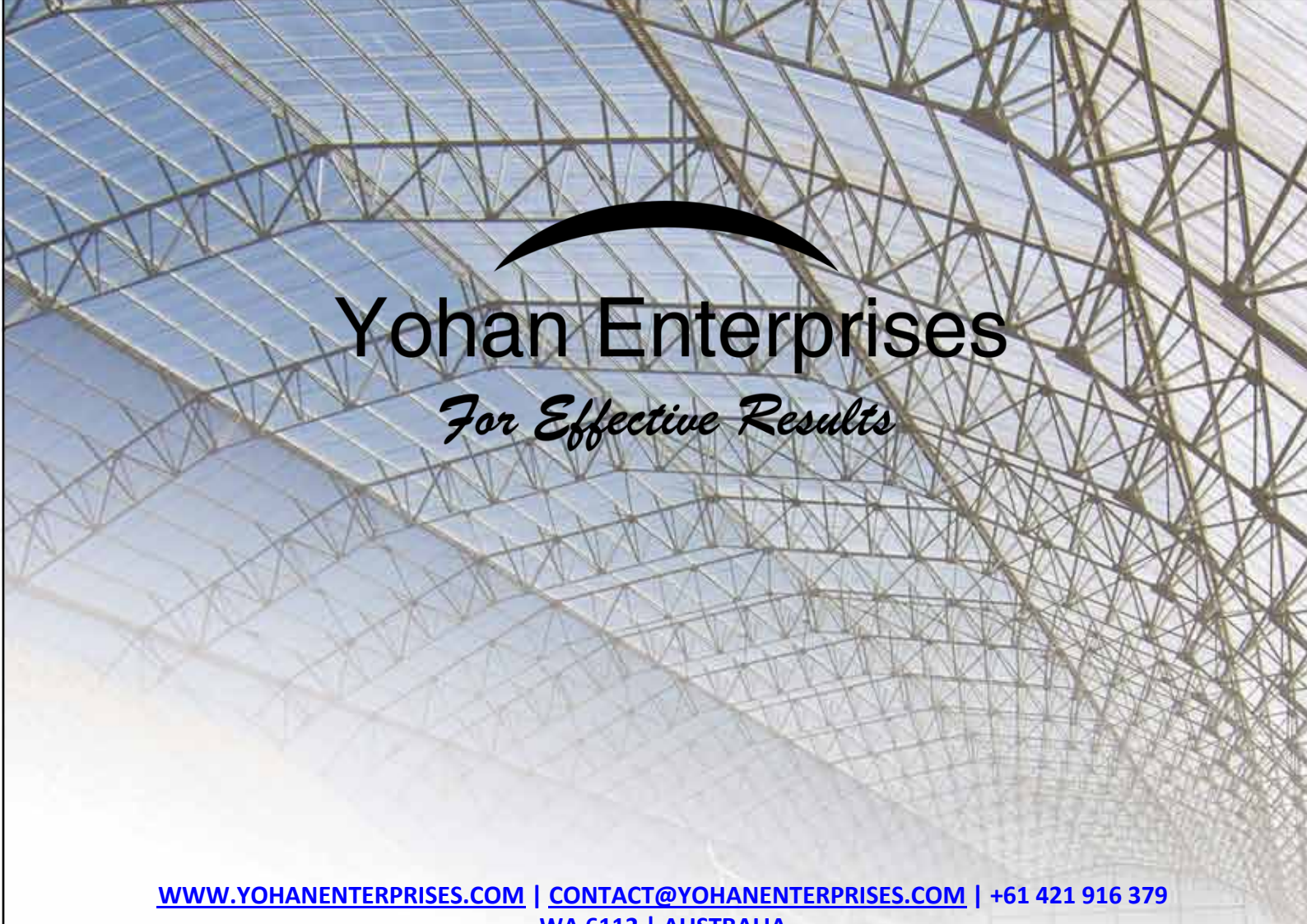




Yohan Enterprises

For Effective Results

WWW.YOHANENTERPRISES.COM | CONTACT@YOHANENTERPRISES.COM | +61 421 916 379
WA 6112 | AUSTRALIA



F.R.P. TRANSLUCENT & OPAQUE SHEETS


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FIBRALAM[®]

