



PALCLAD™ Pro Wall Cladding Solutions



PALCLAD™ Pro Wall Cladding Solutions



Content

About Palram	2
Complete Wall Cladding Solutions	3
PALCLAD™ Pro Wall Cladding Solutions	4
Color Range	5
PALCLAD™ Pro HYG	6
PALCLAD™ Pro Project Gallery	8
PALCLAD™ Pro Technical Data	16
Grooving and Bending for PALCLAD™ Pro Corner Installation	17
Cladding Installation Guidelines for using PALCLAD™ Pro Profiles	18
Cladding Installation Guidelines for using PALCLAD™ Pro Welding Rods	20

About Palram

A Global Leader in Thermoplastic Panels

Palram Industries Ltd established 50 years ago, is a leading multinational manufacturer of thermoplastic panels, mainly from polycarbonate, PVC and acrylic. The products are used in a wide variety of applications and projects around the world, including the following market sectors: building and construction, architectural projects, advertising and printing, agriculture, fabrication and DIY. Palram's global presence and advanced technological abilities allow us to provide our customers with competitive products, while maintaining a high level of service. Palram delivers excellence to a global marketplace, backed by professional support and service on both local and regional levels. Palram is proud of its unique corporate culture that makes us agile, creative and committed to all our customers.

Research & Development

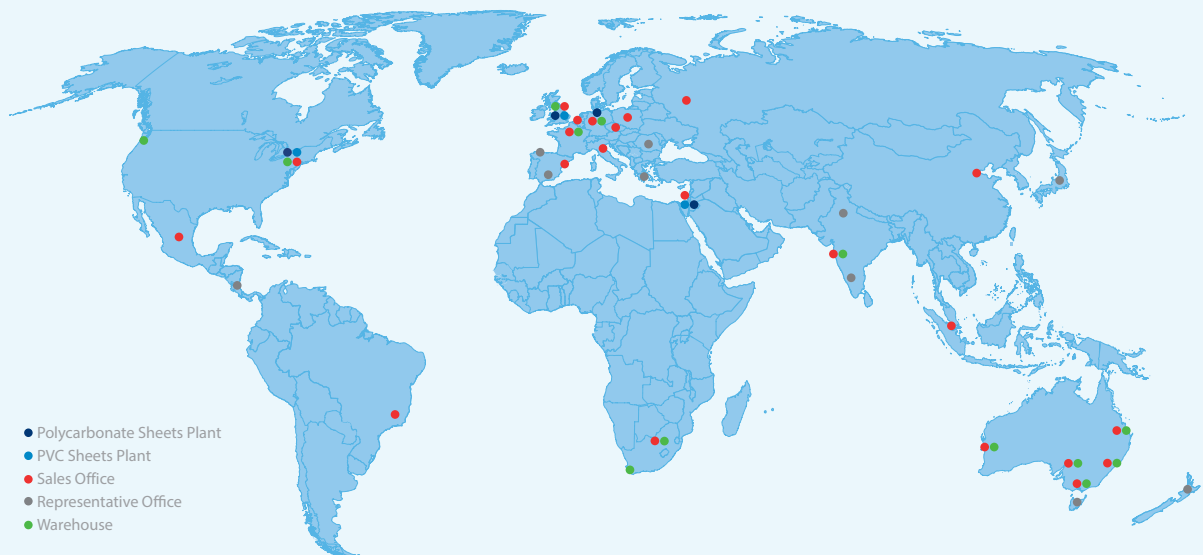
As part of the tradition of producing high quality panels, Palram is constantly adapting new technologies to refine its manufacturing methods. The accumulated knowledge and production technology expands our product range and allows us to match our products more specifically to every project and application.

Panel Extrusion History

Palram has pioneered the production of extruded PVC panels in 1963 and has relied on innovative product culture ever since. New technologies have been continuously adapted to refine the existing manufacturing methods. Palram also keeps track with market demands in order to create the most suitable panel for each application, including wall cladding.

Global Presence

Palram operates production plants in Europe, America and Asia, facilitating close logistic support and PALCLAD Pro supply.



Complete Wall Cladding Solutions

Introduction

PALCLAD Pro wall cladding solutions offer a practical, cost efficient and comprehensive package that helps maintain high sanitation levels. The system combines flat PVC panels, produced by Palram for over 45 years, with proprietary profiling and welding rods in matching colors. Covering large areas is made easy with PALCLAD Pro cladding systems, which have already helped achieve high resistance to fire and chemicals in hospitals, pharmaceutical plants, restaurants, corridors and other locations.

A wide range of colors and surface textures allows versatile design options for many environments. The system's ensures many years of service that will not be affected by frequent cleaning.

