

# Product Data Sheet

## PAC-4000



### PRODUCT NAME:

PAC-4000  
Engineered Architectural Wall System

### MANUFACTURER:

Petersen Aluminum Corporation  
1005 Tonne Road  
Elk Grove Village, IL 60007  
phone: (800) 446-8828  
web: www.pac-clad.com  
email: info@pac-clad.com

## PANEL & SYSTEM DESCRIPTION

### OVERVIEW:

PAC-4000 is a fabricated wall system utilizing a composite panel made by laminating a prefinished aluminum skin to a substrate of thermoset phenolic resin. A second aluminum skin is added as a backer and provides thermal stability and panel balance.

Panels are furnished with a strippable film on the painted surfaces to protect the finish during shipment and installation.

PAC-4000 is fabricated and then attached to the substrate with a series of aluminum extrusions.

The three basic attachment methods for PAC-4000 are the Reveal System (RV) utilizing one piece extruded aluminum moldings, the Rout & Return System (RR) with formed 'pans' and attachment extrusions and the RainScreen System (RS) utilizing formed 'pans', attachment extrusions and featuring 'dry' joints.

### BASIC USES & APPLICATIONS:

As a high end fabricated system, PAC-4000 is designed for use as an exterior cladding on walls, canopies, fascia, and accent bands.

PAC-4000 is typically used on medium to high rise buildings, such as office towers, retail complexes, educational buildings, medical facilities, etc...

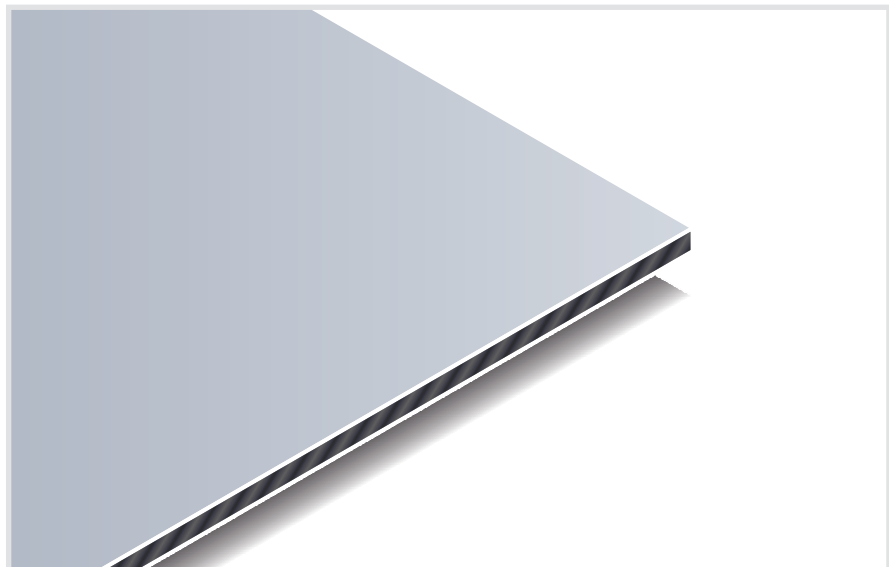


TABLE 1. COMPOSITION & MATERIALS<sup>1</sup>:

COMPONENT	STANDARD (IN)	METRIC (MM)
Prefinished Smooth Aluminum Face	.024" (min)	.609mm
Thermoset Phenolic Resin Core <sup>2</sup>	.105"	2.67mm
Primed Smooth Aluminum Backer	.010"	.254mm

1. Technical Properties (see back) are based upon the Typical Composition. Selecting optional components may alter these properties.
2. 4mm is the most common thickness for PAC-4000. 3mm and 6mm (nominal) are also available.

### FEATURES & BENEFITS:

As a complete exterior cladding system, PAC-4000 offers a number of benefits to the building owner, architect, and installer including:

#### ▶ High-Tech Appearance

Smooth aluminum skins and clean lines make PAC-4000 an excellent choice for high profile projects where a progressive aesthetic detail is desired.

#### ▶ Versatile Installation

With three different attachment options, virtually any look can be created using different shadow line sizes and treatments at the panel joints.

#### ▶ Curvable

Along with various shadow lines, PAC-4000 can also add interest to your project with long sweeping curves or tight, crisp column covers

#### ▶ Thermal Stability

Unlike other cladding solutions, PAC-4000 systems remain rigid and stable even during seasonal heating and cooling thermal cycles

#### ▶ Durable

An innovative thermoset phenolic resin core provides these panels with superior impact and dent resistance.

#### ▶ Low Maintenance

Most foreign matter can be cleaned from surface with mild detergents; can be incorporated into yearly building washing schedule.

## GENERAL LIMITATIONS:

PAC-4000 is intended for use as an exterior cladding. It is not eligible for use as a structural element of a wall assembly. PAC-4000 should not be used in applications where the slope exceeds 25° from vertical.

