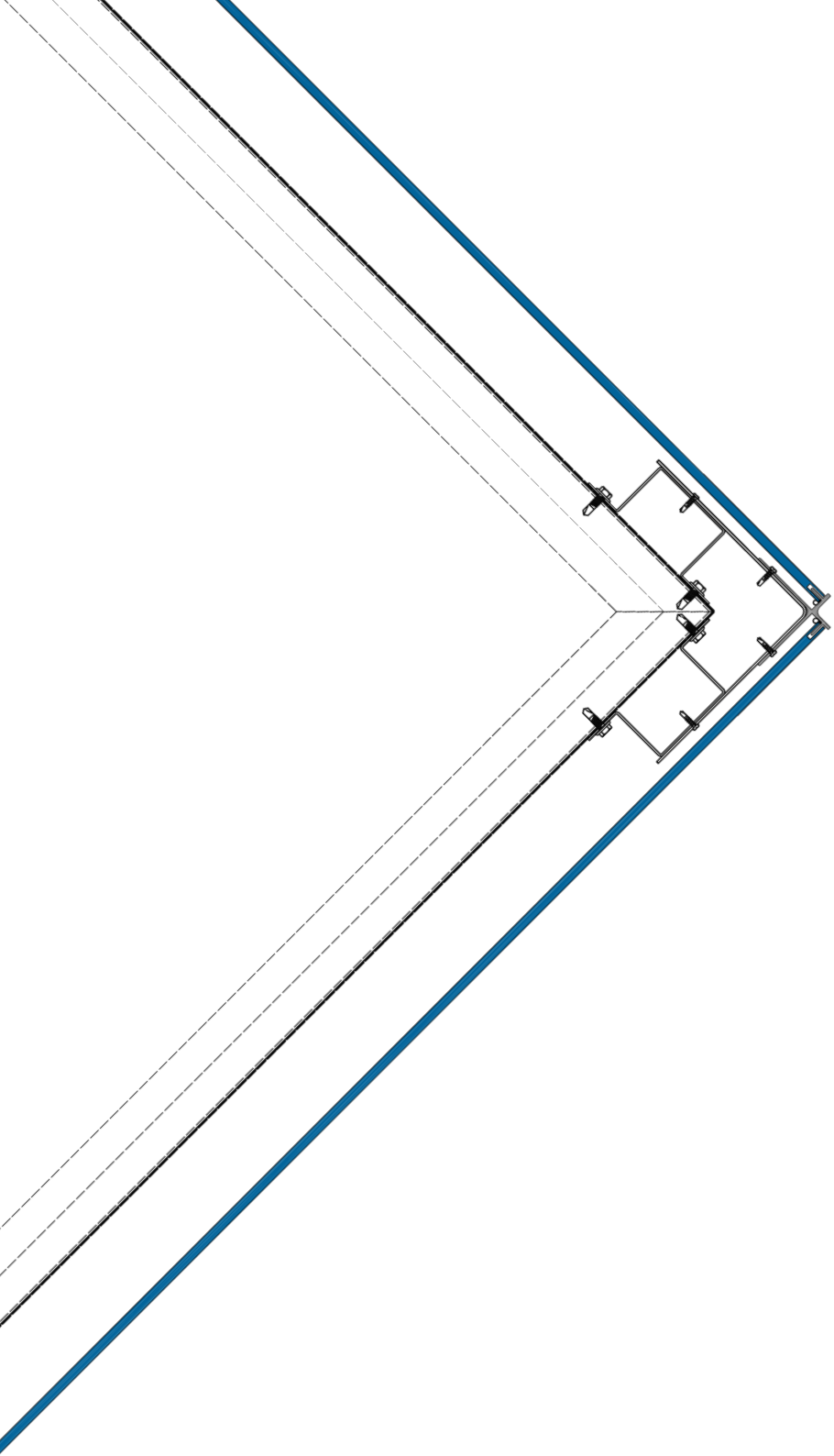




**SOLIDAL®**

KYNAR® 500®  
COIL COATED PVDF



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## EDGE OUT THE COMPETITION

Research has proven that **SOLIDAL®** pre-painted pre-finished cut-edge holds up better over time than post-painted surfaces, due to pre-paint's overall superior surface.

