Palruf

Corrugated PVC Sheet

Tel: +44 (0) 191 258 0777 Fax: +44 (0) 191 258 1010 Email: sales@bayplastics.co.uk

Tel: +44 (0) 191 258 0777 Fax: +44 (0) 191 258 1010 Email: sales@bayplastics.co.uk

Content

PALRUF – For the Long Term

Palruf corrugated PVC panel's combine's excellent resistance to chemicals, fire and impact, resulting in an extremely durable roofing solution. Palruf withstands harsh chemical environments where conventional roofing quickly corrodes, which makes it ideal for long-term use in demanding industrial applications such as chemical plants and storage facilities, mines and ports. For domestic applications, it is ideal as a clear (in cold northern climates) or opaque roofing material that is easy to install and maintain.

Palruf evolved into the high quality product it is today based on the experience of 50 years of service. It is lightweight, safe, and extremely easy to handle and install using conventional tools and requires minimum maintenance.

Tel: +44 (0) 191 258 0777 Fax: +44 (0) 191 258 1010 Email: sales@bayplastics.co.uk


Excellent Chemical Resistance
PALRUF withstands a wide variety of chemicals, making it ideal for long term applications in chemically aggressive environments.
UV and Weather Resistant
Offering long service periods in cold or hot climates.
Flexibility
Suitable for curved roofing.
Non-Corrosive
PALRUF is ideal for seaside projects, mines, livestock farms and similar areas.
Minimum Maintenance
Freedom from high maintenance and frequent roofing replacement.
High Impact Strength
Excellent resistance to hail, wind and snow loads.
Fire Resistance
PALRUF is self-extinguishes and meets the highest flammability standards in the field.

Tel: +44 (0) 191 258 0777 Fax: +44 (0) 191 258 1010 Email: sales@bayplastics.co.uk

PALRUF Project Gallery

Roofing and Cladding Applications in Chemically Aggressive Environments

Palruf prevails where alternative materials fail. It provides a long term solution for roofing and cladding in industrial environments and reduces overall maintenance work and expenditure.

- Chemical processing plants
- Pulp and paper production
- Pharmaceutical plants
- Oil refineries
- Fertiliser plants
- Power stations
- Steel mills
- Mines
- Ports
- Metal refining and processing
- Conveyor roofing

Project: Coca Cola Plant - Middle East | **Type:** PALRUF® White 3mm

Project: Dead Sea Plants - Middle East | **Type:** PALRUF® White Opaque 2mm

Project: TIS Port - Odessa, Ukraine | **Type:** PALRUF® 3mm White Opaque and Clear (Clear sheets used as skylights)

Project: Caserones Mine - Chile | **Type:** PALRUF® White Opaque 3mm

Livestock and Farming Applications

Palruf withstands aggressive chemical environment typical of livestock structures. It would make an ideal roofing, siding and internal cladding solution for a long service period.

- Poultry farms
- Pig farms
- Dairies
- Fish farms
- Barns
- Fertiliser warehouses

Project: Fish Research Farm - University of Maine, USA
Type: PALRUF® White Opaque 3mm

Project: Pig Farm - Middle East | **Type:** PALRUF® White Opaque 2mm

Project: Unicoop Planta UPM Pig Breeding Farm - Paraguay (8,900sqm) | **Type:** PALRUF® Opaque White 3mm

Project: Dairy Farm - Canada | **Type:** PALRUF® White Opaque 3mm

Project: Dairy Farm - Middle East | **Type:** PALRUF® White Opaque 3mm

Do It Yourself (DIY) Applications

Palruf is lightweight and extremely easy to handle and install around the house. The sheets will maintain their appearance with minimum maintenance and withstand extreme weather conditions for a long period.

