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We, the staff of BASF Coatings, have a passion for paint. Yet we are driven by more than that: our aim is to help our customers be more successful. To that end we develop innovative solutions, work closely with customers and have a global presence.

Our paints give surfaces protection, colour and gloss. And our research and development teams are working on achieving even better performance for these paints in future. We develop innovative products and processes which set the benchmarks worldwide for quality and eco-efficiency.

We have market experience and technical expertise to offer. But it is only by working closely with our customers that we create the conditions for innovations and success. This involves adapting our proven products and processes to the particular needs of our customers, thereby helping to optimise processes, save costs and protect the environment.

Our strength for customers is our worldwide network connecting the core processes of production, sales and R&D. This means we are present wherever our customers need us. High quality standards and fast service are the guaranteed outcomes. Furthermore, as part of the BASF Group we can bring all the expertise and experience of the world’s leading chemical company to the partnership with our customers.

Innovative solutions, intelligent ideas, close partnerships with customers and a worldwide presence with automotive OEM coatings, automotive refinish paints and industrial coatings make us a real global player in the coatings industry. We are among the world leaders in all the fields in which we operate.

This also applies to the field of foil coatings, where BASF Coatings is the market leader. We offer our customers a range of environment-friendly paint technologies and a global distribution network. With our passion for paint and comprehensive know-how in application processes we have just one result insight: shared success.

Coatings Solutions
Sharing success
The substrate

Paper goes even further with foil coatings

Versatile – the substrate

Paper is versatile. It can be used for a very wide range of applications, depending on how it is processed. Paper has been used as a substrate for finish foils since the 1960’s. Ultimately, finish foils enable more and more furniture surfaces to be produced ever faster in an ever greater variety.

Unbeatable – the benefits of paper

Paper is made from wood and is therefore based on a renewable raw material. Furthermore, paper is recyclable. Paper fibres can be reused many times over, which is good for our forests and for climate protection. Paper is also available in a wide range of different weights and appearances and can easily be printed on.

Waterborne inks are excellently suited to paper-based finish foils. Paper can also be used as an edge band if it is above a minimum weight of 100 g/m².

Optimally matched – the coating

A unique surface here always consists of two elements: the paper and the coating. To ensure that finished product meets demanding standards both visually and functionally, we match the coating to the relevant substrate, the application processes and the later use of the object. You can therefore always rely on BASF Coatings to offer the right solution.

What do you think of when you think of paper? Your newspaper, a writing pad, books … but how about furniture? Probably not. Yet many furniture surfaces which appear at first glance to be wood are actually based on special printed and coated paper. The fact that these finish foils not only look genuine and also almost naturally warm, and that they offer a large number of positive usability properties, is not least down to the final surface layer: the coating.

Finish foil – “coating on a roll”

Even if the term is potentially misleading: a finish foil is coated paper which is bonded onto a base panel which is then further processed into furniture, doors, flooring etc. BASF Coatings played a significant role in the invention of this “coating on a roll”: In 1975 we launched new waterborne foil coatings which gradually replaced the solvent borne products. This enabled BASF Coatings to become the market leader in coatings for this application.
Finish foil production
How our coatings give your paper wings

The challenges faced by finish foil production are constantly growing. The trend is towards ever lower paper weights and ever faster machines. Each individual stage in the production process is important when it comes to being able to serve this dynamic market. We are aware of this and are developing sustainable methods jointly with our customers. Ultimately, we in the BASF Group can call on comprehensive know-how in all the stages of foil manufacture from paper production to impregnation and coating. Whether you use a pre-impregnation or post-impregnation process in production, we can offer you a range of different solutions for different methods. However, common to all are the high standards in process efficiency, aesthetics and environmental friendliness.

Production process for finish foils

One foil, two possible processes
A fundamental distinction is drawn between two different processes in the production of finish foils: the pre-impregnation and the post-impregnation process. The critical factor is the stage in the production sequence when the paper is impregnated. BASF Coatings supplies products ranging from waterborne to radiation-curable coatings matched to the particular process, application and drying method. In addition, the BASF Group supplies special paper chemicals and impregnation resins – ensuring optimum interaction and a high degree of product stability.

The post-impregnation process
In this classic process the paper is not yet impregnated. It is used as decorative base paper, and the paper may be printed with a pattern in a preceding step. The key properties of the finish foil – e.g. flexibility – can be set by means of the composition of the impregnating compounds.

The pre-impregnation process
If the paper was impregnated at the paper mill, this is described as a pre-impregnation process. As a result, the foil manufacturer does not have to carry out the impregnation process. The printing of the pattern and the paint application can then be combined in one line, resulting in a significant increase in process speed. In similar style, low base weight papers can also be processed.

The stages of the post-impregnation process
The coating technology

More than just attractive protection

Even if they appear superficially comparable: the coating for a flooring material is, of course, required to perform differently from that for bedroom furniture. Apart from the later application fields, the base papers and the configuration of the coating line also determine the choice of the coating technology. And, not least, the choice of the coating also influences the special effects that can be achieved. Silk gloss, bright colours or a deceptively genuine wood grain: BASF foil coatings provide not only convincing visual arguments but also technically mature products which are easy to apply.

### Fundamental options

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<th>Radiation-curable coatings</th>
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<td>Flooring</td>
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What do you want from a surface?
Our foil coatings ensure a range of visual and functional qualities.

Mat to glossy
BASF foil coatings provide the finishing touch for surfaces, whether natural mat or high gloss. FGuard® TA coatings are extremely suitable for dull-mat to mid-gloss surfaces. High-gloss surfaces can be produced particularly well with FGuard® TR coatings. There are various products under these brand names which have been optimised, for example, for such different substrates as edges or pre-impregnated paper.