**SOLIDAL®** pre-painted metal with cut-edges corrodes significantly less than post-painted metal with no exposed edges.

## HANDLING AND FREIGHT

**SOLIDAL®** pre-painted metal can be shipped on flatbed trucks, sea freighted across several continents, stored as coils for long periods, and still retain a beautiful and flawless surface. **SOLIDAL®** pre-painted metal can be handled successfully, without marring the surface.

## SOLIDAL® Kynar® 500® PVDF Coil Coating

### DURABILITY

The face of toughness

Prepainted **SOLIDAL®** products are amazingly durable.

With the appropriate surface treatments, **SOLIDAL®** pre-finished aluminum can be made virtually:

- Waterproof
- Weatherproof
- Corrosion resistant
- UV resistant
- Even smog-eating

All of this helps ensure a long service life, low maintenance without degradation.



### INNOVATION

#### > Reimagine Your World

**SOLIDAL®** pre-finished metal enables product designers, architects, engineers, to reinvent products of all types. Innovative shapes, colors, patterns, textures, and specialty coatings are all possible with **SOLIDAL®** pre-finished metal.

#### > Building Tomorrow Today

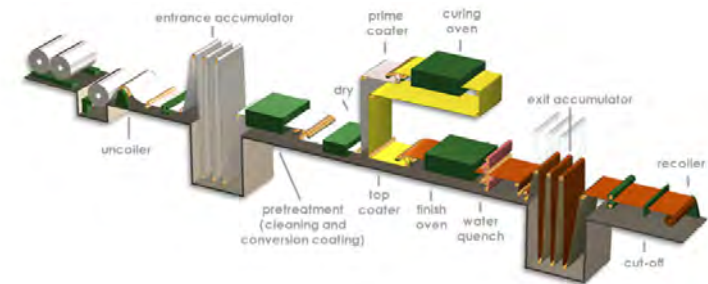
**SOLIDAL®** pre-finished aluminium can be used for all building types, producing buildings with both function and beauty. From residential-housing to industrial and commercial applications, pre-finished **SOLIDAL®** metal can add that awe-inspiring finish to all architectural projects.

## **SOLIDAL® Kynar® 500® PVDF Coil Coating** Amazing colours brought to life

**SOLIDAL®** Coil coating is a continuous, automated process for coating Solid Aluminium metal before fabrication into end products. The aluminum substrate is delivered in coil form from the rolling mills. The metal coil is positioned at the beginning of the **SOLIDAL®** coating line, and in one continuous process, the coil is unwound, pre-cleaned, pre-treated, pre-primed, and pre-painted before being recoiled on the other end and packaged for shipment. All of this happens at up to 700 feet per minute.



The Most Advanced Method For Coating Metal:



## **COST**

Painting In-House: What's it costing your company?

The coil coating process is widely known to be the most efficient, effective, and environmentally friendly way to pre-clean, pre-treat, pre-prime and pre-paint metal.

Costs to be considered with in-house paint shops include labour costs, inventory costs, fixed paint equipment costs and operating costs. All of these costs are reduced or eliminated when using **SOLIDAL®** pre-finished pre-painted coil coating process.

**SOLIDAL®** offers a Cost Comparison Analysis form to help clients to understand the long-term savings in converting **SOLIDAL®** coil coated metal. We recommend that you contact **SOLIDAL®** and request this form and review, to better understand the costs, so you can make a fully informed choice.



**SOLIDAL®** coil coating process itself is considered the most environmentally responsible way to apply paint to aluminum substrate. It's the most eco-friendly coating process on Earth. Here's why:

- > 98% VOC Capture: Coil coating is a highly efficient 'closed loop' process, meaning that the coating curing ovens burn the harmful VOCs, using them as fuel, saving energy and eliminating pollutants. Coil coating achieves at least a 98% rate for capture and destruction efficiency, eliminating toxic air pollutants that would otherwise be released into the air.
- > Centralized Operations: By centralizing paint operations, moving them from the manufacturers' inefficient in-house paint shops to coil coaters' high-tech coating lines, environmental issues are concentrated, controlled, and even eliminated.
- > Exceeds EPA Standards: The coil coating industry is subject to the highest EPA standards and meets and exceeds these standards even as they become more stringent year after year.
- > Recyclable & Recycled: The end products are green. **SOLIDAL®** Prepainted metal is fully recyclable, and coil coated products are often made of recycled content.