As regulatory authorities raise the sanitation requirements of food plants, medical facilities, restaurant kitchens, slaughterhouses, hospitals and other locations, Palram's HYG active hygiene technology offers a second line of defence in meeting such standards. Anti-static SF products will meet other requirements concerning clean rooms and delicate manufacturing environments.

Product and Application Support

Palram's Wall Cladding Application Team provides extensive support to customers on various issues: product specification, installation, certification, suitable adhesives, general guidance and more. The team offers extensive expertise in production and application in many different environments. Special support services include on-site support, professional seminars, tailor-made installation guidelines and more.

Typical Cladding Applications

Public Facilities

- Schools
- Rest rooms
- Airports
- Public transportation



Food Industry

- Food plants
- Food preparation areas
- Sorting halls
- Storage/refrigeration rooms



Healthcare

- Hospitals
- Privat clinics
- Retirement homes
- Pharmaceutical factories



Agriculture

- Livestock and dairies
- Egg sorting halls
- Storage rooms
- Refrigeration facilities



PALCLAD™ Pro Wall Cladding Solutions

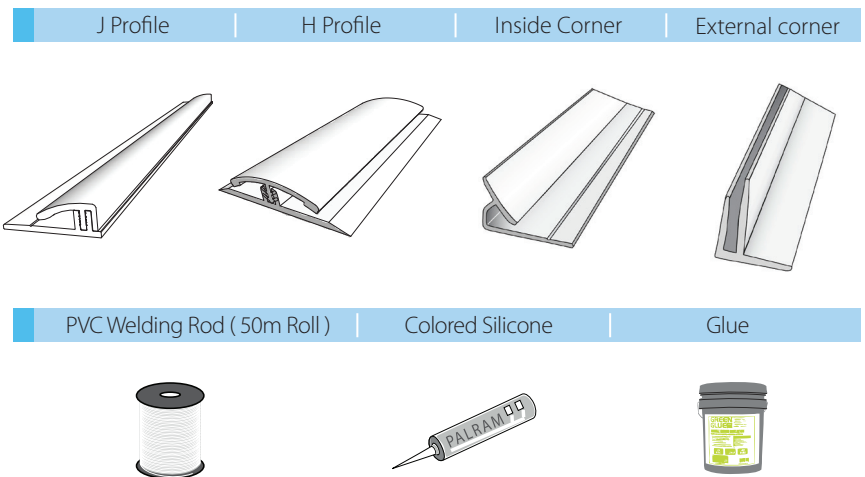
Overview

PALCLAD Pro holds many mechanical and aesthetic benefits that make it a leading solution for cladding. It offers exceptional resistance to impact, chemicals substances, moisture, stains and spills, which complements its aesthetic looks and easy maintenance. The system's panel, PALCLAD Pro flat rigid PVC, has evolved into the high quality product of today based on the results of almost 50 years of service by Palram. It can be easily formed and fabricated while retaining its physical characteristics. PALCLAD Pro is also a high quality printing substrate and can be used to create elegant and appealing decorative walls.

Main Benefits

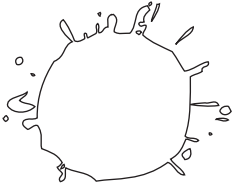
- ✓ Excellent chemical resistance
- ✓ Easy maintenance
- ✓ High impact strength
- ✓ The panels can be easily fabricated and formed to create versatile cladding on uneven surfaces
- ✓ The highest fire ratings in its field
- ✓ Glossy, Matte or Embossed surface finish
- ✓ High electrical and thermal insulation
- ✓ Non toxic
- ✓ Recyclable
- ✓ PALCLAD™ Pro HYG: Active antimicrobial action

System Components



Color Range

PALCLAD Pro is available in 28 different colors and 3 surface finishes: glossy, embossed or matt. This wide variety allows great versatility in internal design. Color appearances may vary slightly between different surface finishes.



STD White



Off White | RAL 9016



Light Pistachio | PAN 9062



Cream | PAN 9143



Stone | PAN 9081



Deep Ice



Light Pink | PAN 9022



Lilac | PAN 9023



Red Wine | PAN 242



Dark Pink | PAN 214



Red | PAN 201



Orange | PAN 159



Crimson Pink | PAN 4725



Avocado | PAN 5783



Green Grape | PAN 7492



Light Blue | PAN 9443



Light Turquoise | PAN 9044



Ocean Blue | PAN 651



Warm Grey 9



Medium Grey | RAL 7043



Black | Black Gloss



Dark Grey | RAL 7015



Light Grey | RAL 7040



Mink | RAL 7044



Grey Cream | RAL 9002



Beige Cream | PAN 9185



Beige 1015 | RAL 1015



Desert Sand | PAN 155

*Colors are available upon request, subject to minimum quantity.

