while its strength is lower.
3. Installing transparent sheets on side will add illuminance.
4. Generally recommended quantity fiberglass transparent sheeting is not less than 10% of total roof area.

## ✕ NOT RECOMMENDED




1. Good fiberglass transparent sheet must diffuse light evenly instead of split themselves to an area where light required.
2. In case of FRP sheets splitting is required, they must be placed above metal sheet to prevent any FRP damaging.
3. In case "not recommended" installation is unavoidable, 2 continuous beads of clear non-hardening silicone sealant EPDM cover strip tape must be applied to prevent leaks.

## EDGE INSTALLATION




**CORRECT** INSTALLATION

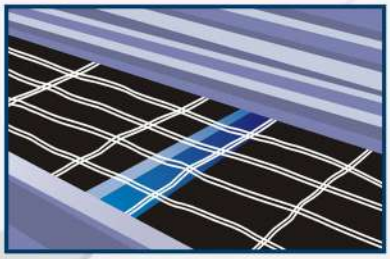




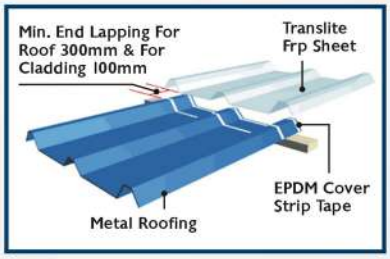

**WRONG** INSTALLATION



## INSTALLATION GUIDE



Start metal roof installation first and leave opening for fibreglass sheet.




Miniumum end lapping is 300mm and to be on top of purlin with 2 strips of EPDM cover strip tape or clear non-hardening silicone sealant.



Put the fibreglass sheets in place with both sides on the metal roof and screw.