PROCLAD PLUS™
Preformed







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Jacketing PROCLAD PLUS™ Preformed

Unbeatable advantages, health & safety benefits, ease of preparation and fast installation

Costs and resources are becoming increasingly expensive, PROCLAD PLUS™ Preformed is more favourable and less volatile than metals and metal sheeting and can be simply fastened with rivets and special UV protection tapes.

Large fluctuations in metal prices have always resulted in uncertainty when calculating project prices. Different thicknesses need to be procured and held in stock. Not so with PROCLAD PLUS™ Preformed, generally only one or two product thicknesses are sufficient for almost all standard pipe diameters, guaranteeing optimum supply chain levels.

For the application PROCLAD PLUS™ Preformed does not require expensive equipment or additional specialist training. A matching cutting table and the necessary tools and you can start immediately.



PVC Nails
Adapted for PROCLAD PLUS™ Preformed

Environmentally responsible

- PROCLAD PLUS™ Preformed does not use any heavy metals
- Free of ozone-depleting CFC and HCFC compounds
- The material is almost [<0.5%] completely free of plasticizers
- Can be used without any restriction in food processing plants
- Free of silicones



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PROCLAD PLUS™ Preformed, Alu, Black & White

The innovation for outdoor applications

PROCLAD PLUS™ Preformed is an innovative insulation jacketing for both interior and exterior applications. PROCLAD PLUS™ Preformed is the consistent further development of PVC and Alu jacketing making it the undisputed market leader in the plastic insulation covering. The proven multi-layer construction provides unprecedented features in technology and efficiency.

The key success factors of PROCLAD™ and PROCLAD PLUS™ Preformed are the ease of installation and machine free handling, combined with new high technological foil advancements, further developed and improved upon to provide a true economic alternative to current real metal jacketing systems.

The quick and easy processing allows for increased productivity and high work rate outputs, with standard rolls of 1 x 25m weighing circa 12.5kg allowing for ease of transportation and handling on site.



PROCLAD PLUS™ Silver
for interior & exterior applications

ALUMINIUM OPTIC

PROCLAD PLUS™ Preformed combines the technical advantages of plastic and aluminium as an inexpensive alternative to aluminium sheeting.

Dents and bruising are a thing of the past, as even strong deformations represent no problem for the film as it returns to its starting position. On sites where contractors have to return to complete other works you can be sure that PROCLAD™ installations will retain that 'as new' look for years to come.



PROCLAD PLUS™ White
for interior & exterior applications

NEW POSSIBILITIES

Due to the highly UV protective film PROCLAD PLUS™ has an advantage also in difficult environments such as on the roof for solar collector pipes, etc.



PROCLAD PLUS™ Black
for interior & exterior applications

DURABILITY

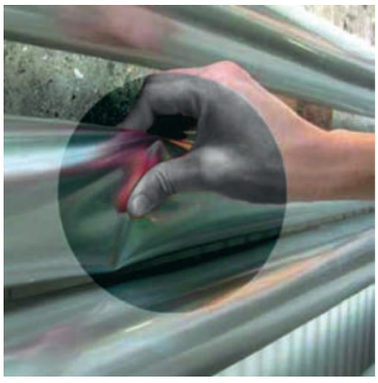
The high chemical resistance combined with low thermal conductivity ensures that the long-term investment pays off.

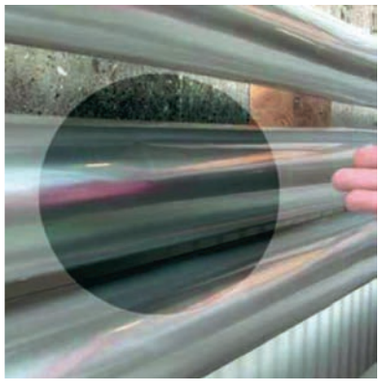
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Jacketing PROCLAD PLUS™ Preformed

Perfect appearance coupled with economic benefits

PROCLAD PLUS™ Preformed differs particularly by its metallic appearance to other PVC sheathings. Especially thanks to the intermediate layer of pure aluminium. A layer of an extremely durable UV-protective film protects the middle layer of aluminium from harmful external influences and corrosion, this guarantees functionality and appearance in the long run.





Dents and indentations are a thing of the past. The memory effect makes for a great advantage on the installation, even after months of construction it will be still in top condition. The curling effect completes a perfect, clean and fast installation. Also, larger pipe diameters can be coated with PROCLAD PLUS™, however we would recommend thicker versions up to 0.45 mm which are also a bit more rigid in construction.