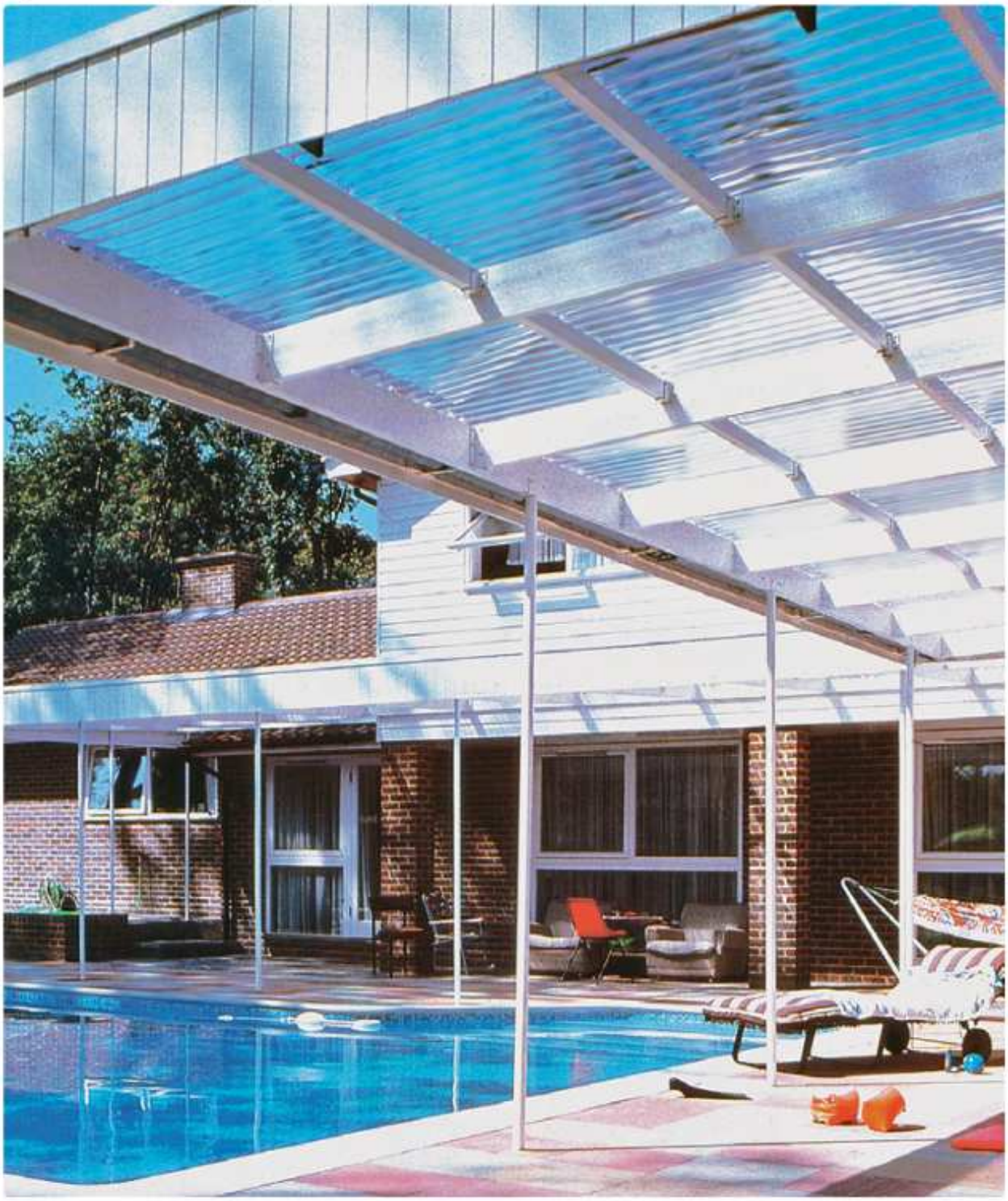
- Peroglas
- Small warehouses
- Carports
- Canopies
- Patios

Project: Residential Carport - Middle East | **Type:** White 1mm

Project: Residential Pergola - Canada | **Type:** PALRUF® Clear 1mm

Project: Residential Pergola - Germany | **Type:** PALRUF® Clear 0.8mm

Project: Residential Pergola - USA | **Type:** PALRUF® Clear 0.8mm



Tel: +44 (0) 191 258 0777 Fax: +44 (0) 191 258 1010 Email: sales@bayplastics.co.uk

Palruf Colours

When specifying Palruf colours, it is important to consider the climactic conditions where the sheets will be installed, as described in the table below. Opaque White Palruf is suitable for any climate and geographical region and will serve as a cost effective roofing solution in most cases. Palruf is also available in a range of transparent, translucent and other opaque colours, which should be specified according to the weather conditions in the area of installation: clear and standard colours are suitable for relatively cold climates, whereas special cool colours can be applied in warmer regions.