 BRAND OF FRP PANELS ARE PROUDLY SUPPLIED
EXCLUSIVELY & DISTRIBUTED IN AUSTRALIA, PHILIPPINES &
VIETNAM BY YOHAN ENTERPRISES PTY LTD, AUSTRALIA



The trademark Fibralam stands for the high quality translucent or opaque, corrugated, trapezoidal, and flat fiberglass reinforced polyester (FRP) sheets manufactured by Polser FRP Panels, Inc. with an annual capacity of 7,000,000 m².

At its 8,000 m² facility located in the Izmir Ataturk Industrial Zone, the products coming out of its modern continuous production lines meet its customers all around the world and in Turkey.

Quality of Polser's products has been certified not only by our customers but also by the most prestigious international testing institutions and by the Turkish Standards Institute's T.S. EN 1013-2 European Quality Certificate.

Polser offers its customers the most innovative products thanks to its intensive R&D studies and to the technical staff which continuously follows the newest technological developments in the FRP materials field.

Polser's corporate motto is "To provide the best service to its customers". Therefore from the moment an order is received till the time the products are delivered, Polser staff make sure that the highest level of service is provided to the customer.

Regardless of the type of application, Fibralam sheets meet your requirements with their performance durability and economy.

When requested, Fibralam sheets may be produced with a protective film or gelcoat layer on the sheet's surface in order to extend the service life of the product by increasing its durability against environmental degrading, UV exposure, and corrosive chemicals.

Fibralam sheets are strong and resilient. They don't rust, rot, scale, mildew and dent. Sheets may also be produced with an embossed, resin rich surface for improved performance.

Fibralam sheets are cost savers for the overall construction thanks to their light weight. This, not only results in faster assembly of the roof but also diminishes the necessity of using a heavier metal construction underneath and therefore brings significant economies to the whole project.


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Fibralam sheets can also be used in combination with roof and wall cladding panels made of other materials such as; asbestos cement, galvanized, aluminium, polyurethane sandwich panel, etc.

Another new but promising application of Fibralam sheets is to use them as sandwich panels. A trapezoidal upper sheet combined with a standard profile lower sheet and a wood, metal, or polymeric separation member from the Fibralam composite panel which carries all the best properties of single Fibralam sheet with only better thermal insulation properties.

COMMON APPLICATIONS

- As roof-lights and sidelights of the metal buildings
- For roofing and cladding of interiors where daylight is needed
- Cooling towers
- Green houses
- Home improvement projects (patio covers, decorative partitions, screens, fencing, etc.)
- Parking lots and car-washing facilities





Optional Product Specifications

■ FIBRALAM ST UV:

Standart Fibralam sheets which are produced with UV resistant orthophtalic polyester resins.

■ FIBRALAM ST MUV:

Standart Fibralam sheets which are produced with UV resistant orthophtalic polyester resins. The top surface is coated with Melinex 301 polyester film.

■ FIBRALAM ST JUV:

Standart Fibralam sheets which are produced with UV resistant orthophtalic polyester resins. The top surface is coated with UV resistant ISO NPG gelcoat.

■ FIBRALAM ACRYL MUV:

Fibralam sheets which are produced with UV resistant acrylic modified polyester resins. The top surface is coated with Melinex 301 polyester film.

■ FIBRALAM ACRYL JUV:

Fibralam sheets which are produced with UV resistant acrylic modified polyester resins. The top surface is coated with UV resistant ISO NPG gelcoat.

■ FIBRALAM ACRYL UV:

Fibralam sheets which are produced with UV resistant acrylic modified polyester resins.

■ FIBRALAM MX:

Fibralam sheets which are produced with orthophtalic polyester resins. The top surface is coated with Melinex 389 high UV resistant polyester film.

■ FIBRALAM FR:

Fibralam sheets which are produced with fire retardant resins. They might be produced according to BS 476-7 as class 3 and class 1, according to DIN 4102-7 as B2 and according to AFNOR as M2.





