

Decoration Powder Coatings : Camouflage for Coated Surfaces



Coatings in Disguise



Powder Coatings are usually seen in solid color or metallic shades, decorating metal parts (and sometimes wood, glass or plastic).

They provide a tough, anti-corrosive finish that protects and decorates the subject.

Sometimes you don't realise there is a coating at all though, because it is disguising the substrate as another material – making metal look like wood, or aluminum look like stainless steel... We call these Decoration Powder Coatings.

Architecture – The Interpon D Series

AkzoNobel's **Interpon D** series of powder coatings have been in use since the 1980s on architectural metal. Designed to give an attractive finish over the long-term, **Interpon D** powders are available to suit every climate and building type. When applied by Approved Applicators, **Interpon D** powders also come with a guarantee of decorative performance.

Furniture and Industrial Markets

AkzoNobel also offer specialised powders for other design-led end-uses. Too numerous to mention here, they include anti-graffiti, soft-touch and corrosion resistant coatings.

Decoration Powder Coatings

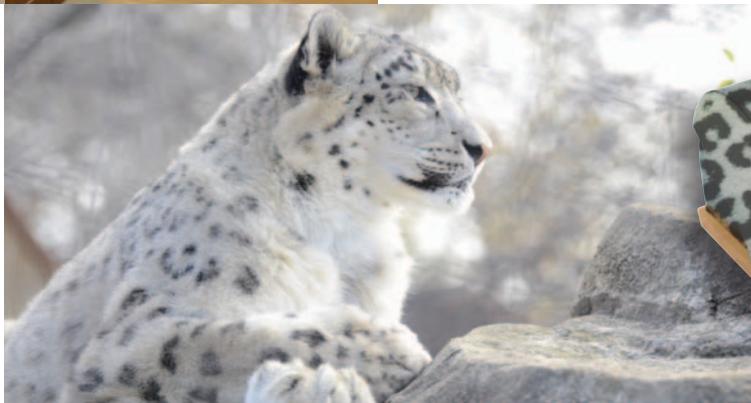
There are two established methods for disguising one material as another using powder coating:

- **The Sublimation process**
- **The Powder-on-Powder process**

There are also newer technologies allowing even greater flexibility in design. This leaflet explains these technologies in more detail. The most common use of such technologies today is to make aluminum windows and doors appear like wood, but they are also used to decorate children's furniture, surfboards, retail signs and more.

Selling prices can be 250-400% higher than for a standard RAL shade, so Decoration can lead to higher margin business.

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Durable Digital Printing

Providing the same outdoor durability as conventional polyester powder coating decoration, the digital printing process is a recent development.

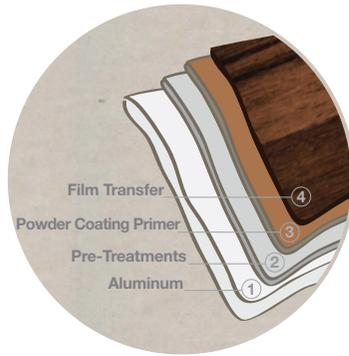
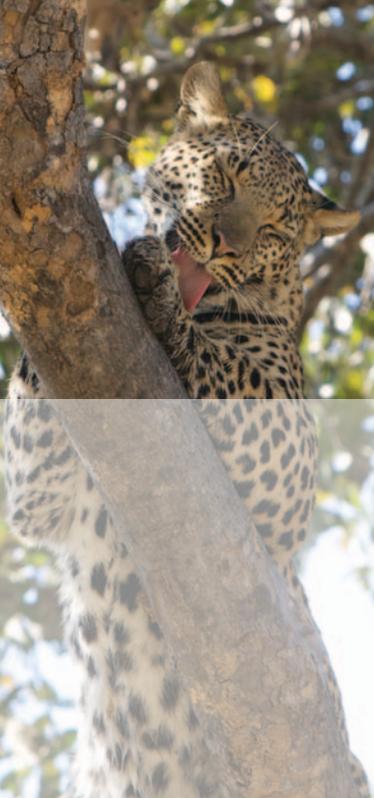
This process can decorate architectural and interior projects by “printing” precise patterns, images or pictures. Photographs and graphics can be utilised, along with images of marble, stone, plaster...and of course wood. The process is compatible with aluminum and steel substrates. The process normally comprises 3 steps:

- **First Layer powder coating**
- **Print (digital or screen print)**
- **Protective clear coating layer (liquid or powder)**

AkzoNobel has specialised primers and top coats developed for this application.