<https://www.coilcoating.org>

## SOLIDAL® Kynar® 500® PVDF Coil Coating

The most earth-friendly way to apply coatings to metal

### THE PROCESS

Even The Process Is Innovative. The coil coating process is always evolving to produce higher quality and lower environmental impact. Recent innovations include:

- > No-rinse pre-treatment - many coil coating lines have been able to dramatically reduce water usage using this innovative technique.
- > Curing ovens – major improvements to the most energy-intensive part of the coil coating process now cure paint in seconds, using innovative induction, infrared, and near-infrared curing.
- > VOC elimination - the coil coating process collects VOC's from solvents in paints and uses oxidizers to turn those compounds into fuel to cure the coating, destroying 98% of the VOCs.

### SUSTAINABILITY

#### The Leading Edge Of Eco-Friendly

Manufacturers of the most advanced green building materials and renewable energy products rely on coil coating technology.

#### For Green Building, There's No Comparison

Unlike brick, cement, wood, and many other building materials, pre-painted pre-finished **SOLIDAL®** metal can be recycled without loss of quality. Aluminum continually recover their original performance properties, even after multiple times of recycling, allowing them to be used again and again. In fact, about 95% of the pre-painted metal that is used in buildings are collected and recycled after they have served their purpose. By contrast, the performance characteristics of most non-metallic materials degrade after recycling, resulting in a loss of strength, durability and aesthetic appeal.

## Technical Specifications

3003H24 Series Aluminium is preferred material for the PVDF applications.

Conversion Coating: Preparation of **SOLIDAL®** before Paint application is completed in 100% chromate free baths.

Typical ways to prepare solid aluminium before painting is using CHROMATE baths, chromate process is highly cancerous and deadly.

Base Metal Cleaning: Cleaning and passivation of metal is completed by submersing **SOLIDAL®** materials into tanks which have an ALODINE 5200 Solution for up to 5 minutes at a time. This is critical to ensure the base metal materials are fully cleaned prior to coating materials being applied.

Brand of Cleaning Product: ALODINE 5200 MU Solution.  
Supplier HENKEL Germany

Cleaning and passivation of all **SOLIDAL®** is signed off by a P.P.G (PVDF).

Please note: *Traditional chromate conversion has been reduced due to heavy metal pollution.*

### SOLIDAL®

Panel Thickness (mm)	2mm, 2.5mm, 3mm, 4mm up to 6mm
Available width (mm)	1240mm, 1500mm, 2000mm
Length (mm)	7000mm

### SOLIDAL® DIMPLE & PERFORATED

Panel Thickness (mm)	3mm, 4mm, 5mm
Dimpled Percentage	10%, 20%, 40%
Diameter Options (mm)	15mm, 30mm, 60mm, 120mm, up to 300mm
Depth of Dimple (mm)	2.5mm (Standard)

### SOLIDAL® Physical Properties

	* 3000 Series <b>SOLIDAL®</b>	5000 Series <b>SOLIDAL®</b>
<b>Mechanical Properties</b>		
Brinell Hardness	45	67
Elastic Modulus	70GPa	68GPa 9.9 x 106 psi
Elongation at Break	6.0%	8.0%
Fatigue Strength	68 MPa	110 MPa 15 x 103 psi
Poisson's Ratio	0.33	0.33
Shear Modulus	26 GPa	26 GPa 3.7 x 106 psi
Shear Strength	93 MPa	150 MPa 22 x 103 psi
Tensile Strength: Ultimate	160 MPa	250 MPa 37 x 103 psi
Tensile Strength: Yield (Proof)	125 MPa	190 MPa 28 x 103 psi
<b>Thermal Properties</b>		
Melting Onset (Solidus)	640 °C 1120 °F	610 °C 1120 °F
Specific Heat Capacity	900 J/kg-K 0.22 BTU/lb-°F	900 J/kg-K 0.22 BTU/lb-°F
Thermal Conductivity	180 W/m-K 100 BTU/h-ft-°F	140 W/m-K 80 BTU/h-ft-°F
Thermal Expansion	23µm/m-K	24µm/m-K
<b>Electrical Properties</b>		
Electrical Conductivity: Equal Volume	44% IACS	35% IACS
Electrical Conductivity: Equal Weight (Specific)	140%	120%