Technical Specifications

■ Standard Colours	: Naturel, yellow, orange, green, blue; translucent or opaque
■ Surface (top/bottom)	: Standart, protective film, gelcoat, embossed
■ Standard thickness	: 0.9 - 1.2 mm (max. 4mm)
■ Standard length	: According to the requirement. (max. 13 mt. due to transportation limits)
■ Specific weight	: 1.30 - 1.40 gr/cm ³
■ Light transmission	: %85 (naturel)
■ Service temperature	: Between -40°C, +120°C
■ Tensile strength	: 720 kg/cm ²
■ Compressive strength	: 920 kg/cm ²
■ Flexural strength	: 1200 kg/cm ²
■ Thermal linear expansion coeff.	: $2.7 \times 10^{-5} \text{ }^{\circ}\text{C}^{-1}$
■ Water absorption	: %0.2
■ Barcol hardness	: >40 Barcol
■ Self ignition temperature	: 487°C
■ Heat transmission coeff.	: ~5 w/m ² °K

CHEMICAL AND CORROSION RESISTANCE

Fibralam fiberglass reinforced polyester (FRP) sheets remain virtually unaffected in many chemical environments. It has an excellent resistance to general corrosion for surface contacts with strong chemicals. After contact with chemicals, washing the sheet's surface with sufficient amount of water would extent the life of the product. Steam cleaning and detergents are ideal for cleaning.

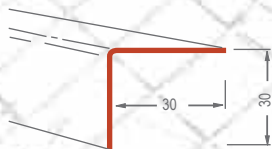
Some of the most common chemicals that Fibralam sheets resistant to are listed below:

CHEMICAL	CONCENTRATION
■ Acetic Acid	%5
■ Chloric Acid	%10
■ Nitric Acid	%10
■ Sulfuric Acid	%30
■ Ethyl Alcohol	%95
■ Benzyl	%30
■ Toluol	%30
■ Carbon Sulfur	%30

FIBRALAM®

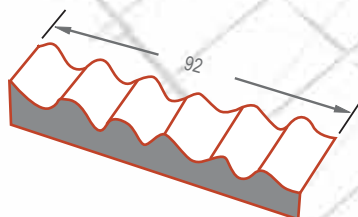
Accessories

All types of accessories are available for Fibralam sheets ridge capping, corner piece and gutters are produced with a gelcoated surface. When requested the ridge capings might be produced at any required angle, color and as translucent. Gutters and corner pieces might be produced according to the required dimensions.



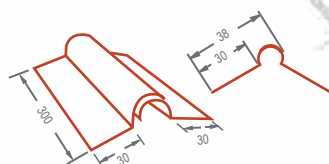
Corner Piece

These roofing accessories are available in required dimensions, angles and in various colors.



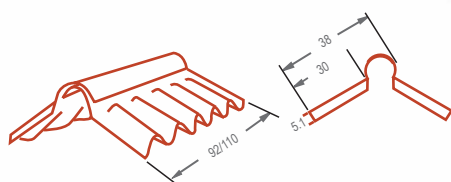
Flat /corrugated closure piece

These accessories can be produced according to required dimensions and angles which match to translucent or opaque roofing sheet profiles.



Flat ridge capping

This type of ridge capping can be used with every type of profile and at every roof slope.



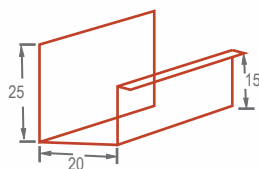
Corrugated ridge capping

This type of ridge capping can be produced for every sheet profile and can be used at any roof slope.



Trapezoidal / corrugated ridge capping

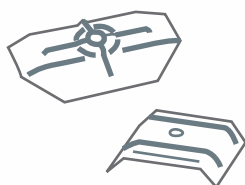
This type of ridge capping can be produced for every sheet profile and it has a fixed angle.



Gutter

Gutters might be produced at every color and length. The inner weathering surface is coated with ISO NPG gelcoat.

