

BETTER
TRANSPARENCY OF LIVING



ShinkoLite™

A transparent acrylic sheet

A new innovation

Exceptional aesthetics

Superior weatherability and durability

Perfect choice for every design for roof, awning,
cover for walkway, parking, gazebo.



Choose SHINKOLITE transparent acrylic sheet that offers a modern, aesthetic beauty.
SHINKOLITE offers ultimate relaxation from natural lighting.

Jointly developed by SCG Chemicals and Mitsubishi Chemical Corporation of Japan, Shinkolite transparent acrylic sheets are available in PRIME, HEAT CUT, NATURE, SUPERIOR. The five categories that make it ideal for use in a new lifestyle that brings you closer to nature.

Why choose a SHINKOLITE transparent sheet

Distinctive with appearance

- Offers a sleek surface with modern aesthetic beauty,
- More than 10 years of durability.
- Only weighs half as much compared to glass.
- Continuous cast acrylic material protects against mold, water, moss or noise during heavy rain.
- Continuous cast SHINKOLITE acrylic is safe and will not break into granular chunks or break into jagged pieces.
- Flexible and can be bent into shape to achieve beautifullycrafted end results. It can also be easily cut or shaped to fit with any designs.
- Able to withstand stronger impact compared to a mirror with the same thickness.



PRIME



BROWNISH GREEN



MODERN GREY

COLOR	CODE	 LIGHT TRANSMITTANCE* (%)	 HEAT CUT* (%)
BROWNISH GREEN	PR-562	13	75
MODERN GREY	PR-N828	14	69

*Accordingly to ISO 9050 test

“Big skylight, luxurious, worth the value, heat reduction”

SHINKOLITE transparent acrylic sheet PRIME

New thickness 10mm with a unique character in heat reduction which is able to reduce the heat up to 6 degree celsius* HEAT CUT cuts up to 69 - 75%*. PRIME comes with 2 colors of choice: brownish green and modern grey, adding modern aesthetics and comfortable environment to your transparent space. PRIME requires less construction, fits any designs without limitations.

- **Thickness** : 10 mm
- **Size** : 1380 x 3000, 6000 mm
- **Purlin size** : 100 cm

HEAT CUT



CLASSIC BROWN



NOBLE GREEN



ROYAL BLUE



MODERN GREY





“Adding shade to your space, heat protection, light - filtration with modern look”

SHINKOLITE transparent acrylic sheet HEAT CUT

With a unique character of protection against heat, it can reduce the heat from sunlight up to 5 degree celsius* HEAT CUT cuts up to 48 - 59%*. HEAT CUT helps save energy, adding more shade and space into the area as well as reducing heat. HEAT CUT comes with 4 colors: CLASSIC BROWN, NOBLE GREEN, ROYAL BLUE, MODERN GREY. Shinkolite™ transparent acrylic sheet HEAT CUT's excellent qualities make it ideal for rainproofing, heat reducing and light transmission purposes while adding beauty and modernity to the area.

- **Thickness** : 6 mm
- **Size** : 1380 x 3000, 4000, 5000, 6000 mm
- **Purlin size** : 50 cm

COLOR	CODE	 LIGHT TRANSMITTANCE* (%)	 HEAT CUT* (%)
CLASSIC BROWN	HC-570	29	56
NOBLE GREEN	HC-N590	19	59
ROYAL BLUE	HC-B703	23	48
MODERN GREY	HC-N828	15	58

*Accordingly to ISO 9050 test

NATURE



CLEAR



LIGHT GREY

COLOR	CODE	LIGHT TRANSMITTANCE* (%)
CLEAR	NT-001	90
LIGHT GREY	NT-332	70

*According to laboratory tests

“Transparent, Rainproof, Transmit light.”

SHINKOLITE transparent acrylic sheet NATURE

Comes with beautiful and unique characters, NATURE is able to filter light and protect against UV rays. NATURE comes with 2 choices of color: clear and light grey, adding space, modernity and comfortable environment to your area with natural lighting.

