Strike up our orchestra of multi-functional fillers for architectural paint

DORKAFILL® PRO_VOID
DORKAFILL® H
DORKAFILL® X_PAND
DORKAFILL® F
Professionals expect a lot from their dispersion paint: good hiding power and first-class matting is required. The paint has to stand up well to wet scrubbing, be very easy to work with and produce an excellent finish. The binders and pigments should not cost a lot. Conventional fillers which essentially perform no useful function are simply not up to the job.

The DORKAFILL® range of multifunctional fillers give paint manufacturers the tools they need to achieve two major objectives, namely to increase the performance of their dispersion paint and reduce the cost of the formulation.

**Objective 1**
- Matting
- Wet scrub
- Hiding power/yield
- Consumption of binders
- Application properties

**Objective 2**
- Performance
- Cost

DORKAFILL® fillers help paint manufacturers reduce the cost of producing dispersion paint.

DORKAFILL® fillers are multifunctional. They provide a number of "set screws" which paint makers can adjust to optimise their dispersion paints.

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Multi-functional fillers make the difference

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The **DORKAFILL® filler range – in a class of its own**

DORKAFILL® fillers offer a unique profile of outstanding features. In contrast to many other fillers, they perform multiple functions (that is why they are called “multifunctional”) which give producers the tools they need to optimise their dispersion paints. There is no filler anywhere in the world which is capable of meeting the requirements profile and delivering the performance of DORKAFILL® products.

So it is hardly surprising that the technical performance, user-friendly features and cost considerations have made DORKAFILL® products the market leaders in this segment. When people talk about functional fillers, they usually mean DORKAFILL®.

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**The way the kaolin is processed holds the secret and the key to success**

Dorfner uses the mineral kaolin as the raw material for its DORKAFILL® product series. Rather than taking just any kaolin, Dorfner extracts very high-grade kaolin from its own mines. However, before the natural kaolin becomes a dispersion paint filler, it passes through a complex treatment and refining process. The result is highly-refined DORKAFILL® H, DORKAFILL® PRO_VOID, DORKAFILL® F and DORKAFILL® X_PAND brand kaolins which offer outstanding performance as multi-functional fillers in today’s architectural paint.

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The combination of high-grade kaolin and Dorfner’s refining expertise is the secret behind the outstanding features of DORKAFILL® fillers for dispersion paint.
It’s what’s inside that counts

The physical and chemical properties of DORKAFILL® multi-functional fillers are what make them unique. During the refining process, Dorfner adjusts the properties of the fillers, so that they provide the exact functionality that is needed for state-of-the-art formulation of dispersion paint. Dorfner achieves reproducible results batch after batch. Well-balanced surface characteristics and defined surface chemistry combined with sophisticated particle technology are the factors which give DORKAFILL® products their unique properties and great versatility.

DORKAFILL® fillers have
- defined structure and morphology
- homogeneous surface chemistry
- controlled particle size with narrow distribution

Highly versatile fillers that add a distinctive character

Extensive screening tests prove that DORKAFILL® fillers improve the four most important quality characteristics of dispersion paint, namely wet scrub resistance, hiding power, matting and rheology, and they also enhance the surface finish. The fillers are genuinely multifunctional in contrast to non-functional fillers which do nothing more than provide a certain degree of reinforcement in the paint film.

Multifunctionality is not the only outstanding feature of DORKAFILL® fillers. Each product in the series has its own individual fingerprint and character which formulation specialists in the world’s paint labs can exploit to increase the performance and reduce the cost of their dispersion paint.

DORKAFILL® PRO_VOID: the right filler for dull matt finishes
DORKAFILL® H: great matting performance, across-the-board enhancement
DORKAFILL® X_PAND: the ideal choice for special applications
DORKAFILL® F: great hiding power
DORKAFILL® fillers can be used to adjust matting. There are no other multifunctional fillers like them on the market.

**Surface characteristics**

Many standard fillers have highly polar, non-uniform surfaces. Adhesion in the binder is poor.

The surface chemistry of DORKAFILL® fillers is well balanced, and they adhere well in the polymer binder.

**Durability**

In many cases, it is worth using DORKAFILL® to optimise the formulation.

The wet scrub resistance test is used to determine the durability of a paint coating.

In many cases, it is worth using DORKAFILL® to improve the wet scrubbability of the formulation.

