IFS Powder Coatings for Architecture
A guide to using powder in architectural applications
Introducing the IFS Coatings Architectural Range

We are proud to introduce our world class, IFS Coatings architectural powder coatings range. With an extensive history and years of dedicated innovation and development behind it, the IFS architectural range gives architects, designers, general contractors and coaters a quality selection of architectural coatings designed to meet and exceed the super durable specifications, in a vast array of colors.

The following pages cover the important areas to consider in specifying architectural powder coatings. For more information, please don’t hesitate to contact your IFS representative.
IFS Products

The IFS architectural range is designed to meet every level of exterior durability required in the architectural arena. Whether it’s a simple AAMA 2603 specification or the tough demands of the AAMA 2605 specification, we have a factory applied powder product that will meet and exceed those performance requirements.

IFS 500FP
IFS 500FP is a top of the range, high performing fluoropolymer powder coating. Designed to meet the very toughest exterior architectural specifications, IFS 500FP will add the highest level of protection to your design without compromising on aesthetics. IFS 500FP is perfect for high value residential, commercial and monumental applications and will give excellent performance irrespective of building height and harsh environments. With a long history in architectural excellence and a true equivalent to liquid PVDF coatings, the IFS 500FP range is made to order.

IFS 500FP:
• Is a 100% PVF3 fluoropolymer system
• Meets and exceeds AAMA 2605
• Is suitable for all exterior architectural applications where high performance is essential
• Comes in a range of colors and effects
• Comes with an excellent warranty*

IFS 400SD
IFS 400SD is the perfect mid-range powder coating suitable for residential and commercial applications. A super durable polyester, IFS 400SD will add first class protection and decoration to any architectural project. IFS 400SD is available with limited stock products and can also be custom made to order.

IFS 400SD:
• Is a super durable polyester powder coating
• Meets and exceeds AAMA 2604
• Is suitable for all exterior architectural applications
• Comes in a range of colors and effects
• Comes with a choice of color and gloss warranties*

IFS 300SP
IFS 300SP offers great flexibility for exterior and interior architectural applications. This standard durability polyester powder coating comes in an enormous range of colors and effects and is perfectly suited to residential applications or interior commercial and monumental requirements. IFS 300SP is a great choice when no warranties are required.

IFS 300SP:
• Is a standard durability polyester powder coating
• Meets AAMA 2603
• Is designed for residential and some commercial applications
• Comes in over 240 stock colors and effects and custom color matching is also available

*When applied by a Certified Applicator to aluminum.
Since 1936 the American Architectural Manufacturer’s Association (AAMA) has been regarded as the standards leader for finishes (both liquid and powder coatings) on architectural aluminum. AAMA creates performance requirement specifications for coating manufacturers and outlines test procedures and pass requirements for all pigmented organic coatings on aluminum. Citing an AAMA standard in the specification makes it clear what level of performance the coating must meet.

There are 3 relevant AAMA specifications:
• AAMA 2603
• AAMA 2604
• AAMA 2605

Each AAMA specification level requires chemical, mechanical and weathering tests which are performed on the coatings to judge how they affect film and appearance. See the table below for the key tests.