- **Thickness** : 6 mm
- **Size** : 1380 x 3000, 6000 mm
- **Purlin size** : 50 cm

SUPERIOR



GLASS FROSTED



LIGHT BROWN



FOGGY BROWN



MARINE BLUE



COLOR	CODE	LIGHT TRANSMITTANCE* (%)
GLASS FROSTED	SP-NB00	50
LIGHT BROWN	SP-NC95	70
FOGGY BROWN	SP-NB30	45
MARINE BLUE	SP-B857	26

*According to laboratory tests

“Transparent, Light transmission quality, UV protection, Affordable.”

SHINKOLITE transparent acrylic sheet SUPERIOR

Exceptional aesthetics and affordable make SUPERIOR acrylic sheets perfect for space that prefers natural light with light filtering and UV protection. SUPERIOR comes with 4 colors of choice: GLASS FROSTED, LIGHT BROWN, FOGGY BROWN, MARINE BLUE. Its versatility and unique characters comes at an affordable price.

- **Thickness** : 6 mm
- **Size** : 1380 x 3000, 4000, 5000, 6000 mm
- **Purlin size** : 50 cm

SHINKOLITE 7S Factors to consider

- SPACE** : Space needs to be open at least on 2 sides. The installation cannot be near fire or any source of heat such as an oven. The roof must be at least 3 meters higher from the floor.
- SAVE COST** : The adjustment is recommended for the area of installation to reduce the loss of acrylic sheets that could affect the price. For example, the awning of 1 meter, 1,5 meter, 2 meters, 2,5 meters fit the size of the acrylic sheets.
- STRUCTURE** : Prepare the structure to be accurate according to the assigned spacing. Purlin size not exceeding 50 cm. Rafter size not exceeding 1.392 cm. The rafter and purlin are parallel. In the case that the roof goes over 6 meters long, the stairs structure is needed with the appropriate size of metal structure.
- SLOPE** : 5 degree Slope
- SPARE GAP** : The spare gap is needed at 12-14 mm for the possible shrinkage and expansion by the sunlight. The spare gap to the eaves is not over 10cm.
- SCREW** : Use the screw first and then use the router bit to go further. The screw needs to be in the middle of the hole (router bit size 12.4 mm). Never use the screw on the sheets directly.
- STAIN** : Use the water hose to clean the dust and follow with a soft sponge and or a cloth soaked in water mixed with dishwashing soap. Do not use mirror cleaner or thinner to clean the sheets.



Shade your space, for a cooler life



SHINKOLITE Shade acrylic sheet Pearl White

SHINKOLITE Opaque Shade Series is becoming more and more popular. For a customer's house who wants a flat roof and has a solid color, not transparent because this acrylic sheet is a pearly white color that looks beautiful.

Therefore suitable for garage roof work Sun roof in front of the house Awning roof behind the house most of them are used to replace vinyl roofs, poly roofs or uPVC roofs (UPVC).

- **Thickness** : 4 mm
- **Size** : 1380 x 3000, 4000, 5000, 6000 mm
- **Purlin size** : 40 cm

- Reflect heat Infrared radiation more than 60%, reducing heat up to 10 degrees Celsius.
- Reflects up to 70.8% of the sun's rays (Solar).
- Pearl white looks soft and blends in with nature. Suitable for every home style especially modern style
- The sheet is weather resistant, can be used for a long time, the color does not yellow or fade easily. (Simulated with QUV Test)
- It has an elongation and contraction distance of about 0.3-0.4%.
- The sheet weight is approximately 4.76 kg/square meter.



Shield your space, shade your home



Long Lasting Beauty

Beautiful, long-lasting, durable in all conditions through the simulation of QUV Test



Heat Reflection 50%

Reflects heat more than 50% (NIR/Solar)