Standard fillers are soft. They break easily under stress, and the paint chalks. DORKAFILL® platelets are hard and protect the paint coating.
**Rheology**

Standard fillers lack physiochemical balance. As a result, the paint coating dries too quickly.

**Exertion**

Many fillers reduce the open time. They dry too quickly and are difficult to smooth out, causing streaking. It should only take minimal exertion to apply a coat of dispersion paint. To find out, we measure the force needed. DORKAFILL® helps increase the open time, making smoothing easier. You get a better surface finish.

**Whiteness and hiding power**

In standard formulations, normal fillers are often used at their hiding power and yield limits. Hiding power and yield are key parameters that need to be tested. In many cases, DORKAFILL® makes a major contribution to hiding power and yield.

* Dr. Robert Murjahn Institute, Ober-Ramstadt, Germany
Optimisation of cost and performance

Dorfner has developed and made available guideline formulations in which a DORKAFILL® filler or a combination of different DORKAFILL® types plays a crucial role. These guideline formulations are intended to act as a good starting point for manufacturers who are looking for higher performance and lower cost formulations to optimise their dispersion paint portfolios.

Optimisation trials carried out by dispersion paint manufacturers with the assistance of the Dorfner paint team have produced results which are surprising but unequivocal: the success rate when DORKAFILL® is used is nearly 100%. What this means is that DORKAFILL® can improve nearly any formulation for the professional and do-it-yourself market. In most instances, DORKAFILL® optimised the formulation and improved performance in virtually every category including wet scrubbability, matting, hiding power and workability of the dispersion paint.

Formulation enhancement can be exploited in a number of different ways, for example to improve the quality of the dispersion paint or to reduce binder content. In some cases, synergy effects lead to an improvement in performance as well as a reduction in production costs.

DORKAFILL® can enhance nearly any formulation. This is an advantage that can be exploited in a number of different ways in the paint industry.

Dorfner would like to encourage all manufacturers to discover the DORKAFILL® range of functional fillers and exploit new opportunities to create innovative dispersion paint formulations.

Customer benefits

Technical benefits for the customer
- Kaolin-based functional filler
- Undulating texture produces diffuse refraction and good intermeshing with the polymer
- Optimised surface characteristics
- Low ratio of fine particles
- Matting effect and good whiteness
- Excellent hardness produces stable films
- Excellent contribution to abrasion resistance
- Normal oil absorption when used in combination with calcium carbonate and TiO₂
- Good chemical resistance, weather resistant
- Moderate surface activity, no yellowing
- Stable platelets enhance crack bridging

Operational benefits for paint manufacturers
- Compatible with standard binders and additives
- Easy to use and apply
- Easy to wet with standard additives and easy to disperse
- Suitable for almost every formulation
- Compatible with almost all binder systems
- Low consumption of binders

Operational benefits for users
- Optimal transfer from the paint roller to the substrate
- High transfer rate (m²/immersion of the roller)
- Enhances spread and penetration into cavities in the substrate
- Minimal splatter
- Easy to apply
- Low exertion needed for application and smoothing
- Outstanding finish

Economic benefits for the customer
- Opportunity to reduce binder, pigment and additive consumption
- Replaces expensive TiO₂
- Improves the quality of the formulations
- Reduction in product costs
- Significant improvement in on-site productivity
- Competitive dispersion paint
- Highly productive and satisfied professional painters
- Optimum cost/benefit ratio
Best-in-class optimisation services

The Dorfner paint team working for you – expertise, experience and a practical hands-on approach

When the time comes for dispersion paint manufacturers to revisit their existing formulations and add in DORKAFILL®, the best thing to do is ask the experts at Dorfner for help.

Contrary to the general trend in the market, Dorfner has invested heavily in its applications engineering resources and has a highly committed team working at the in-house paint lab. Our team of lab specialists, who all have a background in paint manufacturing or the painting services industry, have the expertise it takes to tackle any filler or formulation project. They work closely with the customer to develop solutions that produce excellent results in practical application.

Service benefits from Dorfner

• Application engineering consultancy of the highest standard
• Technical advice on your specific application provided by industry experts
• Optimisation of your formulation as a joint effort

Dorfner services for manufacturers of dispersion paints

Our team of paint experts is always available to answer your questions. We would welcome the opportunity to tell you all about what DORKAFILL® can do for you. No need to wait any longer. Contact us today to request a free sample.