Texture
Looks like wood, feels like wood: thanks to pores, foil surfaces look even more natural. Apart from the non-synchronous mechanical embossing, there are two methods which can be used to create pores at the same time as the pattern.
In the case of “real pores”, a layer of coating is applied on a special printing ink. This printing ink creates a three-dimensional texture in the paint.
To create “optical pores”, a base coating is applied to the whole surface. A printing cylinder applies a topcoat synchronous to the print pattern. A three-dimensional pore effect is achieved as a result of major differences in the gloss levels of the base paint and the topcoat. Specially matched FGuard® TA coatings are available for both methods.

Toughness
All FGuard® coatings offer chemical resistance to prevent such things as coffee, mustard or red wine from attacking the surface. Highly resistant FGuard® TA and FGuard® TR coatings are available for particularly demanding conditions.
Very good mechanical resistance is required for flooring materials. The FOILWalk® systems, which are mixed with corundum to optimise them for this application, protect surfaces against wear. By varying the particle size and the corundum content it is possible to tailor these products for a wide range of applications – from table tops to flooring.

Surface finish
You want a little more gloss? Or a special surface effect? Recoatable FGuard® TA coatings offer the option of applying further layers or prints to the coated surface.

Colour
Get some colour in your surface! BASF’s FGuard® CA coatings offer a system of 12 mixing bases which can be blended to produce a wide range of colours. Colourful surfaces can thus be created with a coating and a crosslinking agent. The application of a transparent FGuard® TA topcoat enables particularly high-quality surfaces to be created.
The applications

Variety is the spice of life

Our society is becoming more and more mobile, and our markets always moving faster. If you choose a new table in the morning, you expect to be eating from it that evening. And most of those fitting out a new home today no longer intend it to last for ever. Many people are looking for practical yet aesthetically pleasing solutions. This is one reason why surfaces with finish foils, which are quick to produce while conserving resources, are on the advance. Thanks to their ever increasing ability to look and feel like the real thing and their toughness, finish foils are not only used for furniture, panelling and doors, but also for flooring and for fitting out caravans.

Beautiful furniture and doors

Although the trend is towards “fast furnishings”, many people nonetheless wish to enjoy the warm, natural charm of wood. Finish foils meet these requirements since they look very much like real wood. However, BASF’s FGuard® foil coating products also offer a multitude of options for white, coloured or fantasy surfaces.

Everyday floor coverings

For a long time laminate flooring was regarded as the easy-care, inexpensive alternative to parquet flooring. Thanks to intensive R&D work in BASF Coatings’ labs there is now an attractive alternative to the alternative: flooring with finish foil. As a result of a special coating formulation and the use of new application methods, this can, for example, be produced on impregnation lines for the manufacture of liquid overlays.

Furthermore, the special FOLiWalk® coating gives the flooring a particularly cozy warm touch and outstanding wear resistance.

Interior design made easy

Mahogany in your caravan? Foil coatings enable this wish to be granted at lower cost and also deliver a lighter solution. When laminated to especially lightweight panels, this alternative to real wood is significantly lighter than real wood. Guaranteed to ensure easy-going travelling!
Our services

Your success is our goal

We are committed to helping you to be successful. This obviously includes guaranteeing you consistently high product quality. We do so by means of a sophisticated quality assurance system which is regularly reviewed by external auditors. In addition to this, we can support you with a wide selection of services. From technical consultancy to bespoke coating development and customer-specific stockholding, we can assist you in ensuring maximum process reliability. After all, we have many years of experience with a huge variety of substrates and processes. For a result that not merely meets your expectations but often also exceeds them.

Technical consultancy

Planning a new line? We’ll be happy to advise you on design or construction aspects from the very start. Our excellent contacts with manufacturers ensure that we can match all the components perfectly. To create reliable results as efficiently as possible, our experts can replicate laboratory conditions on your lines. Naturally, we also deal with modifications in a professional manner. And if you have an existing line, we will adjust our products optimally to it or we will consult with you on potential optimisation measures.

Close networking with paper manufacturers

Paper, impregnation and foil coatings must be optimally matched to each other in order to achieve the best possible result. One clear benefit for our customers is that the impregnation resins and the coatings both come from BASF. And we also cultivate a close collaborative partnership with paper manufacturers in an active network. We are therefore jointly committed to making a good thing even better.

Individual analyses from our in-house department

Our Analytical Services unit always has a key role to play in helping to identify or avoid faults and errors, optimising existing products, researching into new fields or developing tailored formulations. Our experts with their many years of experience and the lab facilities at their disposal provide pointers for ongoing developments. This involves working closely with customers, searching out practical solutions and, if required, providing personal, on-site consultancy.

Precise colour reproduction

We can precisely reproduce any colour you specify or request in our coating materials. We will also be happy to advise you on all colour-related issues or develop creative new surfaces and effects in consultation with you. How about silver, glittering or pearl effects for your brand new application? Let us know what you want!
Brand Card

Our current brand card below provides an overview of our products, their brand names and applications. This card will enable you to navigate easily through our portfolio.

### Foil Coatings – Branding Productlines

<table>
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<tr>
<th>Brand Name</th>
<th>Productlines</th>
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| **FGuard®** | **pigmented**  
FGuard® CR HH67  
FGuard® CA HH47  
FGuard® CU HH67  
**transparent**  
FGuard® TR HH62  
FGuard® TA HH43  
FGuard® TA HH36  
FGuard® TU HH63  
**Flooring**  
FOILWalk® TA HH30  
FOILWalk® TR HH50  
FOILWalk® TU HH60  |

**Abbreviations**

1. Digit:  
C: pigmented  
T: transparent  
2. Digit:  
A: acid-curing  
R: radical  
U: Polyurethane  
W: waterborne
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