ACCESSORIES

- PROCLAD PLUS™ Preformed 45 & 90° elbows [S,W & 3S]
- T-sections
- Adhesive tapes [UV-Alu, Black & White]
- Nails and PVC staples





PROCLAD PLUS™ Bends
segment optic, standard S, W and 3S closed

PRODUCT DATA

Description	Value	Unit	Test Method
Standard Thicknesses:	230, 280	mµ	
Tensile Impact Strength:	> 285	N/15mm	EN ISO 527-3
Elongation at Break:	35	%	EN ISO 527-3
Puncture Resistance 3.0mm:	110	N	EN 14 477
Fire Class:	B1	on request	DIN 4102
Impact Strength:	≥400	kJ/m²	ISO 8256
Tensile Strength:	> 35	N/mm²	ISO 527
Sd-Value:	ca. 1600		
LOI (Limiting Oxygen Index):	35	% O	ASTM D 2863-77

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PROCLAD PLUS™ Preformed Certifications

The innovation for outdoor applications

We have been testing PROCLAD PLUS™ against differing national fire regulations for more than 10 years with extremely positive outcomes.

FIRE RATING EN 13501

EN ISO 13501-1: B S_2D_0


efectis

CLASSIFICATION

3.4 CLASSIFICATION CRITERIA

Fire classification of construction products and building elements Linear pipe thermal insulation products			
Classification criteria			
Class	B	C	D
Test method(s)			
EN ISO 11925-2 Exposure = 30 s	$F_s \leq 150$ mm within 60 s Ignition of the paper in EN ISO 11925-2 results in a d2 classification.		
EN 13823	$FIGRA_{0.4\,kJ} \leq 270$ W/s LFS < edge of specimen $THR_{600s} \leq 7.5$ MJ	$FIGRA_{0.4\,kJ} \leq 460$ W/s LFS < edge of specimen $THR_{600s} \leq 15$ MJ	$FIGRA_{0.4\,kJ} \geq 2100$ W/s $THR_{600s} \geq 100$ MJ
Additional classification			
Smoke production	s1 = $SMOGRA \leq 105$ m²/s² and $TSP_{600s} \leq 250$ m²; s2 = $SMOGRA \leq 580$ m²/s² and $TSP_{600s} \leq 1400$ m²; s3 = not s1 or s2		
Flaming Droplets/particles	d0 = no flaming droplets/ particles in EN 13823 within 600 s; d1 = no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600 s; d2 = not d0 or d1.		

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with clause 13 of EN 13501-1:2007+A1:2009.

4.2 CLASSIFICATION

The product: ALU, applied onto Rockwool pipe insulation PROROX PS 960, in relation to its reaction to fire behaviour is classified:

B_L

The additional classification in relation to smoke production is:

s2

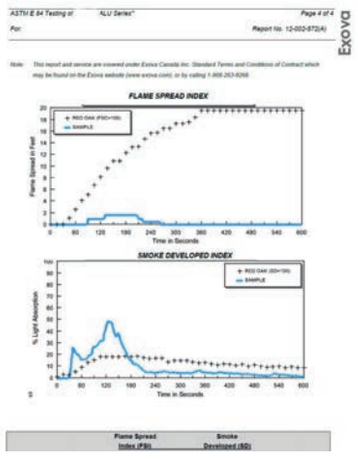
The additional classification in relation to flaming droplets / particles is:

d0

Reaction to fire classification: B_L - s2, d0

FIRE RATING ASTM E 84

ASTM 85 _ 5 / 85


ASTM E 84 Testing of: "ALU Series" Page 4 of 4

For: Report No. 12-002-872(A)

Note: This report and service are covered under Exova Canada Inc. Standard Terms and Conditions of Contract which may be found on the Exova website (www.exova.com), or by calling 1-866-263-9268

Exova

FLAME SPREAD INDEX

Flame Spread in Feet

Time in Seconds

SMOKE DEVELOPED INDEX

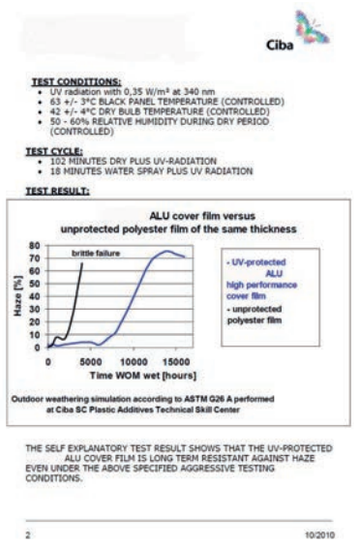
% Light Absorption

Time in Seconds

Flame Spread Index (FSI)	Smoke Developed (SD)