Washers matching the color of Fibralam Sheets

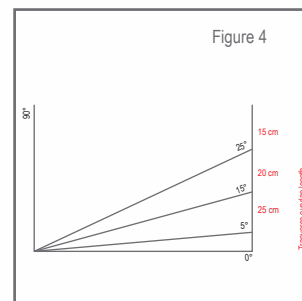
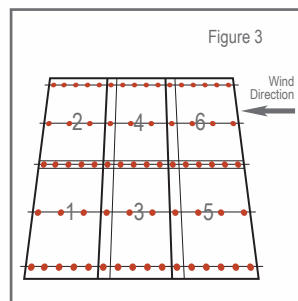
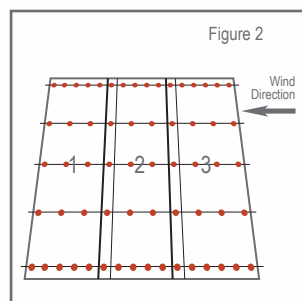
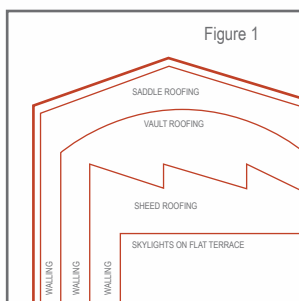


Self-drilling screw



EPDM foam filler





1. The types of roofs where Fibrilam sheets might be used. (Figure 1)

2. Fixing scheme for only side overlapping sheets roof (Figure 2)

On sheet heads purlins fix every wave or rib. On intermediate purlins fix every overlapping wave or rib. Other waves on intermediate purlins to be fixed according to the sheets profile. Avoid to leave more than one purlin with no fixings (2 m max.).

3. Fixing overlapping scheme for side and transverse overlapping sheets roof (Figure 3)

On sheets heads and transverse overlaps purlins fix every wave or rib. On intermediate purlins fix every overlapping wave or rib. Other waves on intermediate purlins to be fixed according to the sheets profile. Avoid to leave more than one purlin with no fixing (2 m max.).

4. Transverse overlap length (Figure 4)

According to slope as shown in the diagram

5. Side overlap

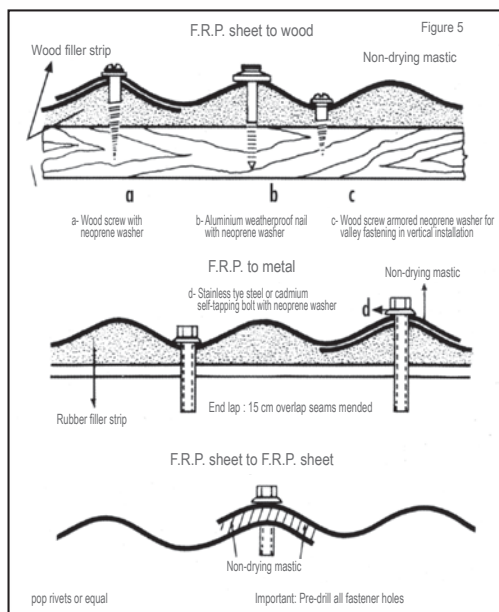
For corrugated sheets having a wave height less than 30 mm overlap at least 2 waves.

For corrugated sheets having a wave height more than 30 mm overlap at least 1 wave.

For ribbed sheets having a wave height less than 25 mm overlap 1 rib with a sealing.

For ribbed sheets having a wave height more than 25 mm overlap 1 rib

For reduced slopes avoid the use of low waves or ribs and provide for a sealing.



1. Cutting

Sheets can be cut using power or hand saws. Saw blades should be fine-toothed carbide type or a safety fabric reinforced abrasive disc. Face shields and appropriate safety equipment should be worn by all operators. Some typical installation details are shown in figure 5.



2. Drilling

All sheets should be pre-drilled not less than 4 cm from the sheet end and the holes drilled a minimum of 1.6 mm larger than the fastener diameter.



3. Fastening

When possible, fasteners should be installed at high point of the corrugation with spacings of 15 cm to 20 cm on the center at sheet end and 30 to 40 cm on center for immediate purlins and siding applications.



4. Sealing

Seal end and side laps with a flexible non-hardening UV-stabilized butyl caulk.