Heat Reduction 10°C

Reduce the temperature by 10 degrees

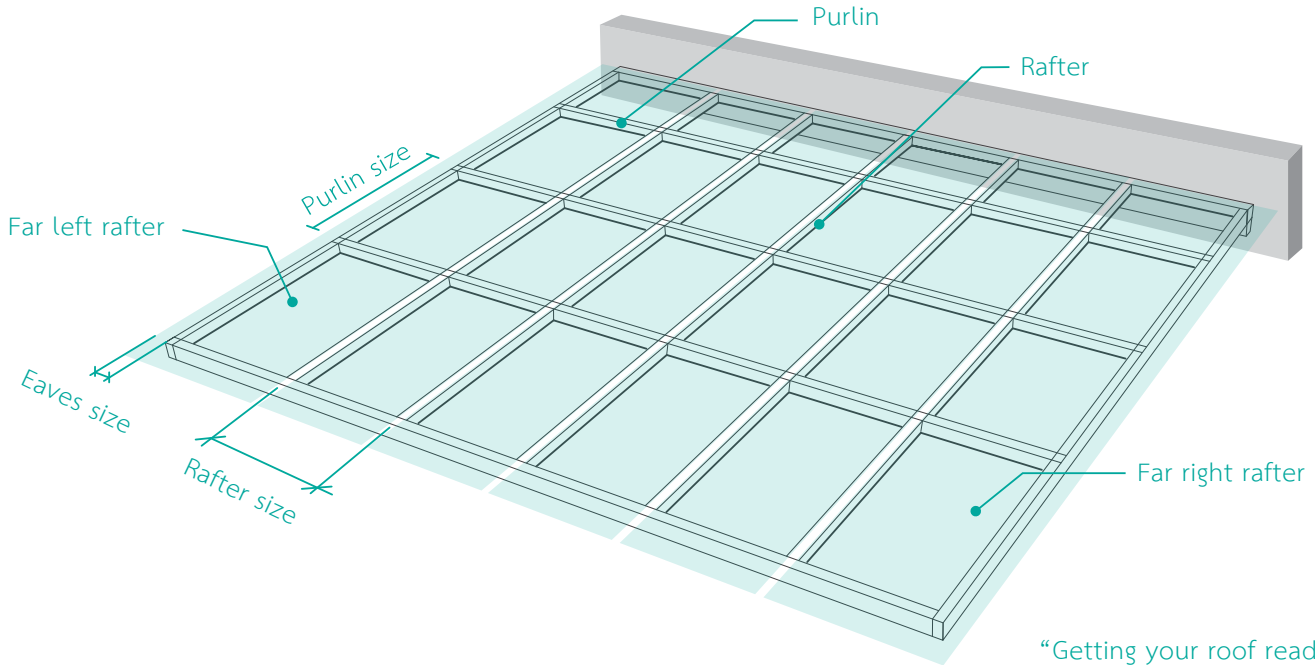


Less Joints, Low Risk of Leaks

Less joint structure reduce the risk of water leaks

Preparing the Roof Structure

Check that the rafter and purlin are parallel. The size of both rafter and purlin are as recommended.

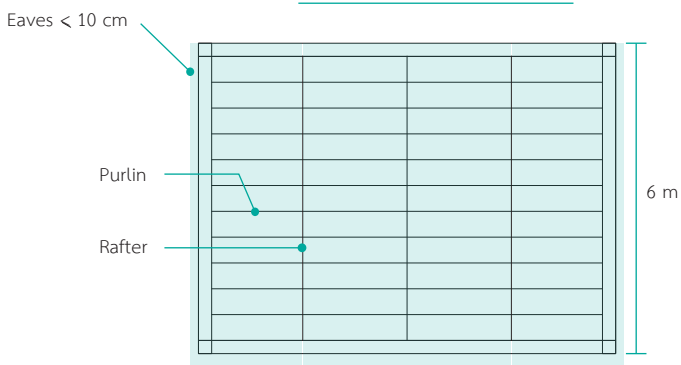


“Getting your roof ready for SHINKOLITE is not that hard”

NOTE

Only the size of the far left and far right rafter are needed to have some spare gap for the eaves. Therefore, those will be narrower than the rest of the rafters in order to leave the gap at the rafter’s edge.
 * The size of the rafter should be wider and thicker than the acrylic sheets at least 6 mm per each side to leave space for the shrinkage and expansion and to avoid long term deflection.