PALCLAD™ Pro HYG Hygienic Action

Active Antimicrobial Protection

Palram's HYG technology sets a higher standard for hygienic cladding and facilitates high levels of sanitation. Breakthrough HYG products incorporate silver ions, a natural antimicrobial agent with proven biocidal behavior that highly inhibits microbe reproduction. With silver ions, HYG products bring active microbe elimination to a whole range of applications, taking hygienic care one step further.

PALCLAD Pro HYG have either killed or inhibited the growth of all the pathogens tested to date. This includes microorganisms that can affect the appearance of the panel. Since silver ions are uniformly distributed throughout the panel, a scratched or damaged surface will be equally effective.

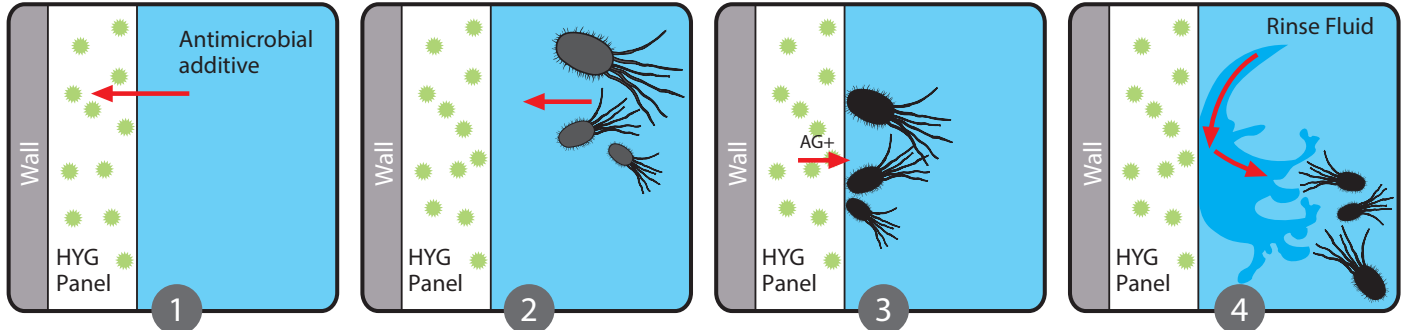


Main Benefits

- ✓ Active protection from various microbes
- ✓ Biocidal capabilities proven by independent tests
- ✓ Long lasting antimicrobial effect
- ✓ Formable: HYG properties are maintained throughout the product's lifetime.

How Does HYG Technology Work?

Silver ions are incorporated into the PVC compound before the extrusion process, and improve the inherent antimicrobial quality of the rigid PVC panel. They enable the panel to kill a wide variety of microbes on contact, including those resistant to antibiotics.



1 PALCLAD Pro HYG is installed as wall cladding.

2 Microbes approach the wall.

3 Upon contact, active silver ions are transferred onto the microbes, cease their mitosis and ultimately eliminate them.

4 Dead microbes are removed by simple cleaning routine.





PALCLAD™ Pro Project Gallery

Hospitals

Project: Operating room | Installation: PALCLAD Pro HYG Beige with welding rods



Project: Hospital Corridor | Installation: PALCLAD Pro HYG Off-White



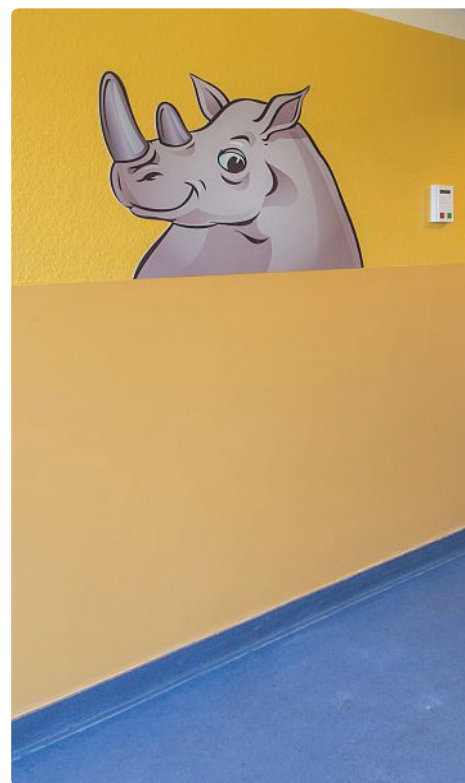
Project: Hospital operating theatres and other facilities | Installation: PALCLAD Pro HYG White with welding rods



Project: Maternity ward | Installation: PALCLAD Pro HYG with profile system



Project: Children Hospital | Installation: PALCLAD Pro HYG Various Colors



Project: Operating room | Installation: PALCLAD Pro HYG Green Grape with profile system