<table>
<thead>
<tr>
<th>Tests</th>
<th>AAMA 2603</th>
<th>AAMA 2604</th>
<th>AAMA 2605</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muriatic acid resistance</td>
<td>No blistering or visual change</td>
<td>No blistering or visual change</td>
<td>No blistering or visual change</td>
</tr>
<tr>
<td>Mortar resistance</td>
<td>No loss of film adhesion or visual change</td>
<td>No loss of film adhesion or visual change</td>
<td>No loss of film adhesion or visual change</td>
</tr>
<tr>
<td>Nitric acid resistance</td>
<td>Not applicable</td>
<td>Color change Delta E &lt;5</td>
<td>Color change Delta E &lt;5</td>
</tr>
<tr>
<td>Detergent resistance</td>
<td>Not applicable</td>
<td>No loss of adhesion or visual change</td>
<td>No loss of adhesion or visual change</td>
</tr>
<tr>
<td>Window cleaner resistance</td>
<td>No loss of adhesion or visual change</td>
<td>No blistering or change in appearance</td>
<td>No blistering or change in appearance</td>
</tr>
<tr>
<td>Weather</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidity resistance</td>
<td>1500 hours</td>
<td>3000 hours</td>
<td>4000 hours</td>
</tr>
<tr>
<td>Salt spray resistance</td>
<td>1500 hours</td>
<td>3000 hours</td>
<td>4000 hours</td>
</tr>
<tr>
<td>Erosion resistance</td>
<td>Not applicable</td>
<td>10% loss max.</td>
<td>10% loss max.</td>
</tr>
<tr>
<td>UV exposure</td>
<td>45°F Florida exposure 1 year</td>
<td>5 years</td>
<td>10 years</td>
</tr>
<tr>
<td></td>
<td>Color retention</td>
<td>“slight change” Delta E &lt;5</td>
<td>Delta E &lt;5</td>
</tr>
<tr>
<td></td>
<td>“slight change”</td>
<td>Minimum 30%</td>
<td>Minimum 50%</td>
</tr>
<tr>
<td></td>
<td>Chalk resistance</td>
<td>No more than number 8 rating</td>
<td>No more than number 8 rating</td>
</tr>
</tbody>
</table>

IFS Coatings architectural range is designed to meet and exceed the performance requirements of all the AAMA specification requirements, however it is the weathering tests that really set the specifications apart. The below table outlines the AAMA weathering requirements and the applicable IFS architectural coating.

<table>
<thead>
<tr>
<th>AAMA 2603</th>
<th>AAMA 2604</th>
<th>AAMA 2605</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFS Product</td>
<td>IFS 300SP</td>
<td>IFS 400SD</td>
</tr>
<tr>
<td>AAMA - number years weathering</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>AAMA - color retention</td>
<td>“slight fade”</td>
<td>Delta E&lt;5</td>
</tr>
<tr>
<td>AAMA - gloss retention</td>
<td>“slight fade”</td>
<td>Minimum 30% retention</td>
</tr>
<tr>
<td>Available warranty*</td>
<td>No warranty</td>
<td>5 or 10 year warranty*</td>
</tr>
</tbody>
</table>

*When applied by a Certified Applicator to aluminum.

For complete details relating to these and other standards visit www.aamanet.org/
Color and Effect

We know that choosing the right color for your design is complicated. That’s why we have a great selection of standard architectural colors and metallic effects as well as the ability to work with you to create the color you want – quickly.

Standard architectural colors
There are certain shades instantly associated with architectural design – bronze, silvers, greys, blacks, whites, ivory and browns. All of these shades and more are available from the IFS Coatings architectural range.

Color matching service
If you have a specific shade in mind or need to match your coating color to something else, let us know. We will quickly analyze the shade using the latest color matching technology and create a match and sample panel for you to approve.

Custom color creation
Need a special color and don’t have a sample? Just let us know. We regularly work with architects and designers to create the exact shade they need. We’ll start with a RAL shade and can then warm it up, cool it down, add more red, add more blue – whatever you need to have the perfect shade for your project. We can also change the gloss levels and add metallics or textures to your palette.

Gloss levels
From flat matte to high gloss we can adjust the gloss of your coating, so whether it’s a flat black or a high gloss green, simply let us know what you need.

Metallics
Metallic looks have become a staple favorite in the architectural world. It’s easy to add a metallic look and feel to your design. We can add metallic flake to any color to ensure the coating is exactly what you need for your project.

Textures
Sometimes super smooth just won’t do. There are a range of textures available to add a tactile dimension and an interesting look to your coating.