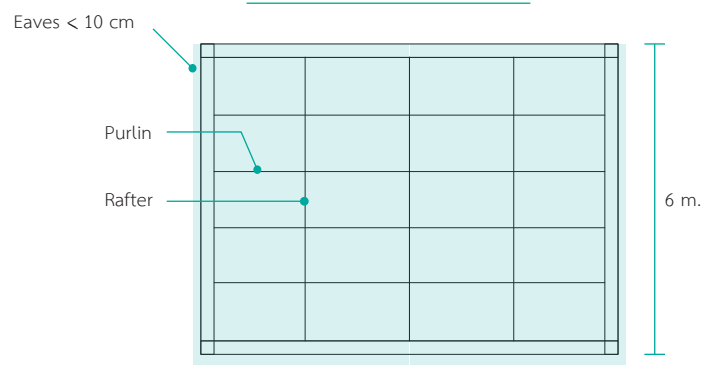
Structure of 6 mm Sheet



Thickness	Purlin	Rafter	Rafter* (left / right)
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6 mm 500 mm ≤ 1392 mm 1286 mm*

Structure of 10 mm Sheet



Thickness	Purlin	Rafter	Rafter* (left / right)
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10 mm 1000 mm ≤ 1392 mm 1286 mm*

*Please study more information from the SHINKOLITE transparent acrylic sheet installation manual.

GENERAL INSTRUCTION

- The structure needs to be tilted at least at 5 degree to drain the water. See picture (Picture 1)
- For longer use of acrylic sheets, avoid installing near the area with heat higher than 70 degree celsius or the area with fire such as an oven or grill.
- The eaves should not be longer than 10 cm from the metal structure. Adjust the rafter size on the far left and far right accordingly.
- Install the SHINKOLITE transparent acrylic sheets in an open space only (at least 2 sides open) such as awning, cover for walkway or parking, balcony.

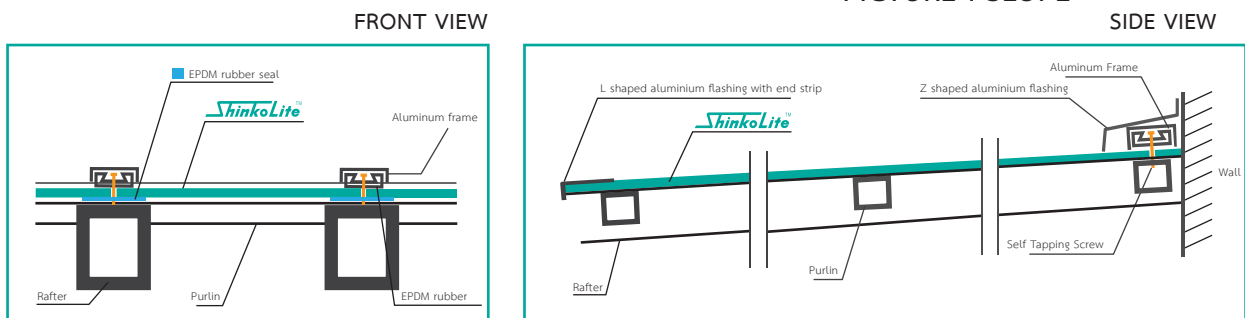
CARE INSTRUCTION OF ACRYLIC SHEET BEFORE INSTALLATION

- Acrylic sheets should be kept on a pallet or a high shelf to keep away from humidity.
- Acrylic sheets should be kept in a dry place and away from sunlight for longer use.
- Never use PVC plastic sheets to cover the acrylic sheets from the sun after removing the film.

CAUTION

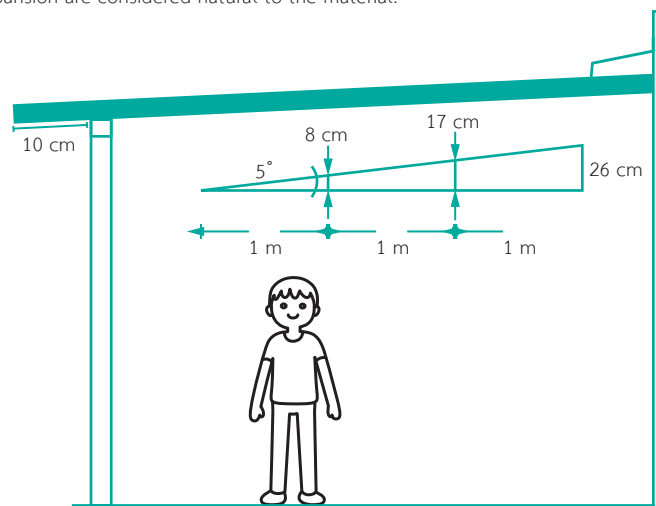
- Avoid stepping on acrylic sheets without the metal structure for users safety and damage prevention to the sheet (crazed with cracks).
- Do not use other installation tools that are made from PVC material and make contact with SHINKOLITE transparent acrylic sheet (for example, rubber sheet flashing, adhesive tape)
- Be cautious about the sharp edge or the corner. For safety and aesthetic purpose, please install flashing on the acrylic sheet's edge.
- Take out the film within 2 weeks.