Recreational & Public Facilities

Project: Sports club | Installation: PALCLAD Pro HYG Green shades and Orange with welding rods



Project: Public school kitchen | Installation: PALCLAD Pro HYG White with profile system



Decorative Cladding

Project: Youth club | Installation: Printed PALCLAD Pro and profiles



Project: Designed Door Skins | Installation: Various PALCLAD Pro colored panels cut and glued



Food Preparation

Project: Pizzeria | Installation: PALCLAD Pro White and Red with profile system



Pharmaceutical Industry

Project: Pharmaceutical plant | Installation: PALCLAD Pro White with profile system



Food Industry

Project: Laboratory at a food manufacturing plant | Installation: PALCLAD Pro HYG White with welding rods and profile system



Sanitation

Project: Hospital toilet and shower | Installation: PALCLAD Pro HYG with profile system



Technical Data

Standard Dimensions

Width x Length mm	Thickness mm	Surface
1220 x 2440	2	Glossy / Hair Cell
1500 x 3000	2.5	Glossy / Glossy

* Custom dimensions are available, subject to a minimum quantity.

Flammability

HYG panels are self-extinguishing and complies with the most demanding international fire resistance standards in the field of plastics, as indicated in the detailed table herein. The classification is subject to product type, thickness and color.

Type	Standard	Classification
PALCLAD™ Pro PALCLAD™ Pro HYG	EN 13501	B, s3, d0
	BS 476/7	Class 0
	ASTM E 84	Class A
PALCLAD™ Pro LS (Low Smoke)	EN 13501	B, s2, d0


* For more detailed information please contact your Palram distributor.

Resistance to Chemicals

All of the PALCLAD Pro system parts have excellent resistance to a wide range of chemicals. A detailed chemical resistance list is available on the Palram website and from your Palram distributor.

Dina Warrington
Hemel Hempstead
Hemel Hempstead
Herts SG9
United Kingdom

T: +44 (0) 1295 555 110
F: +44 (0) 1295 555 410
E: enquiries@exovc.com
W: www.exovc.com



Testing, Advising, Assuring.

Title:
CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH EN 13501-1:2007+A1: 2009

Notified Body No:
0833

Product Name:
"PALOPAQUE" "PALOPAQUE HYG" "PALRUF" "PALOPAQUE LS"

Report No:
321611

Issue No:
2

Prepared for:
Palram Europe Limited
Unit 2
Doncaster Carr
Industrial Estate
White Rose Way
Doncaster
DN4 5RH

Date:
23rd August 2012

Registered Office: Exovc (UK) Ltd, Lutterworth Industrial Estate, Lutterworth LE15 1PL, United Kingdom. Page 16 of 20/20

WF Classification Report
No. 321611 (Issue 2)

4. Classification and field of application

4.1 Reference of classification
This classification has been carried out in accordance with clause 8 of EN 13501-1:2007+A1: 2009.

4.2 Classification
The product, "PALOPAQUE" "PALOPAQUE HYG" "PALRUF" "PALOPAQUE LS", a flat un-plasticised rigid polyvinyl chloride (PVC) sheet, in relation to its reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:
s2

The additional classification in relation to flaming droplets / particles is:
d0

The format of the reaction to fire classification for construction products excluding floorings is:

Fire Behaviour		Smoke Production		Flaming Droplets	
B	-	s	2	,	d 0

i.e. B – s2 , d0

Reaction to fire classification: B – s2, d0

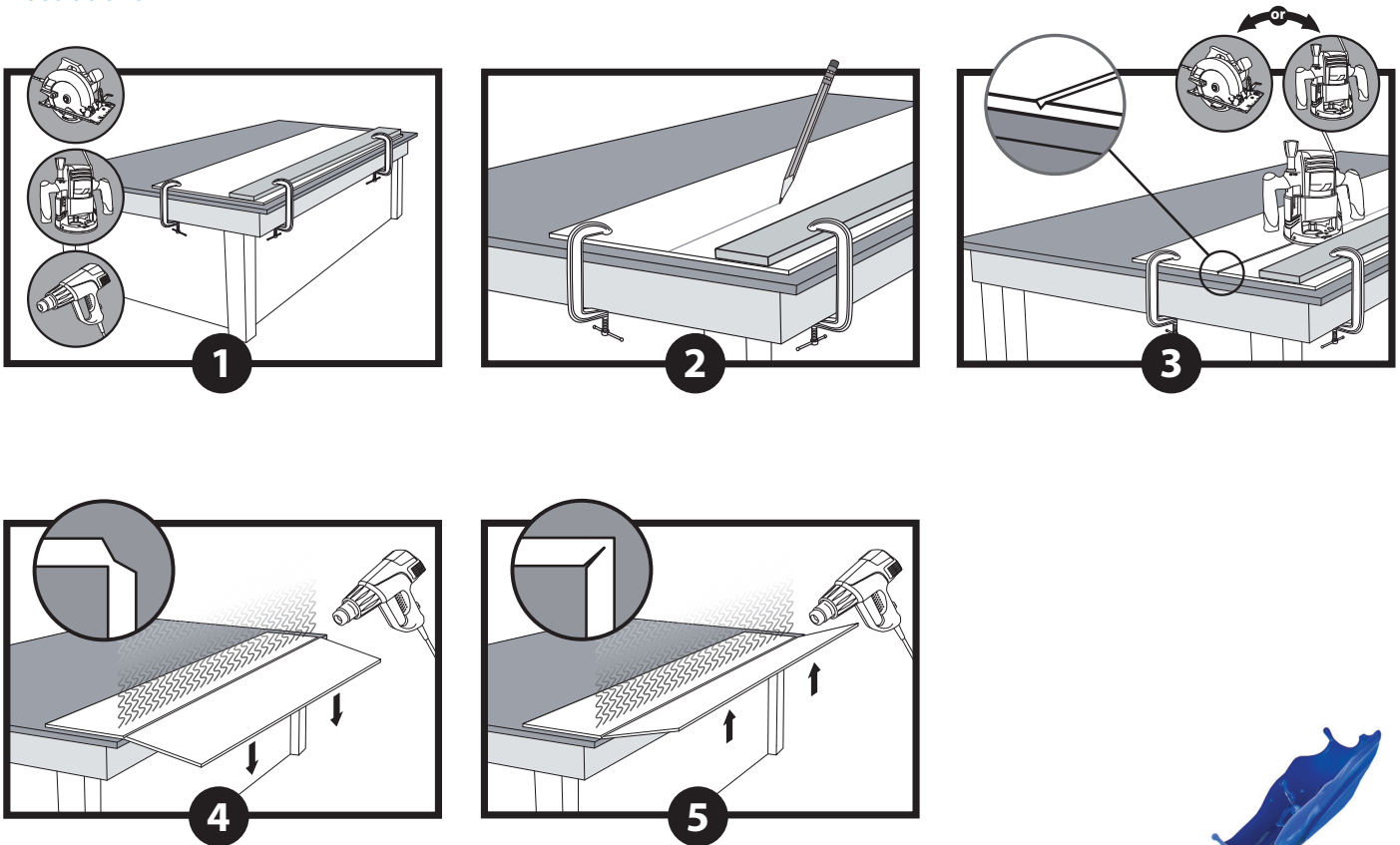
Grooving and Bending for PALCLAD™ Pro Corner Installation

Installation Guidelines

The following guidelines relate to the corresponding illustrations below.

Illustration	Guidelines
1	Measure the distance from the panel edge to the corner. Place the panel on a working surface and secure it.
2	Draw the bending line on the back side of the PALCLAD Pro panel.
3	It is advised to prepare a groove on the back side, prior to bending, along the marked line. The depth should not exceed half the thickness of the panel.
4	For internal corners, place the groove over a straight table corner and use an industrial hot blower to soften the groove. The panel temperature must not exceed 70°C. Once softened, bend down to the desired angle.
5	For external corner place the groove over a straight table corner and use a hot industrial fan to soften the groove. Once softened, bend up to the desired angle.

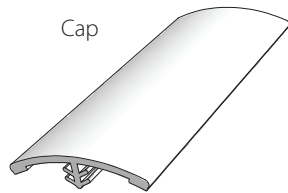
Illustrations



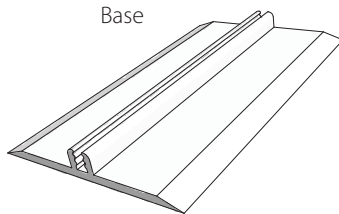
Cladding Installation Guidelines Using PALCLAD™ Pro Profiles