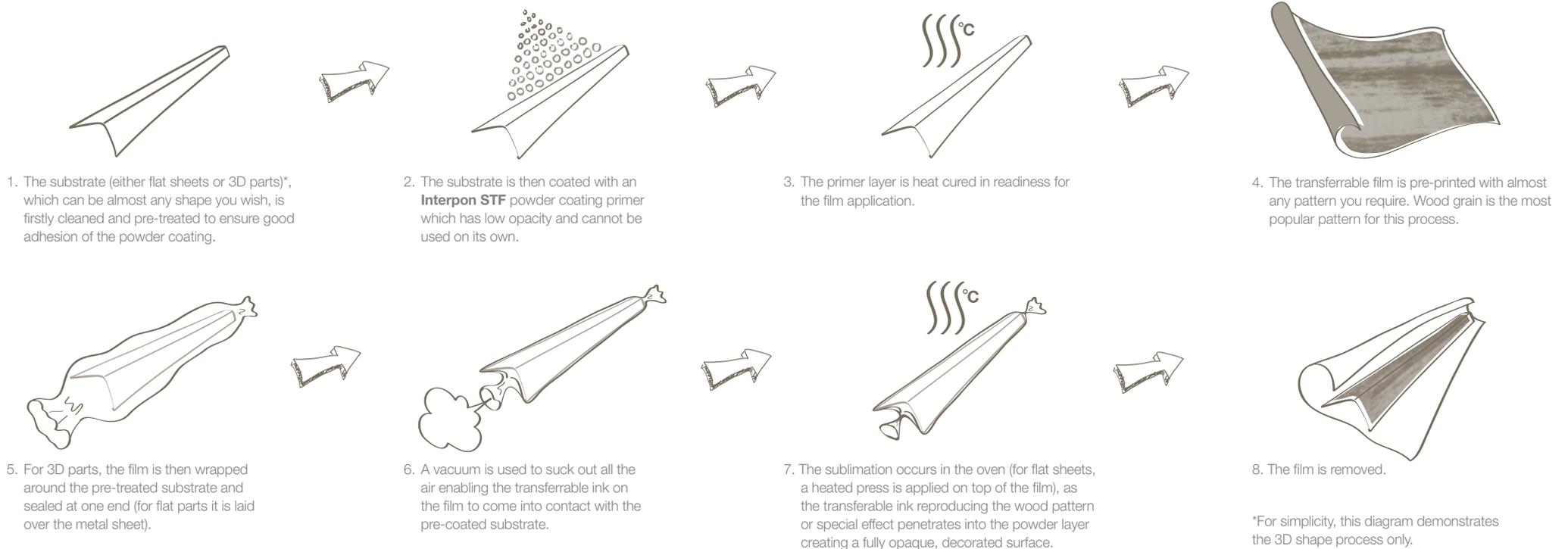
Powdered and decorated By COLORALU in FRANCE



Sublimation Technology

The sublimation process can apply almost any pattern onto a base coat of powder coating, transforming the appearance of the object.

It is mostly used to transform the appearance of aluminum products to realistically look like wood. The aluminum wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The process is shown in the diagram below.



*For simplicity, this diagram demonstrates the 3D shape process only.



The finished substrate can be used for a myriad of products of almost unlimited shapes.

Interpon STF

AkzoNobel were the first company to develop powders for sublimation, and our powders work with film from all the major suppliers. AkzoNobel's powder offer for the sublimation market is branded **Interpon STF (Sublimation Transfer Finish)**.

The key benefit of **Interpon STF** is to remove the constraints of wood:

- **Environmentally Friendliness – no solvent emissions**
- **Design flexibility – provides excellent edge coverage on conventional and multi-faceted pieces**
- **Consistent quality across and between the different parts**

Interpon STF powder coatings from AkzoNobel can be developed in both interior and exterior grades. Exterior grades for the architectural aluminum market are sold as **Interpon D STF** series coatings.

Film and Equipment

We can connect you with suitable partners for the printed films and the equipment for applying the film pattern to the powder coating. There are many decorators who operate on a contracting business for those not ready to invest. Contact your local AkzoNobel office for information on partners.

Film is available in hundreds of patterns. Buying an existing pattern for which the supplier already has an engraved roller is usually much cheaper than having a bespoke pattern made. Prices are normally per linear meter and in the range €1-€2/m.