## SYSTEM FINISHES:

PAC-4000 comes standard with a smooth aluminum skin. Standard and metallic colors are furnished with a durable Kynar 500® coating. Anodized finishes are available as a standard finish. Custom colors are also available to match customer's standard.

Moldings (Reveal System) are coated using a Kynar 500 paint system and can be painted to match any standard or custom color.

## INSTALLATION OVERVIEW

### REVEAL SYSTEM (RV):

Utilizing one piece extruded aluminum moldings, this is a barrier system that features a progressive installation. The moldings are mechanically fastened to the substrate. The panels are then inserted into the moldings, along with sealant and attached to the substrate using construction adhesive at intermediate locations. Reveal (1/2" typical, 3" also available) and batten profile moldings are standard.

### ROUT & RETURN SYSTEM (RR):

Barrier system in which panels are fabricated and formed into 'pans' and then 'hung' on the substrate using aluminum extrusions. All fasteners are concealed and panel joints (1/2" reveal typical) are finished with an approved sealant.

### RAINSCREEN SYSTEM (RS):

Based on the 'rainscreen principle', this system allows incidental water to enter the cladding cavity, but then be drained through the system via weepholes. Also utilizing formed panels, this system is attached using aluminum extrusions. Panel joints are finished using color matched or complementary accent strips that 'float' in the extrusions providing a reveal from 1/2" to 12".

**TABLE 2. PANEL WEIGHT & THICKNESS:**

COMPONENT	STANDARD	METRIC
Panel Weight <sup>1</sup>	1.33 lbs/ft <sup>2</sup>	6.47 kg/m <sup>2</sup>
Nominal Thickness <sup>2</sup>	1/8"	4mm

**TABLE 3. PANEL PERFORMANCE:**

PROPERTY	TEST	VALUE	UNIT
R-Value	---	0.05	°F ft <sup>2</sup> /BTU
Flame Spread	ASTM E84	Class A	---
Peel Strength	ASTM D1781	34.5	lb-in/lb
Stiffness (EI) <sup>1</sup>	---	1.27E+03	lb-in <sup>2</sup> /ft width
Allowable Bending Moment <sup>1</sup>	---	1.82E+01	lb-ft/ft width
Tensile Yield <sup>1</sup>	ASTM D638	7.34E+03	lb/ft width
Ultimate Tensile <sup>1</sup>	ASTM D638	1.04E+04	lb/ft width
Coefficient Of Therm. Exp.	ASTM D1237	1.11E-05	in/in/°F
Ignition Temperature	ASTM D1929	900	°F
"Gardner Impact Test (other results available)"	ASTM D5420	0.006" depth and 0.176" diameter at 24-in lb.	

1. Weight and testing based upon panels using an .024" smooth face skin and an .010" smooth back skin.

**TABLE 4. SYSTEM PERFORMANCE:**

PROPERTY	VALUE	UNIT
Air Infiltration	ASTM E283	pass
Uniform Load	ASTM E330	pass
Water Resistance	ASTM E331	pass
International Building Code (IBC)*	---	approved
Intermediate Scale Multi-Story	UBC 26-9	pass

\* RR and RS Systems only. All other testing applies to all Envelope 2000 attachment systems.

## SIZES AVAILABLE:

48" x 96" (1219mm x 2438mm)  
 48" x 120" (1219mm x 3048mm)  
 48" x 144" (1219mm x 3658mm)  
 60" x 96" (1524mm x 2438mm)  
 60" x 120" (1524mm x 3048mm)  
 60" x 144" (1524mm x 3658mm)  
 Cut-to-size panels are also available in virtually any size up to 60" x 144"

## MATERIAL TOLERANCES:

Thickness: ±1/32" (±0.79mm)  
 Length Dim: +0, -1/16" (+0, -1.59mm)  
 Width Dim: +0, -1/16" (+0, -1.59mm)  
 Squareness: 1/64" (0.4mm) per lineal foot

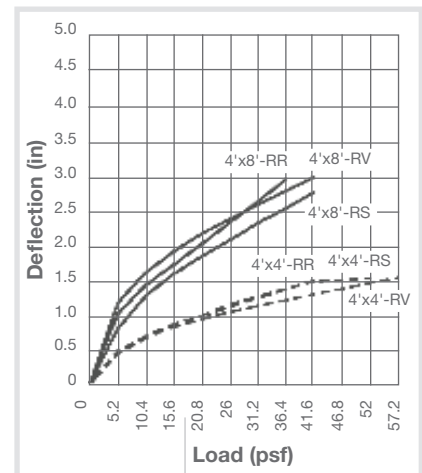
## STANDARD WARRANTY:

Panel Warranty: 10 Years  
 Anodized Finish: 20 Years  
 Kynar 500 Finish: 20 Years (spray-applied)  
 Kynar 500 Finish: 30 Years (coil-coated)

## PANEL FINISH SYSTEMS:

Standard Smooth: Kynar 500 (coil-coated)  
 Custom Smooth: Kynar 500 (spray-applied)

## LOAD DEFLECTION<sup>1</sup>:



<sup>1</sup> Panel tested while supported on four sides.