Group	Description	Colors
White Opaque	Ideal for any climatic conditions. Does not transmit light.	White Opaque
Opaque Colors	Suitable for most regions - please consult with your Palram distributor before specifying. Does not transmit light.	Light Gray, Beige
Special Cool Opaque	Suitable for any climatic conditions due to a unique feature that stabilizes the sheet's temperature. Available with any color on special orders only, subject to a minimum order.	Light Blue, Red, Dark Green
Opal	Suitable for cold climates only. PALRUF Opal sheets transmit 20-40% of incident light.	White Opal, White Diffuser, Blue
Transparent	Suitable for cold climates only. Transparent colors offer good light transmission and clarity, and can be either clear or tinted.	Clear, Bronze

Physical Properties

Property	Method*	Conditions	Units	Value
Density	D-792		g/cm^3	1.4
Heat deflection temperature (H.D.T)	D-648	Load: 1.82 MP	℃	61 - 67
Service Temperature Range			℃	-20 to +50
Thermal conductivity	C-177		W/m K	0.16
Coefficient of linear thermal expansion	D-696		cm/cm℃	6.3×10^{-5}
Impact strength	ISO 6603/1	2 mm sheet	J	45 - 60
Tensile strength at yield	D-638	10 mm/min	MPa	50 - 66
Tensile strength at break	D-638	10 mm/min	MPa	39 - 53
Elongation at yield	D-638	10 mm/min	%	3
Elongation at break	D-638	10 mm/min	%	>80
Tensile modulus of elasticity	D-638	1 mm/min	MPa	2,900
Flexural strength	D-790	1.3 mm/min	MPa	90 - 100
Flexural modulus	D-790	1.3 mm/min	MPa	2,700
Rockwell hardness	D-785		R Scale	105 - 115

* ASTM method except where noted otherwise.

Flammability, Building and Construction Standards

PALRUF complies with stringent international building and construction standards shown in the table below.

Standard	Country	Method	PALRUF® Type	Designation or Rating
Cyclonic Test	Australia	AS2424	Industrial Profile	Passed
Flammability	Australia	AS1530-3		Conforms*
Flammability	France	NFP 92501, NFP 92505		M-1*
Flammability	Germany	DIN 4102		B-1*
Flammability	UK	BS 476/7		Class 1*
Flammability	USA	ASTM D-635		CC1*
Flammability	USA	ASTM E-84, D-3286, D-1929		Class 1*
Flammability	USA	Flame Spread Rating		12 – Class A*
Flammability	Israel	755		V 2 3*
Retention of Profile and Impact Resistance	Australia	AS2376-1980		Complies
ITB	Poland	AT-15-5324/2002		Approved
Static and Impact Tests	Australia	AS2424-91	American Industrial	Passed*
Windstorm Classification	UK	FMRC 4470 Approval Requirements		I-60 and I-90*

Weather Resistance

PALRUF sheets retain their physical properties and attractive appearance despite exposure to various climactic conditions. They withstand humidity, rain and snow and provide weather protection over a large temperature range, from -20°C to 50°C (-4°F to 120°F). Proven weather resistance ensures the long-term flawless performance of PALRUF sheets.

Poultry Farm in the Middle East, covered with Opaque White 3mm PALRUF®

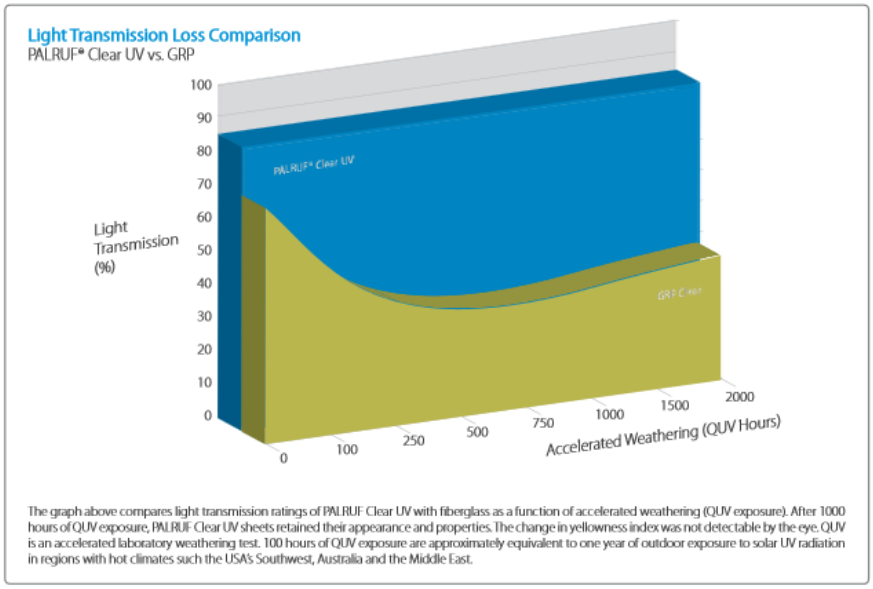
Resistance to UV Radiation

Palruf Opaque – Inherently protected by an internal UV absorber and offered in white, light grey and beige colours.

