

Helping our customers to be more successful:

Ibuprofen DC 85 helps BASF customers to significantly increase their production rate

- **No need for manual tablet selection**
- **Tableting can be carried out with no additional excipients**
- **Extremely rapid active substance release**

The secret is in the coating. The active ingredient in BASF's new Ibuprofen DC 85 is coated with nanomaterial in a special manufacturing process. The nanolayer provides protection during processing and greatly simplifies the customers' production processes.

A standard high-speed tablet press, for example, has the capacity to manufacture approximately 200,000 Ibuprofen tablets per hour. "It sounds like a lot, but it could be much more", says Dr. Heinz Einig, responsible for technical service of Ibuprofen with BASF Pharma Solutions. The problem is that Ibuprofen has a fairly low melting point. It can gradually start to melt during the tableting process and tends to cause the tablet press punches to stick. The unfortunate result is that the production process needs to be stopped to clean each punch.

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"It means a lot of extra work and lower productivity," Einig continues. "It's what prompted us to develop our new Ibuprofen DC 85 formulation, which allows our customers to get the most out of their production facilities – without the down times that conventional Ibuprofen usually involves," says Dr. Kathrin Meyer-Böhm, responsible for the development of pharmaceutical ingredients in BASF Pharma Solutions. "That's because the new formulation protects the active ingredient from the temperature influences which occur during the tableting process," she adds. It saves production workers from having to remove distorted tablets stuck to the punches by hand. During trials, a three-fold increase in production to a rate as high as 700,000 tablets per hour could be achieved.

The protective nanocoating has also another advantage: it reduces the percentage of lubricants used during tableting. This all results in a smaller tablet which is easier for patients to swallow. "That's a key advantage, especially for patients taking high doses of tablets containing 600 to 800 milligrams of Ibuprofen," Einig goes on to say. "Tablets with a total weight above 1,000 milligrams are practically impossible to swallow."

The coating on the Ibuprofen crystals also facilitates rapid tablet dissolution after ingestion by the patient. Rapidly released, Ibuprofen works much faster.

BASF customers benefit from Ibuprofen DC 85's easy handling, especially for high dosage strengths. The new formulation is suitable for direct tableting even at high doses. Ibuprofen DC 85 does away with time-consuming preparation steps such as wet granulation and compacting, which shortens production times compared to conventional Ibuprofen formulations and helps our customers to save costs.

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