UV OUTDOOR RESISTANCE

ASTM G26 A: >10.000h = > 10 Years


Ciba

TEST CONDITIONS:
- UV radiation with 0,35 W/m² at 340 nm
- 63 +/- 3°C BLACK PANEL TEMPERATURE (CONTROLLED)
- 42 +/- 4°C DRY BULB TEMPERATURE (CONTROLLED)
- 50 - 60% RELATIVE HUMIDITY DURING DRY PERIOD (CONTROLLED)

TEST CYCLE:
- 102 MINUTES DRY PLUS UV-RADIATION
- 18 MINUTES WATER SPRAY PLUS UV RADIATION

TEST RESULT:

ALU cover film versus unprotected polyester film of the same thickness

Haze [%]

brittle failure

- UV-protected ALU high performance cover film
- unprotected polyester film

Time WOM wet [hours]

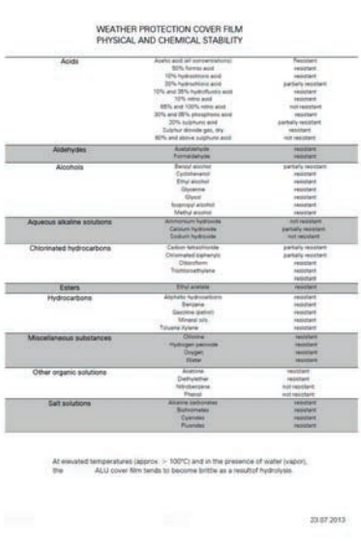
Outdoor weathering simulation according to ASTM G26 A performed at Ciba SC Plastic Additives Technical Skill Center

THE SELF EXPLANATORY TEST RESULT SHOWS THAT THE UV-PROTECTED ALU COVER FILM IS LONG TERM RESISTANT AGAINST HAZE EVEN UNDER THE ABOVE SPECIFIED AGGRESSIVE TESTING CONDITIONS.

2 10/2010

PHYSICAL & CHEMICAL

Stability UV protection film


WEATHER PROTECTION COVER FILM
PHYSICAL AND CHEMICAL STABILITY

Acids	Acetic acid all concentrations	Resistant
	50% formic acid	resistant
	10% hydrochloric acid	resistant
	35% hydrochloric acid	partially resistant
	10% and 38% hydrofluoric acid	resistant
	10% nitric acid	resistant
	65% and 100% nitric acid	not resistant
	30% and 85% phosphoric acid	resistant
	20% sulphuric acid	partially resistant
	Sulphur dioxide gas, dry	resistant
	80% and above sulphuric acid	not resistant
Aldehydes	Acetaldehyde	resistant
	Formaldehyde	resistant
Alcohols	Benzyl alcohol	partially resistant
	Cyclohexanol	resistant
	Ethyl alcohol	resistant
	Glycerine	resistant
	Glycol	resistant
	Isopropyl alcohol	resistant
	Methyl alcohol	resistant
Aqueous alkaline solutions	Ammonium hydroxide	not resistant
	Calcium hydroxide	partially resistant
	Sodium hydroxide	not resistant
Chlorinated hydrocarbons	Carbon tetrachloride	partially resistant
	Chlorinated diphenyls	partially resistant
	Chloroform	resistant
	Trichloroethylene	resistant
		resistant
Esters	Ethyl acetate	resistant
Hydrocarbons	Aliphatic hydrocarbons	resistant
	Benzene	resistant
	Gasoline (petrol)	resistant
	Mineral oils	resistant
	Toluene Xylene	resistant
Miscellaneous substances	Chlorine	resistant
	Hydrogen peroxide	resistant
	Oxygen	resistant
	Water	resistant
Other organic solutions	Acetone	resistant
	Diethylether	resistant
	Nitrobenzene	not resistant
	Phenol	not resistant
Salt solutions	Alkaline carbonates	resistant
	Bichromates	resistant
	Cyanides	resistant
	Fluorides	resistant

At elevated temperatures (approx. > 100°C) and in the presence of water (vapor), the ALU cover film tends to become brittle as a result of hydrolysis.

23.07.2013

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PROCLAD PLUS™ Preformed

References the world over

With decades of development and real-world experience, and millions of square meters installed successfully the world over, we're happy to share with you real world applications upon request.









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Notes



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