\* 3000 Series **SOLIDAL®** is ideal for Kynar® 500 PVDF coil coating



## **SOLIDAL® Kynar® 500®** UNLIMITED CHOICE OF COLOURS

**SOLIDAL®** Coil Coated PVDF offers unlimited range of Finishes and Colours with various Gloss levels.

Kynar® 500 Solid is standard three coat system, consisting of a primer, topcoat and clear coat with a minimum thickness of 28 microns. Reverse side can either be a milled aluminium finish or a polyester base coat finish. Nano PVDF application is available. Maximum gloss level for Kynar® 500 finishes is 30%.

Pearlescent pigments with infrared-reflective coatings technology are applied to SOLIDAL® panels with the coil coating process, improving energy efficiency.

### **SOLIDAL® Kynar® 500® can match any RAL Colour Code**

Utilise RAL sample color cards and follow the specification process below:

STEP 1: Choose your **SOLIDAL®** Colour code (for example NU001)

STEP 2: Specify NU001 (PVDF COIL COATING)

**Colour Matching:** provide us with a colour control sample for colour matching using our colour spectrometer.

Contact us for more information:

T: +61 414885530 | E: [info@solidalmetal.com](mailto:info@solidalmetal.com) | [www.solidalmetal.com](http://www.solidalmetal.com)



## HOW TO SPECIFY:

Once you have chosen **SOLIDAL®** Architectural Coating, it's important to specify the correct product.

We make specifying our **SOLIDAL®** products and coatings easy, simply:

1. Nominate your preferred Colour or Finish:

Step 1. Nominate finish type:

PVDF Coil Coating (Kynar® 500®) or

Powder Coat (Interpon D2015) Ultriva or

Anodise (from 10µm to 25µm Anodise)

Step 2. Nominate the Colour, Finish and Product Code,

e.g. Charcoal Pearl Matt YY237A (refer to SOLIDAL® colours & finishes catalogue)

2. Nominate the SOLIDAL® Architectural Grade of Aluminium: 3 Series or 5 Series\* (this will be dependent on your preferred colour or finish)
3. Nominate the Fabrication / Fixing System (refer to **SOLIDAL®** Fabrication catalogue):  
Smartfix® System /  
Cassette Fixing /  
VIZFix System /  
Curtain Wall  
Perforated / Dimpled

Please contact our Customer Care Team for additional specification support and advice.

T: +61 414885530 | E: [info@solidalmetal.com](mailto:info@solidalmetal.com) | [www.solidalmetal.com](http://www.solidalmetal.com)



Solid	Pure White - NU018 PVDF/PE	Autumn Pink - NUP012 PVDF/PE	Grey Violet - NUP014 PVDF/PE	Mute Dull - NUP016 PVDF/PE	Dark Pepper - NUR009 PVDF/PE
Summr Sky - NUO021 PVDF/PE	Heavy Storm - NUO004 PVDF/PE	Charcoal - NUN003 PVDF/PE	Aero - NUO002 PVDF/PE	Bereft - NUO017 PVDF/PE	Cobalt - NUO015 PVDF/PE
Night Sea - NUO014 PVDF/PE	Forlorn - NUO018 PVDF/PE	Lavonne - NUO010 PVDF/PE	Faded Blue - NUO011 PVDF/PE	Deep Ocean - NUO016 PVDF/PE	Moon View - NUO012 PVDF/PE
Gloss Light Blue - NU041 PVDF/PE	Gloss Blue - NU042 PVDF/PE	Grey Teal - NUO009 PVDF/PE	Blue Cream - NUO005 PVDF/PE	Humid Sky - NUO006 PVDF/PE	Blue - NU027 PVDF/PE