Palruf Clear – UV stabilised sheet, recommended for use in regions where heat and the sun's radiation are limited.

Palruf UV – A protective layer on the outer side makes this sheet resistant to UV radiation and helps it retain its properties for many years. Palruf UV is recommended for regions characterised with intense UV radiation.

Palruf Clear UV – UV stabilised sheet with protective layer on the outer side for outdoor use in any climate. This sheet will resist hard chemical environments and maintain its clarity far better than some alternatives, as seen in the graph below.



The graph above compares light transmission ratings of PALRUF Clear UV with fiberglass as a function of accelerated weathering (QUV exposure). After 1000 hours of QUV exposure, PALRUF Clear UV sheets retained their appearance and properties. The change in yellowness index was not detectable by the eye. QUV is an accelerated laboratory weathering test. 100 hours of QUV exposure are approximately equivalent to one year of outdoor exposure to solar UV radiation in regions with hot climates such the USA's Southwest, Australia and the Middle East.

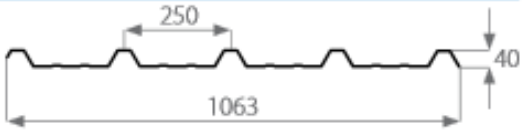
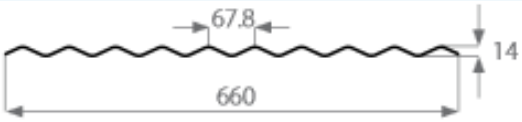
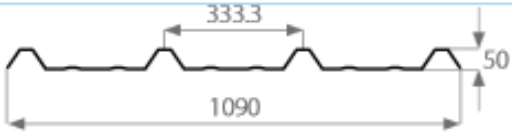
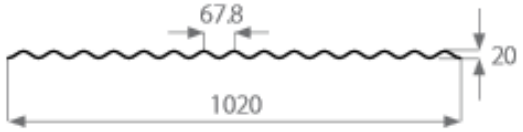
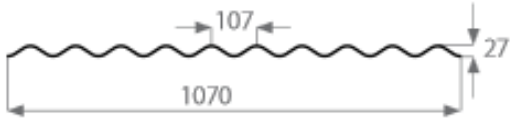
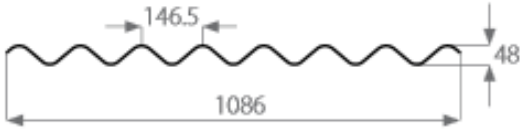
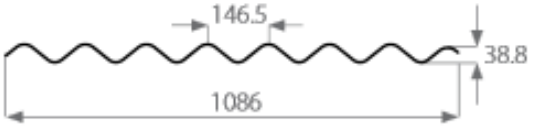
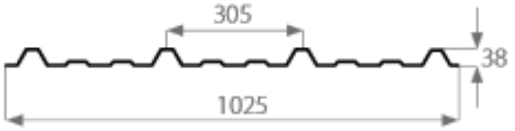
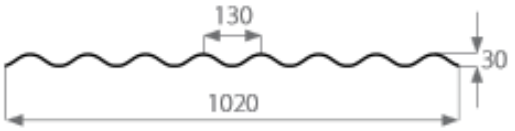
Chemical Resistance

The mechanism of chemical attack on thermoplastics in general, and our PVC sheets in particular, differs significantly from the mechanism of corrosion of metals. Corrosion of metals results in a gradual loss of surface material as a result of electrolytic action by the relevant chemicals. Chemical attack on our PVC sheet, where it occurs, consists generally of absorption of the chemical by the PVC sheet and its subsequent swelling.