Palram Cladding Profiles

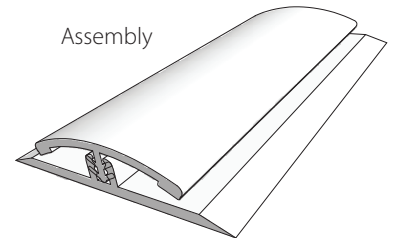
H Profile



Cap

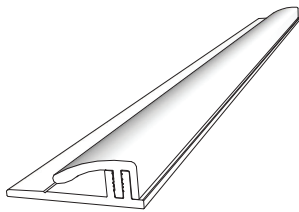


Base



Assembly

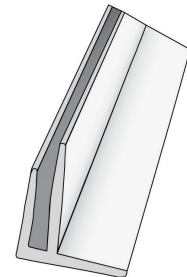
J Profile



Inside Corner



External



Preparation

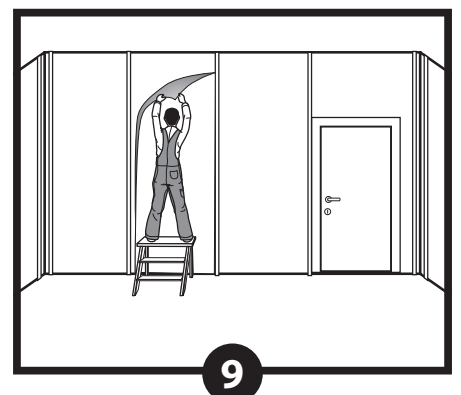
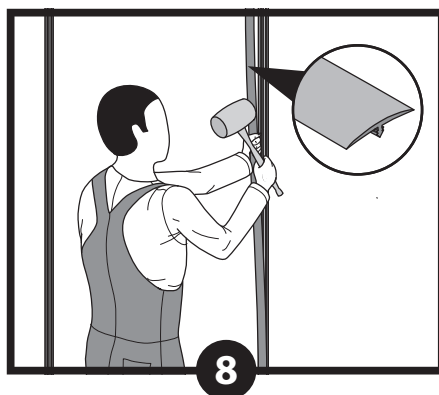
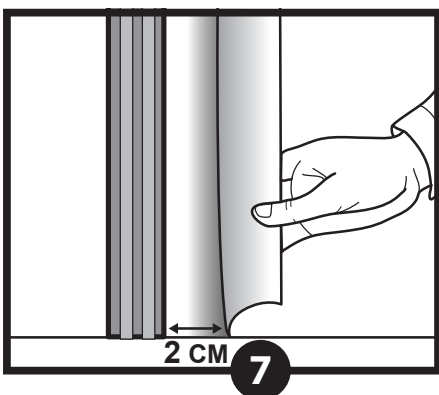
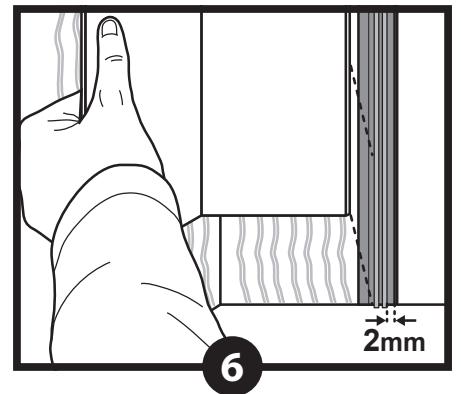
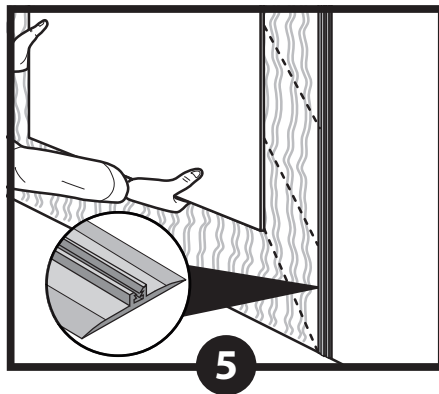
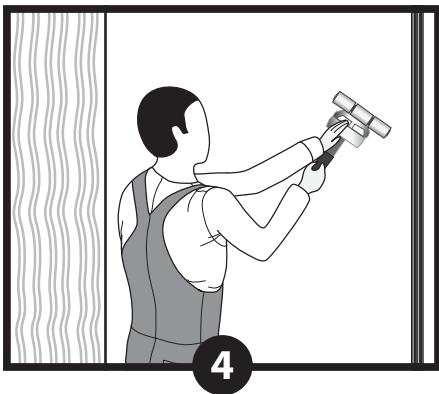
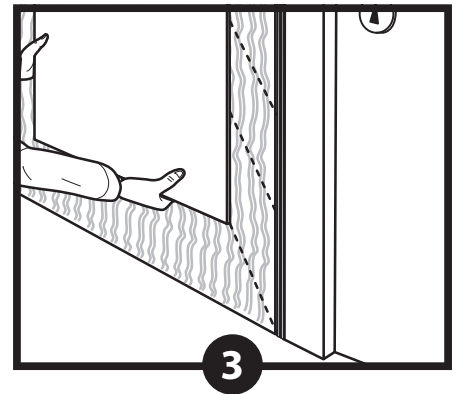
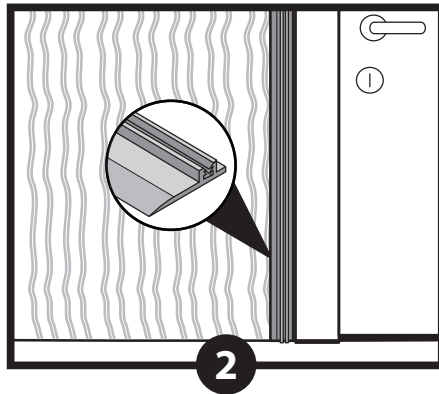
- Store panels on a flat surface and away from direct sunlight.
- Panels should be acclimated to room temperature for 24-36 hours prior to installation.
- Walls should be reasonably level and flat. Remove high spots and fill dents.
- All surfaces must be clean and dry.
- If necessary, cut the panels and profiles to suitable dimensions for the intended surface.