Gloss Green - NU040 PVDF/PE	Gloss Traffic Green - NU039 PVDF/PE	Heavy Green - NUP030 PVDF/PE	Green Moon - NUF005 PVDF/PE	Palm Leaf - NUF004 PVDF/PE	Bamboo - NUF015 PVDF/PE
Tree Brown - NUF017 PVDF/PE	Jarden Olive - NUF007 PVDF/PE	Wet Moss - NUF014 PVDF/PE	Dry Leaf - NUF011 PVDF/PE	Yellow Metal- NUN006 PVDF/PE	White Pepper - NUR010 PVDF/PE
Dark White - NU019 PVDF/PE	Ivory Gloss White - NU020 PVDF/PE	Milk White - NU021 PVDF/PE	Milk Yellow - NU022 PVDF/PE	Pure Yellow - NU023 PVDF/PE	Gloss Purple Coffee - NUR010 PVDF/PE
Linen Silver - NUD012 PVDF/PE	Chocolate Red - NUD026 PVDF/PE	Gloss Traffic Red- NU045 PVDF/PE	Indian Purple - NUR008 PVDF/PE	Pure White - NU032 Nano PVDF	 PPG Architectural Coatings  

## TRUE BEAUTY

Architects, manufacturers, and consumers appreciate the beauty of coil-coated **SOLIDAL®**, including consistent quality, low cost, design flexibility, and green properties.

## TRANSFORM ORDINARY INTO EXTRAORDINARY

Architectural facades become objects of beauty with laminate films applied with the coil coating process. The look of stainless steel, brushed copper, wood grains, and even color changing pigments can be achieved using pre-painted **SOLIDAL®** coil coating.

## MESMERIZING FINISHES

**SOLIDAL®** Pre-finished metal can be the catalyst to transforming everyday items into objects d'art that capture your customers' attention and makes your products irresistible.