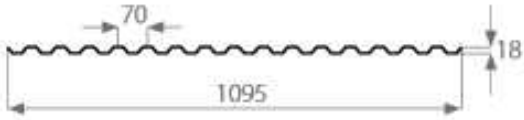
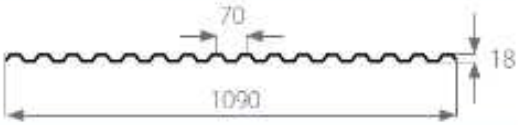
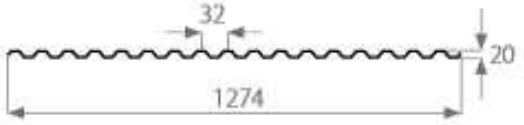
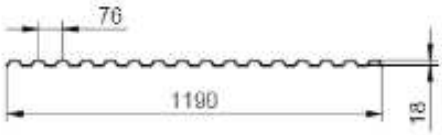
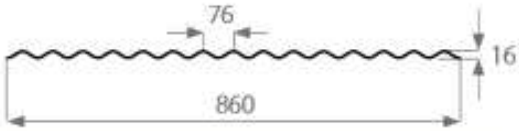
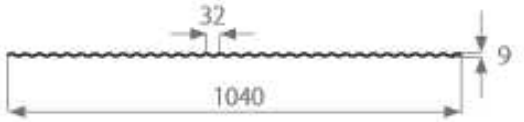
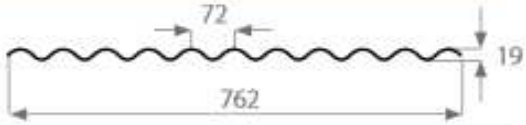
Palruf corrugated PVC sheets provide exceptional resistance against the following classes of chemicals in both liquid and vapour form: mineral acids, alkalis plating solutions, paper making chemicals, pickling solutions, most inorganic compounds, alcohols, aliphatic hydrocarbons, glycols, amines and phenols. Palruf PVC sheets should not come into contact with acetone, ethers, esters or aromatic hydrocarbons.

Standard Profiles*

*Custom designed profiles are available upon request, subject to a minimum order.

PALRUF®	Designation	Cover Width mm (Inch)	Standard Width mm (Inch)	Drawing
100	40/250	1000 (39.4")	1063 (41.8")	
2800	14/67.8	610 (24")	660 (26")	
5100	DV4	1000 (39.4")	1090 (42.9")	
6500	36.5/171.5	686 (27")	756 (29.8")	
5,6 Wave	51/177	1062 (41.8") 1062 (41.8") 885 (34.8") 708 (27.9")	1170 (46") 1100 (43.3") 1020 (40.1") 920 (42.9")	
American 2.6"	20/68	949 (37.4")	1020 (40")	
American 4.2"	27/107	1284 (50.6") 963 (37.9") 856 (33.7")	1390 (55") 1070 (42.1") 1017 (40")	
Big 6	48/146	1025.8 (40.3")	1086 (42.7")	
Big 6 IM Sunlux	38.8/146.5	1016 (40")	1086 (42.7")	
Astoria	38/305	915 (36")	1025 (40.4")	
BS 130/30	30/130	910 (35.8")	1020 (40")	

*Custom designed profiles are available upon request, subject to a minimum order.

PALRUF®	Designation	Cover Width mm (Inch)	Standard Width mm (Inch)	Drawing
Greca 70	18/70	1120 (44.1") 1120 (44.1") 1050 (41.3") 1050 (41.3") 700 (27.6") 490 (19.3")	1160 (45.5") 1140 (45") 1103 (43.4") 1090 (42.9") 765 (30.1") 550 (21.7")	
Greca 70 Ond	18/70	1050 (41.3")	1090 (42.9")	
Greca 75	20/75	1275 (50.2") 1200 (47.2") 1125 (44.3") 1050 (41.3") 600 (23.6") 600 (23.6")	1285 (51.6") 1274 (50") 1135 (44.7") 1060 (41.7") 642 (25.3") 637 (25")	
Greca 76	18/76	1140 (44.9") 1140 (44.9") 988 (38.9") 988 (38.9") 912 (35.9") 912 (35.9")	1190 (46.8") 1145 (45") 1060 (41.7") 1045 (41") 980 (38.5") 963 (38")	
Iron 76	18/76	1140 (44.9") 988 (38.9") 836 (32.9") 836 (32.9") 608 (23.9")	1150 (45.3") 1067 (42") 900 (35.4") 860 (33.8") 660 (26")	
Mini	8/32	1024 (40.3") 732 (28.8") 640 (25.2")	1040 (41") 750 (30") 660 (26")	
3"	19/72	648 (25.5")	755 (29.7")	
7.2"	38.1/82.9 (1.5"/7.2")	1098 (43.2") 1098 (43.2") 915 (36") 915 (36")	1217 (47.9") 1150 (45.3") 967 (38.1") 965 (38")	
9"	¾" / 9"	914 (36")	965 (37.8")	
5102	5102	1528 (60.2")	1618 (63.7")