INSTALLATION



SPECIFICATION OF THE MATERIAL

- Due to the nature of plastic, there will be shrinkage and expansion when faced with sunlight. This might cause waves on the sheets that are normal.
- Noises from shrinkage and expansion are considered natural to the material.



PICTURE 1 SLOPE

Patterns of SHINKOLITE Roof Structure Installation



PATTERN A FOLDING ARM*

Folding Arm

Box of metal rafter 4" x 2" x 2.3 thk.mm.

Box of metal purlin 1" x 1" x 2.3 thk.mm.

The space not exceeding 3.00 m

* The wall cannot be precast or hold on to a column or beam.



PATTERN B FLAT BAR ARM

Flat Bar size 4", thickness 9 mm.

Box of metal rafter 4" x 2" x 2.3 thk.mm.

Box of metal purlin 1" x 1" x 2.3 thk.mm.

The span should not exceed 2 meters. Only install on the beam area.



PATTERN C STRUCTURED

Box of metal rafter 4" x 2" x 2.3 thk.mm.

Box of metal purlin 1" x 1" x 2.3 thk.mm.

The span should not exceed 3 meters. Only install on the column area.



PATTERN D COLUMN

Box of metal column 4" x 4" x 2.3 thk.mm.

Box of metal rafter 4" x 2" x 2.3 thk.mm. (depends on the size of the roof)

Box of metal purlin 1 1/2" x 1 1/2" x 2.3 thk.mm. (adjust accordingly)

Up to 3 meters span or accordingly.



PATTERN E OVER 6 METERS SPAN

* Please consult a civil engineer accordingly

The structure must be designed to be separated as steps on stairs.

Note: Please find additional info on <https://www.shinkolite.co.th>



ROYAL BLUE (HC-B703)



CLASSIC BROWN (HC-570)



NOBLE GREEN (HC-N590)



MODERN GREY (PR-N828)



NOBLE GREEN (HC-N590)



MODERN GREY (HC-N828)



FROSTED GLASS (SP-NB00)



MODERN GREY (HC-N828)

Properties of **ShinkoLite™ L**

Property		Test Method	Unit	Value
General	Density ^{a, b}	ISO 1183: method A	g/cm ³	1.19
Optical	Refractive index, n _D ²³	ISO 489: method A		1.49
	Total luminous transmittance	ISO 13468-1	%	93
	Haze	ISO 14782	%	0.5
Mechanical	Tensile strength	ISO 527-2/1B/5	MPa	75
	Tensile strain	ISO 527-2/1B/5	%	4.5
	Modulus of elasticity in tension	ISO 527-2/1B/1	MPa	3200
	Flexural Strength	ISO 178	MPa	120
	Charpy impact strength	ISO 179-1/1fU	KJ/m ²	17
	Rockwell Hardness	ISO 2039-2	Scale M	100
Thermal	Temperature of deflection under load	ISO 75-2: method A	°C	100
	Vicat softening temperature	ISO 306: method B50	°C	110
	Linear expansion coefficient	ISO 11359-2	°C-1	7E-05
	Coefficient of thermal conductivity		W/mK	0.21
	Specific heat		J/g°C	1.5
Electrical	Surface Resistivity	IEC 93	S	> 1E16
Mar Resistance	Pensile Hardness	MCC method (200g load)		2H
	Taber Abrasion (100times)	ISO 9352	%	40
Miscellaneous	Flammability	UL 94		HB
	Water Absorption ^c	ISO 62 method 1 (24 h)	%	0.3

a For transparent, colorless material.

b Colored sheets may have a higher value.

c Value reported refers to a square specimen of edge 50 mm and thickness 3 mm.

Shinkolite™ is a registered trademark of Mitsubishi Chemical Corporation. Typical values should not be used for specification purpose.







Example of SHINKOLITE roof in various formats

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