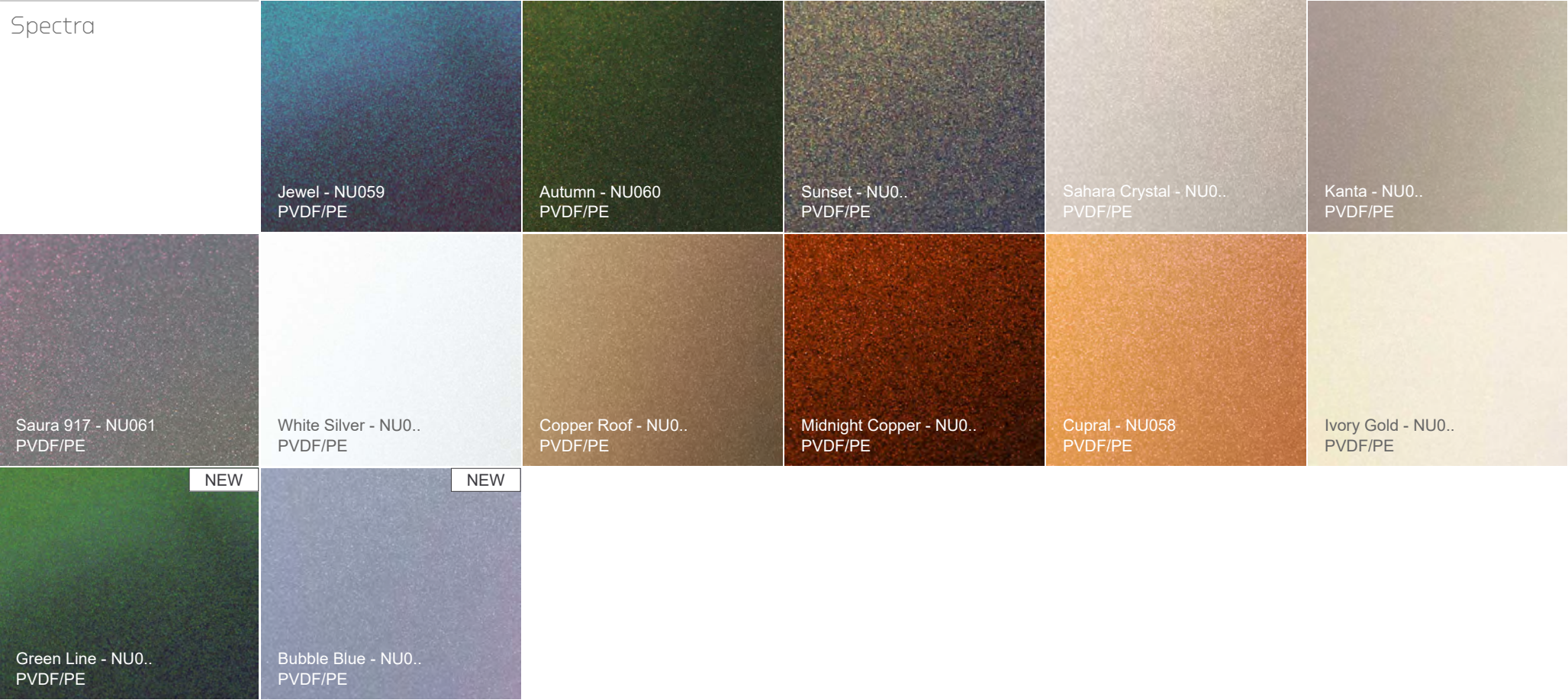




Key features and advantages  
of **KYNAR 500® PVDF** Finish

For all its bravado and beauty, metal tends to be superficially weak and is generally available in but a single color. Thus, in order to be both functional and pleasing to the eye, metal must be coated with a unique finish which beautifies with color and resists any chalking, pitting, chip-ping, or premature aging.

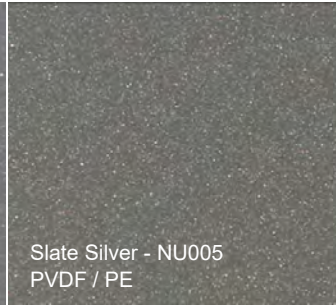
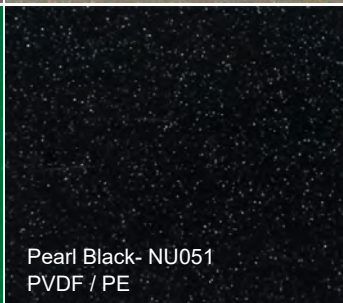
Noted by architects around the world, Kynar® 500® PVDF resin-based coatings are precisely the product necessary to provide such protection to **SOLIDAL®** Solid Aluminium.



## Why **KYNAR 500®** PVDF Finish

Modern times have seen the rise of metal as a prime exterior material, largely due to its rugged durability, design versatility, and aesthetic possibilities.

No other coating system withstands the rigors of nature and time like those based on Kynar 500® resins. This high-performance fluoropolymer resin, with its extraordinary capability to retain color and gloss, keeps **SOLIDAL®** Solid Aluminium looking vibrant and appealing.

Metallic					
	Sugar Bronze - NU017 PVDF / PE	Golden Brass - NU014 PVDF / PE	Golden - NU013 PVDF / PE	Glittering Silver - NU001 PVDF / PE	Slate Silver - NU005 PVDF / PE
					
Charcoal Silver - NU008 PVDF / PE	Moon Light Silver - NU004 PVDF / PE	Silver Grey - NU007 PVDF / PE	Dark Champagne - NU006 Nano PVDF	Silver Gloss - NU037 Nano PVDF	Dark Pearl - NU009 PVDF / PE
					
Pearl Red - NU047 PVDF / PE	Pearl Blue - NU048 PVDF / PE	Pearl Green - NU049 PVDF / PE	Pearl Black- NU051 PVDF / PE	Tin Silver - NU030 Nano PVDF	True Silver - NU002 PVDF / PE



**SOLIDAL®**

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Image Disclaimer. All images used are for illustrative purposes only.

Color Disclaimer. We have made every effort to make the colours and finishes as close as possible to the colours and finishes of the products you'll use. However, we cannot guarantee an exact match in colours and finishes. The representation of colours, gloss levels, metallic pigment effects and textures are limited by technology and may vary due to screen and printer settings.

The Brochure is designed to help you get a better idea of our products, but you should always order samples from our website and test our products before you commit to a large purchase.

For the application of our products, we refer you to our technical literature or to your local SOLIDAL® representative.



PPG Architectural Coatings



Intertek