5. Installation

Under no circumstances should sheets be allowed to support undistributed loads such as the weight of a human body. Use roof ladders for installation. Clean all waste material on the sheets after installation is complete.

IMPORTANT: Necessary care has been given in order to provide an accurate information. Yet Polser FRP Panels Inc. does not accept any responsibility for the accuracy of the information given in this document. Polser retains the right to make any changes on the information given in this brochure without prior acknowledgement.

FIBRALAM® Profile Types

Profile Types	Thickness mm	Weight gr/m²	Profile Types	Thickness mm	Weight gr/m²	Profile Types	Thickness mm	Weight gr/m²
KOD 900 Flat Panels 	0.9 1.0 1.2 1.5 1.8 2.0 3.0 4.0 5.0	1200 1350 1600 2000 2400 2700 4050 5400 6750	KOD 808 50/207 Assan 	0.9	1490	KOD 875 Tekiz SPÇ 1015 	1.2	2000
Profile Types KOD 501 Onduline 	0.9	1550	KOD 811 1000 R7 Assan Master Panel 	0.9	1680	KOD 878 Tekiz SPÇ 940 	0.9	1510
KOD 705 76/18 iron wave, 12 laps 	0.9	1200	KOD 821 915 R3 Assan Master Panel 	1.0	1610	KOD 881 Tekiz DK 90 	0.9	1500
KOD 704 76/18 iron wave, 15 laps 	0.9	1600	KOD 838 38/151 Assan 	0.9	1560	KOD 890 Tekiz ÇK 90 	1.2	1575
KOD 602 177/51 Fiber cement, 5 laps 	0.9	1380	KOD 862 1000 R3 Assan 	1.2	2100	KOD 891 Tekiz DK 99 	0.9	1500
KOD 603 177/51 Fiber cement, 6 laps 	0.9	1650	KOD 864 38/302 Assan 	1.2	1830	KOD 892 Tekiz ÇK 105 	1.0	1610
KOD 812 27/200 Galvanized steel, 5 laps 	0.9	1200	KOD 817 500/1000 3 HDV 	1.0	1640	KOD 895 Tekiz ÇK 100 	1.0	1720
KOD 827 27/200 Galvanized steel, 5 laps 	1.2	1940	KOD 818 250/1000 5 HDV 	1.0	1875	KOD 840 42/250 Aluform 	0.9	1650
KOD 836 38/980 Almetan 	0.9	1660	KOD 887 40/1000 Ç-D B.S Yasan 	0.9	1550	KOD 841 45/150 Aluform 	0.9	1630
KOD 899 38/900 Almetan 	0.9	1560	KOD 893 19/1000 Ç-D B.S Yasan 	0.9	1430	KOD 561 24/1000 	1.2	1912
KOD 810 ATR-4 Atermit Isopanel 	1.2	2050	KOD 806 38/148 Nasas 	0.9	1450	KOD 860 Composite panel bottom profile 	0.9	1385
KOD 855 ATR-5 Atermit 	0.9	1510	KOD 813 38/914 Nasas 	0.9	1500	KOD 950 SPG 	0.9	1500
KOD 857 ATR-7 Atermit 	0.9	1560	KOD 802 T38/914 T7 Park Panel 	0.9	1520	KOD 998 45 / 900 Almetan 	0.9	1600
			KOD 820 T4-35/1000 Park Panel 	1.2	2050	KOD 500 Ridge capping 	0.9	2100

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WWW.YOHANENTERPRISES.COM |
CONTACT@YOHANENTERPRISES.COM | +61 421 916 379 |
+61 8 6150 0291 | WA 6112 | AUSTRALIA

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Certifications



Turkish Standards Institute
Quality Certificate
TS-EN 1013-2



Impact Resistance Certification
ACR(M) 001-200 Class B



Fire Resistance Certification
DIN 4102:B2



Fire Resistance Certification
No RA01-153 : M 2



CONSULTANCY • TESTING
Fire Resistance Certification
BS 476-7 Class 3 SAB3
Class 1 SAA



Fire Resistance
Certification
E - 84 FS<25