

# Wherever life takes you BASF excipients for orally disintegrating tablets make medication easy

Dr. Philipp Hebestreit,  
an enabler in excipients

Pharma Ingredients & Services. Welcome to more opportunities.  
Custom Synthesis | Excipients | Active Ingredients

 **BASF**  
The Chemical Company

## Creating innovative excipients to solve urgent formulation needs



### “Mouth-melt tablets are my medication of choice for fast action and when travelling”...

says Dr. Philipp Hebestreit, Technical Service Manager Europe at BASF Pharma Ingredients & Services. “Our product development was targeted to achieve a pleasant mouth feel and taste sensation for these orally disintegrating tablets (ODT).”

ODTs are an innovative dosage form that is becoming increasingly important in the pharmaceutical market, both for prescription and over-the-counter drugs. In contrast to traditional tablets, ODTs are specifically designed to disintegrate immediately in the user’s mouth to create a very fast onset of action. The disintegrated tablet can then be easily swallowed without resistance. This type of application offers significant advantages over traditional solid oral dosage forms. They can be administered easily on-the-go, taken without the need for water and do away with the problem swallowing bulky tablets.

### The advantages of orally disintegrating tablets

Tablets that disintegrate quickly in the mouth offer several distinct advantages. They are particularly helpful for pediatric and geriatric patients who have difficulty in swallowing, as well as for patients on the move or where safe drinking water is not readily available. Swallowing difficulty is a frequent complication associated with a number of diseases including stroke, Parkinson’s disease and other age-related conditions. Since there is no need to swallow bulky tablets anymore, they can significantly increase patient compliance and can thus be used for higher drug concentrations.



### Four superior products for your formulation development

**BASF offers a comprehensive set of excipients that help you to easily formulate your active ingredient in an effective ODT:**

#### Ludiflash®

A co-processed excipient formulation designed to achieve reliable quick disintegration with an outstanding, creamy mouthfeel of your ODT.

#### Kollidon® CL-F and CL-SF

BASF’s widely known Kollidon® CL tablet disintegrant series offers two grades that are specifically suitable to disintegrate your ODT with the necessary speed and excellent mouthfeel.

#### Kollicoat® Smartseal 30D

BASF’s latest excipient innovation, Kollicoat® Smartseal 30D, is the unique solution to an ODT problem not solved before. When it comes to pellet and particle coating, other products in the market are too tacky to be applied without individual items sticking together.

## Ludiflash® – the ideal choice for easy-to-swallow tablets

Ludiflash® is a co-processed excipient formulation designed to create ODTs with reliable and rapid disintegration and an outstanding, creamy mouthfeel. This high-performance excipient is suitable for direct compression manufacturing by simply blending with the active ingredient and a lubricant, creating a very cost-efficient production process.

At the production level, Ludiflash® increases flowability, compressibility, hardness and stability. This helps to optimize production processes while also giving products the physical characteristics they need to make them suitable for polyethylene containers and push-through blisters. To increase flexibility, Ludiflash® is license-free and there is no confidentiality agreement. You are free to use your own production facilities and retain full control over your formulations, manufacturing processes and expertise.

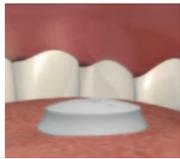
### Ludiflash® – for drugs that patients love to take and manufacturers love to make

- Enhances patient compliance by making drugs pleasant to take and taste
- Makes tablets easy to swallow, even without water
- Increases acceptance of tablets by the very young and elderly
- Provides flowability, compressibility, hardness and stability in production

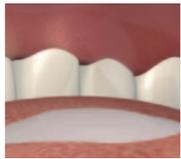
With Ludiflash®, a hard tablet disintegrates ...



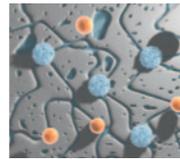
... in the mouth without the need for additional liquid ...



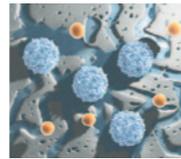
... to form a fine cream.



The highly porous tablet ...



... rapidly releases the API.