With any coating, powder or liquid, there are limitations regarding what is achievable at the higher levels of exterior durability. Quite simply, the pigments for some shades (for example, bright yellow) that will offer the durability required for these specifications are not available. Similarly, not all gloss levels or metallic effects can be achieved at an AAMA 2605 level. However, there is a vast range of colors and effects that are available and will meet the strict exterior durability demands of the AAMA 2605 specification. Talk to your IFS architectural advisor for advice.
Certified Applicators

Once the difficult task of specifying the right product in the right color has been achieved, the project’s coating success now rests in the hands of the fabricator and applicator. Using an IFS Coatings Certified Applicator is essential to ensuring the quality and integrity of your project. Our Certified Applicators have invested heavily in the quality of their business and must repeatedly demonstrate their capability to meet stringent pretreatment, coating, quality conditions and international standards.

Pretreatment is an essential part of the coating process, just as much as a professional application and curing operation. For the coating to provide maximum protective and decorative performance, the aluminum must be properly cleaned and prepared, the powder must be applied in accordance with IFS recommendations and the coated metal thoroughly tested before being released. Using a registered IFS Certified Applicator helps ensure that this process is done to the highest standards. Talk to an IFS representative about finding a Certified Applicator near your project. We’re happy to help.

Fabrication and Installation Considerations

IFS premium architectural powder coatings are suitable for post fabrication onto windows, doors, curtain wall, store front, balustrade assembly and more.
All IFS architectural powder coatings are suitable for post cutting, mitre joining and glazing. Punching out drainage holes is generally acceptable provided there is no deformation of the metal. Generally, raw edges of cut metal will perform quite well in mild to moderate environments. For additional protection, in mild environments and critical in tropical or severe environments, the raw metal should be treated with a chromate solution, a small joint sealer or an equivalent performing system before the metal is assembled and installed.
Bending

As a general rule the higher the durability of the finish, the lower the flexibility of the coating. Bending of powder coated aluminum sections should be kept to a minimum as this can introduce cracking in the metal and the pretreatment underneath the powder coating. In some cases the powder coating can crack upon bending, causing unsightly marks and a potential site for film failure. When designing fabricated sections, it is recommended that trials are conducted to ensure the fabrication procedures are understood prior to production. Alternatively and ideally, the metal should be formed into the desired shape before pretreatment and powder coating. While some architectural powder coatings show no evidence of cracking after bending, it should be noted that warranties do not cover film failure or corrosion caused by post bending, unless specifically authorized by IFS in writing.

Installation

The use of masking materials to protect the installed architectural products is a common practice to avoid scratching or discoloration. There have been many occasions when a high quality product has been installed only to be damaged through excessive exposure to building materials like mortar, plaster, cleaning chemicals and paints. However, care must exercised to ensure that the protective material itself does not cause harm to the finish. All protective materials should be used for short periods (less than 3 months) and where the masked product is exposed to direct sunlight, even shorter masking periods should be employed. With so many masking materials available it is advisable to trial a small test area before applying any form of test product.

Sealant adhesion

When assembling joinery, including application of sealants and glazing products, avoid contact as much as possible. Neutral cure sealant on all glazing is recommended, as acid- and alkali-cured sealants can damage the powder coating and corrosion resistance of the metal. It is the responsibility of the sealant to adhere to the powder coating and any concerns with sealant adhesion should be directed to suppliers of the sealant products.

The AAMA specifications state:

“Sealant used in contact with an organic coating shall be compatible with the organic coating and meet the performance requirements of AAMA 800 Sealant Specification. There shall be no evidence of deleterious effects in the organic coating such as staining, coating separation, lifting, discoloration or loss of adhesion of the coating from the substrate. Note: It is strongly recommended that the fabricator of the finished products consult with the sealant manufacturer in the selection of the appropriate sealant...”