Installation Guidelines

The following guidelines refer to the corresponding illustrations in the next page.

Illustration	Guidelines >>>
1	Apply the glue on the wall according to the instructions of the glue manufacturer. When using Palram glue, please note that its color should turn from white to clear, usually within 20-30 minutes.
2	Position and attach a trimmed H base or a profile to the wall.
3	Attach the first PALCLAD Pro panel to the wall and profile.
4	Apply pressure to the entire Panel to ensure good adhesion and removal of trapped air.
5	Position the H section base and leave at least a 2 mm gap for expansion (See illustration 6). Repeat steps 2 + 3 + 4.
6	Internal and external corners should include prepared grooves. See "Grooving and Bending for Corner Installation" on page 17.
7	When all panels are in place, peel off the edges of the protective film approximately 2cm from edge.
8	Attach the profile caps onto the bases using a rubber mallet.
9	Peel off the protective films after all other jobs on site are finished.

Illustrations



Cladding Installation Guidelines Using PALCLAD™ Pro Welding Rods

Preparation

- Store panels on a flat surface and away from direct sunlight.
- Panels should be acclimate to room temperature for 24-36 hours prior to installation.
- Walls should be reasonably level and flat. Remove high spots and fill dents.
- All surfaces must be clean and dry.
- If necessary, cut the panels to suitable dimensions for the intended surface.
- Use appropriated tools for welding. For tool recommendations please contact your Palram distributor.

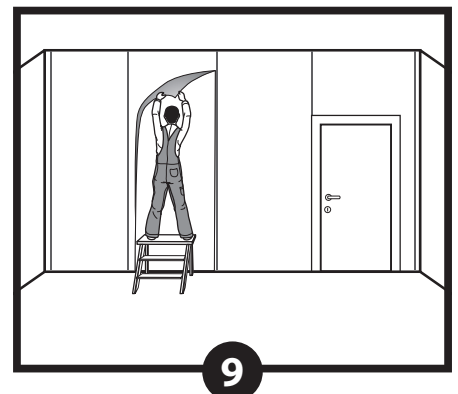
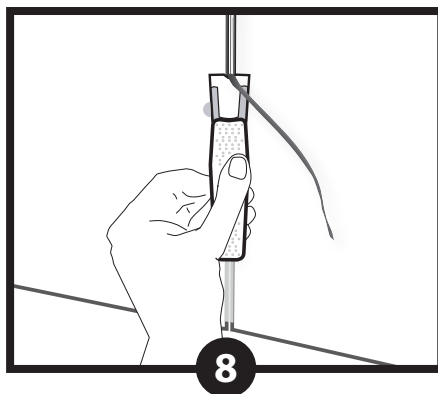
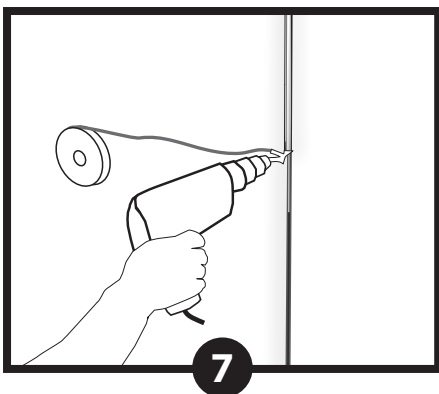
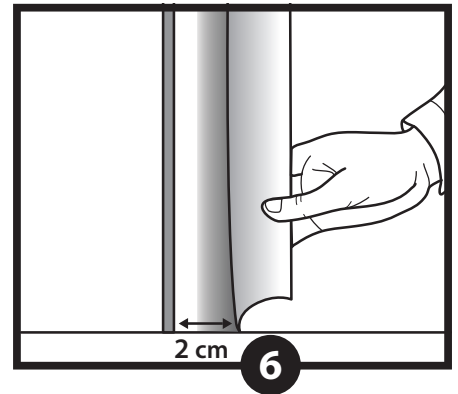
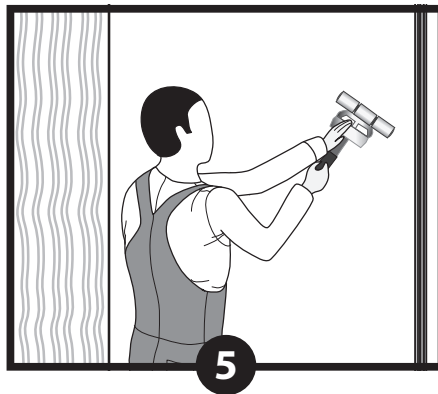
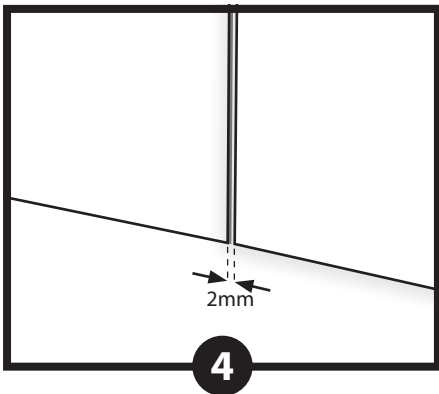
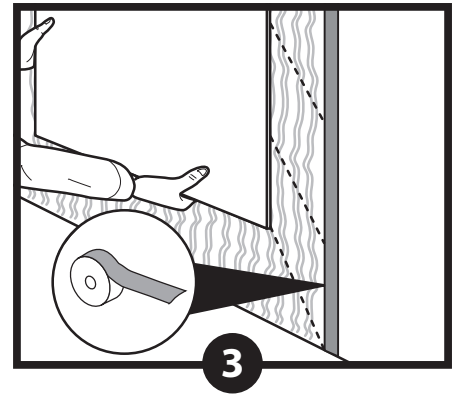
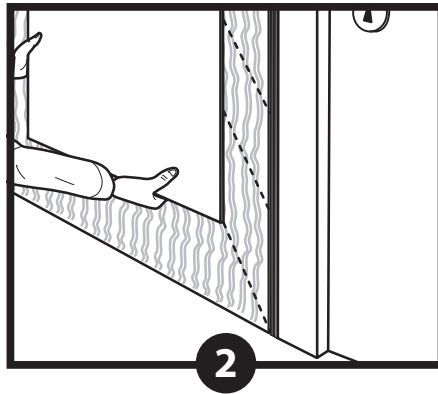
Installation Guidelines