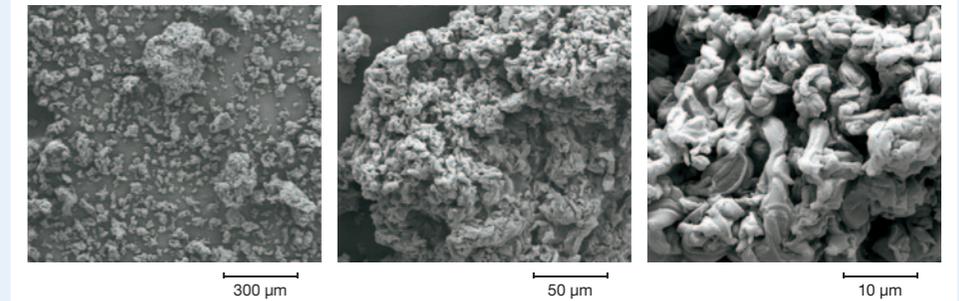


## Kollidon® – the Original

Binders and disintegrants from the Kollidon® family optimize the mechanical properties of tablets while ensuring more rapid release of the active ingredient.

### Kollidon® CL-F

Kollidon® CL-F is the perfect alternative when formulators are looking for a disintegrant with strong disintegration power in combination with a smooth tablet surface and a good mouth feel. Furthermore, the material can absorb large amounts of solvent, which can be beneficial if the product is included in wet granulation processes.



### Kollidon® CL-SF

Kollidon® CL-SF is the finest grade for disintegration applications. When it comes to special applications, such as ODTs, the product has significant advantages due to its reliable disintegration power in combination with a very smooth, cream-like mouth feel.

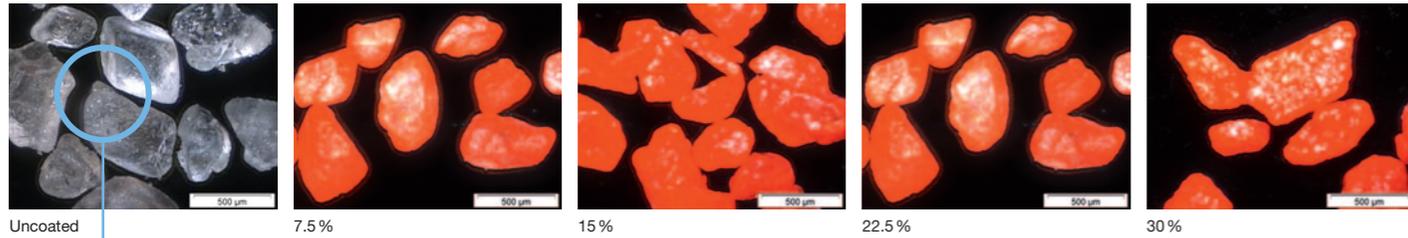


## Kollocoat® Smartseal – the first aqueous dispersion for taste masking

One of the major challenges in ODT development is the bitter taste of the active pharmaceutical ingredient (API), because the tablets disintegrate in the mouth. This is where Kollocoat® Smartseal offers the solution, because its low stickiness makes it particularly suited to the coating of API particles.

Production efficiency is combined with superior taste masking properties and instant release in the stomach, which makes Kollocoat® Smartseal the coating of choice for bitter APIs in ODTs.

### Coating of acetaminophen crystals



### Kollocoat® Smartseal 30 D – Active Protection

- Smart protection from unpleasant taste
- Effective sealing against moisture
- Fast release of active ingredients
- Easy and economical film coating

## Our products at a glance



<b>Ludiflash®</b>	Ludiflash® is the co-processed excipient of choice for the fast development and production of ODTs with a smooth and creamy mouth feel.
<b>Kollidon® CL-F</b>	Kollidon® CL-F is mainly used as a super-disintegrant in especially small tablets and ODTs. The small particle size results in a pleasant mouth feel.
<b>Kollidon® CL-SF</b>	When it comes to disintegration properties and superior mouth feel, Kollidon® CL-SF is a winner. It also results in fewer defects on the tablet surface after storage, making it ideal for ODTs.
<b>Kollocoat® Smartseal 30 D</b>	Kollocoat Smartseal® 30D is the unique solution in pellet and particle coating, where other products are too tacky to be applied without individual items sticking together. Kollocoat® Smartseal 30D features outstanding taste-masking, ensures quick release of the active ingredients in the stomach and offers superior protection with a reduced amount of coating, resulting in lower costs and more efficient production processes.

## Unique excipient solutions to solve unmet formulation needs

- Melt-in-the-mouth tablets are ideal for a wide range of users
- Increased medication compliance among the very young and elderly
- Suitable for both prescription and over-the-counter drugs
- Worldwide technical support to help you create new formulations

BASF's innovative range of excipients is revolutionizing the ease of taking medication while increasing compliance among at-risk groups. With our commitment to helping develop new medications while increasing the ease-of-use of existing formulations, BASF is playing a vital role in improving the effectiveness of healthcare worldwide.

**Contact us to find out how Dr. Philipp Hebestreit and his colleagues can use BASF excipients to boost the success of your pharmaceutical products.**

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