Care and maintenance

The effects of UV light, pollution, dirt, grime and salt deposits can all accumulate on your powder coated surface over time. To extend the effective life of powder coatings and protect any warranty requirements that may exist, a simple regular maintenance program should be implemented for the removal of any residues.

As a general rule:

1. Carefully remove any loose deposits with a wet sponge.
2. Use a soft, non-abrasive brush or cloth and a mild household detergent to remove dust, salt and other deposits. Do not use steel wool, scrapers, scouring liquids or powders to remove deposits as these permanently scratch the coated surface.
3. Rinse off with clean fresh water. Avoid water which has a high mineral content. Bore water is generally unsuitable for rinsing.

In essence, common sense should apply with regards to cleaning frequency. If the surface is ignored, the appearance and performance of the powder coating may be compromised. After all, you wouldn’t leave a car outside in the sun for 10 years, not clean it, and expect it to look the same.
Building sustainability into your design is important. Choosing IFS powder coatings can help you achieve an improved sustainability footprint over other finishing options because:

- **IFS Coatings have no or very low VOCs**
  There are no solvents and therefore no or extremely low VOCs in powder coatings.
- **IFS Coatings contain no toxic compounds or dangerous substances (e.g. lead)**
- **IFS Coatings and energy savings**
  IFS Coatings can achieve the same or better levels of chemical, mechanical and weathering performance than liquid coatings, but in a single coat. This means there is a significant energy saving. With liquid 2, 3 or 4 coat systems each coat must be sprayed and baked – with significant energy requirements each time. With powder only one spray and bake cycle is required, thus making significant energy savings.
- **Reclaim and reuse IFS Coatings**
  Any overspray can be reclaimed and reused or recycled, unlike with liquid paints where any overspray is instantly lost. This gives up to a 97% utilization rate from a box of powder.
- **IFS Coatings have lower carbon dioxide emissions**
  In a life cycle analysis (DSM study), powder coatings were shown to have both lower VOC and lower carbon dioxide emissions than liquid coatings.
- **IFS Coatings can help with LEED certification**
  Ask for details on how IFS powder coatings can help towards LEED certification.
- **EPA recommendation**
  Powder coatings are recommended by the Environmental Protection Agency.

**Specification advice**

**Writing the spec**
Reduce the chance of misinterpretation or inferior or less sustainable products being switched into the project by:

- Including the IFS product name and code
- Indicate the AAMA specification level required
- Indicate that the coating must be applied by an IFS Certified Applicator
- Specify the warranty period
- Indicate any installation criteria
- Indicate that if an alternative to the specified product is to be submitted, it must meet or exceed the required AAMA specification level, the sustainability characteristics and the performance criteria of the IFS warranty

The IFS architectural team will work with you through the entire process – from design development, choosing the colors and ensuring samples are available for prototypes, to contacting the General Contractor to assist in finding a Certified Applicator and getting the right powder to right place at the right time. We know how important specifying the right coating is and we are here to help.

**Suitable Applications**

**IFS architectural powders are suited to all metal applications including:**

- Individual Housing
- Condominiums
- Doors
- Retail
- Skylights
- Windows
- Condominiums
- Doors
- Retail
- Skylights
- Skyscrapers
- Storefront
- Hospitals
- Curtain Wall
- Stadiums
- Mullions
- Government Buildings
- Exterusions
- Malls
- Fencing
- Balustrades
- Handrails

**Summary**

**IFS architectural powder coatings:**

- Are a sustainable coating option
- Are factory applied to ensure a professional finish
- Offer superior protection in a single coat
- Meet and exceed AAMA specifications
- Come with excellent warranties
- Come in a range of colors and effects
Any recommendations contained herein or any information given by any IFS Coatings representative is based on tests and information believed to be accurate. However, since we have no control over the conditions under which our products are transported, stored, handled or used by purchasers, all recommendations and sales are made on condition that IFS Coatings will not be held responsible for any damages resulting from their use. No representative of ours has any authority to waive or change this provision.