The following guidelines relate to corresponding illustrations in the next page.

Illustration	Guidelines >>>
1	Apply the glue on the wall according to the instructions of the glue manufacturer. When using Palram glue, please note that its color should turn from white to clear, usually within 20-30 minutes.
2	Attach the first panel to the wall.
3	It is recommended to place a bonding tape (two sided adhesive) between the wall and panels. This small overlap between both panels will prevent the glue from penetrating the 2 mm gap used for welding.
4	Attach the rest of the panels and ensure a 2 mm gap between them.
5	Apply pressure to the surface of the Panel in order to ensure good adhesion and removal of any trapped air.
6	After all of the panels are in place and prior to welding, peel off the edges of the protective film approx. 2cm from edge.
7	Weld the panels using Palram welding rod at a temperature of 140°C.
8	Trim the welding rod using a suitable trimming knife. For tool recommendations please contact your Palram distributor.
9	Peel off the protective films after all other jobs on site are finished.



Illustrations





All marketing materials and any content therewith provided by Palram® are provided solely for the purpose of supporting and enhancing the marketing of Palram® products. These materials are protected by Palram's intellectual property rights and may not be used for any other purpose or in connection with the sale of products of any other manufacturer. These materials may not be transferred to or used by any third party without prior permission of Palram.



PALRAM H.Q.

Tel: +972.4.8459.900
Fax: +972.4.8444.980
palram@palram.com
www.palram.com

PALRAM EUROPE LTD.

Tel: +44.1302.380777
Fax: +44.1302.380788
sales.europe@palram.com
www.palram.com

PALRAM AMERICAS

Tel: +1.610.285.9918
Fax: +1.610.285.9928
palramamericas@palram.com
www.palramamericas.com



062019 - 76713

In as much as Palram Industries has no control over the use to which others may put the material, it does not guarantee that the same results as those described herein will be obtained. Each user of the material should make his own tests to determine the material's suitability for his own particular use. Statements concerning possible or suggested uses of the materials described herein are not to be construed as constituting a license under any Palram Industries patent covering such use or as recommendations for use of such materials in the infringement of any patent. Palram Industries or its distributors cannot be held responsible for any losses incurred through incorrect installation of the material. In accordance with our company policy of continual product development you are advised to check with your local Palram Industries supplier to ensure that you have obtained the most up to date information.

©1998 Palram Industries Ltd. | PALCLAD Pro is a trademark of Palram Industries Ltd.