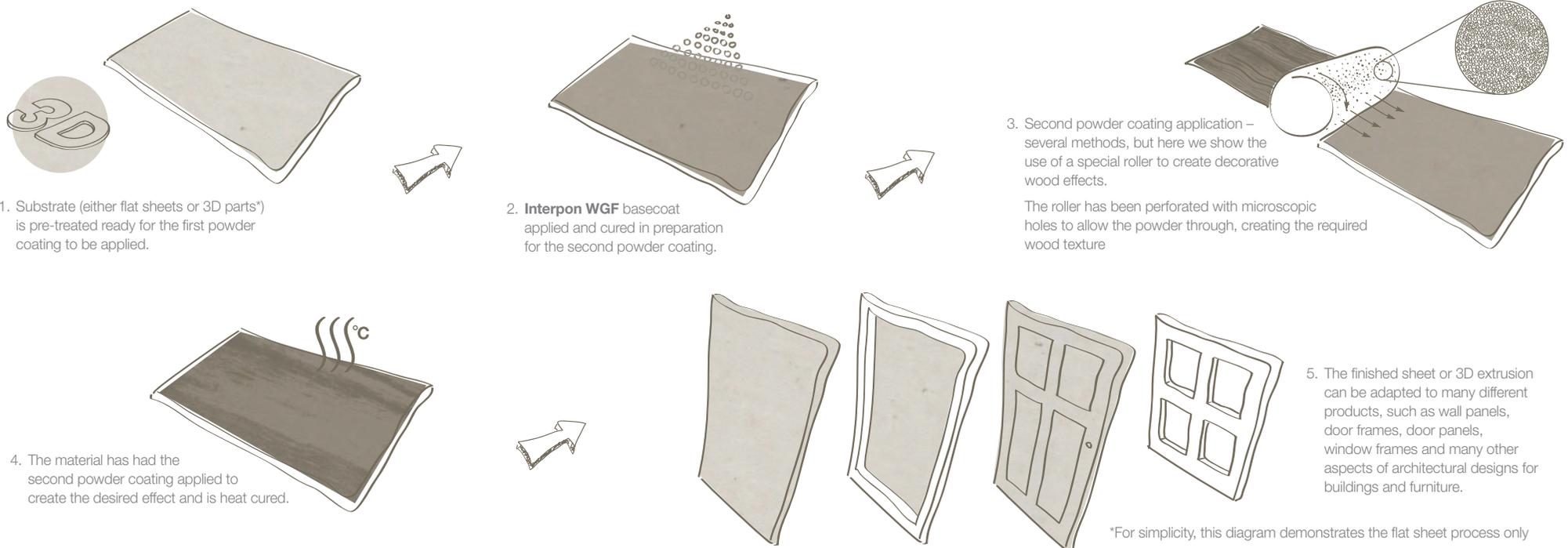
Cost of the sublimation equipment depends on size, speed and complexity. A simple machine to print flat sheets can be €30000 - €45000. Equipment to coat 3-dimensional profiles can be from €100000 - €500000. Speed can be from 40 to 350 profiles per hour.



Powder-on-Powder Technology

This process is used almost exclusively to achieve wood-like effects. There are several processes to achieve the effect, but all use 2 layers of powder coating.

Owing to the need for 2 coating processes, the production cost is from 50% to 200% higher (depending on process used), but with the selling prices being much higher this is an attractive business. A schematic diagram of the typical process is shown below.





Interpon WGF

The powder coating for powder-on-powder processes needs to be specially manufactured. Key elements are to ensure:

- **Inter-coat adhesion between basecoat and the grain coat**
- **Correct particle size for the equipment being used**
- **Good electrostatic properties to ensure correct laydown film build of grain**

AkzoNobel's product offer for this technology has the Interpon brand suffix **WGF (Wood Grain Finish)**. This suffix is used in combination with an existing **Interpon D** brand, e.g. **Interpon D1036 WGF**.

Equipment

Each equipment manufacturer has its own patented technique for applying the second layer. AkzoNobel can put you in contact with suppliers so you can evaluate the potential and costs of each process.

Interpon is SMaRT

Interpon Powder Coatings are the only coatings company to receive the **SMaRT** (Sustainable **MA**terials **R**atings **T**echnology) third party accreditation. **SMaRT** looks at everything, from policies with suppliers to a product's after-life, verifying claims with tangible proof. Sustainability is at the heart of what we do, and we help our customers put sustainability at the heart of what they do.



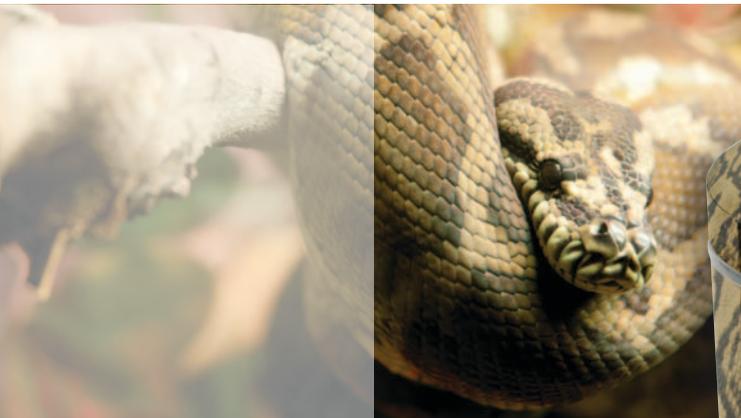
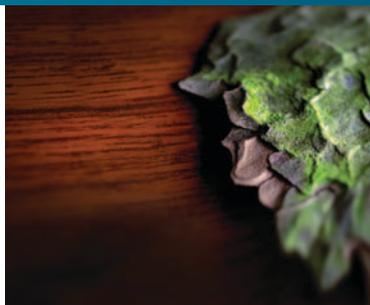
For more information visit our website at www.interpon.com



You can now also follow us on Facebook

Quality Assured

The quality label organisation Qualicoat has developed a special approval for decoration processes under the Qualideco specification, and where relevant our AkzoNobel powders hold this quality approval. Ask your representative for the latest approval status.



Interpon[®]
powder coatings
EVERY COLOR IS GREEN

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