



# Pharmasperse<sup>®</sup> 416

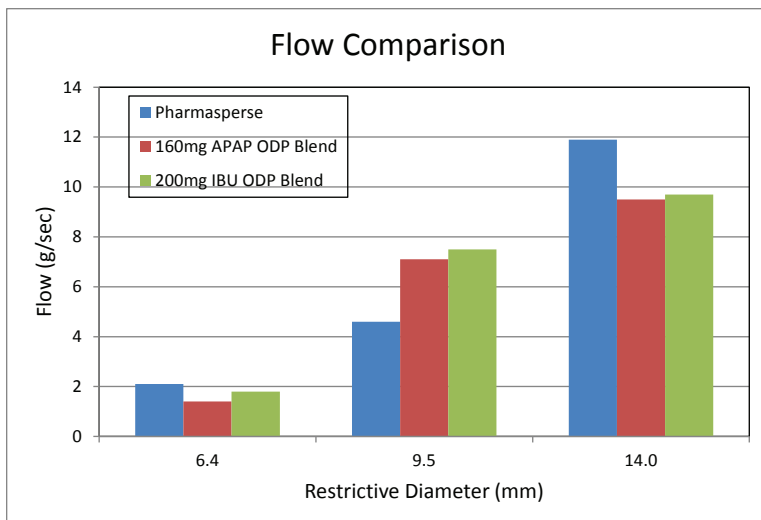
Orally Dispersible Powder



## Pharmasperse® 416

Pharmasperse® 416 is specifically engineered for the ready manufacture of orally dispersible powder (ODP) formulations intended for filling into sachets or stickpacks. These highly portable dosage forms offer an attractive alternative to tablet formulations, particularly for populations that may have difficulty taking solid oral dose medications (such as geriatric and pediatric patients). Pharmasperse is a versatile drug delivery system comprised of excipients that meet globally accepted compendia. This innovative platform is easy to use and offers a number of formulation advantages including:

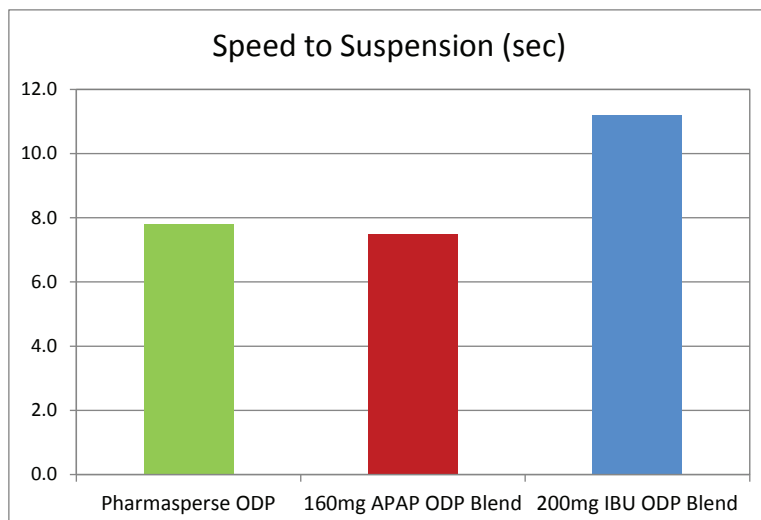
- Enhanced Functionality
- Rapid Speed of Suspension
- Low Hygroscopicity
- Excellent Organoleptics
- Streamlined Manufacturing Process



### Enhanced Functionality

Pharmasperse is designed to provide the functional properties required to formulate a high quality orally dispersible powder dosage form.

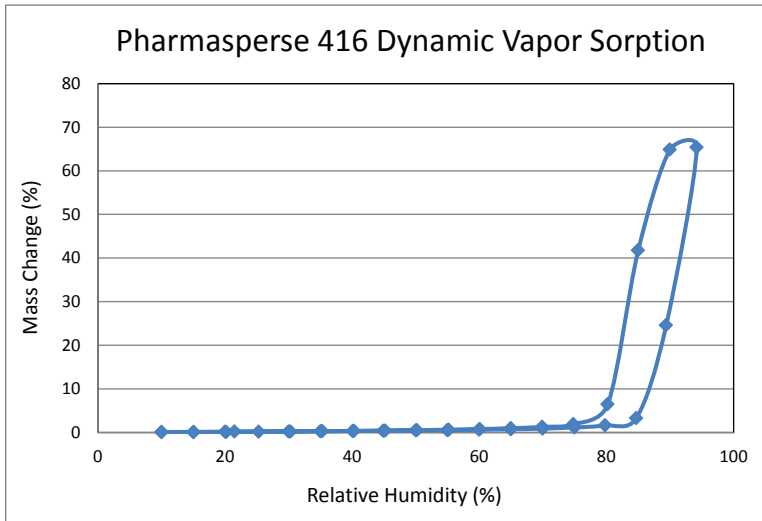
- Uniform particle size distribution helps to ensure drug uniformity from batch to batch
- High density and low fines reduce the risk of a "puffing effect" that may lead to inhalation of the powder
- Excellent flow helps to prevent fill weight variation. Pharmasperse retains its excellent flow properties even in high drug loading formulations as shown in the flow comparison graph at left



### Rapid Speed to Suspension

The rapid speed of suspension of Pharmasperse helps to deliver fast therapeutic relief resulting in better patient outcomes.

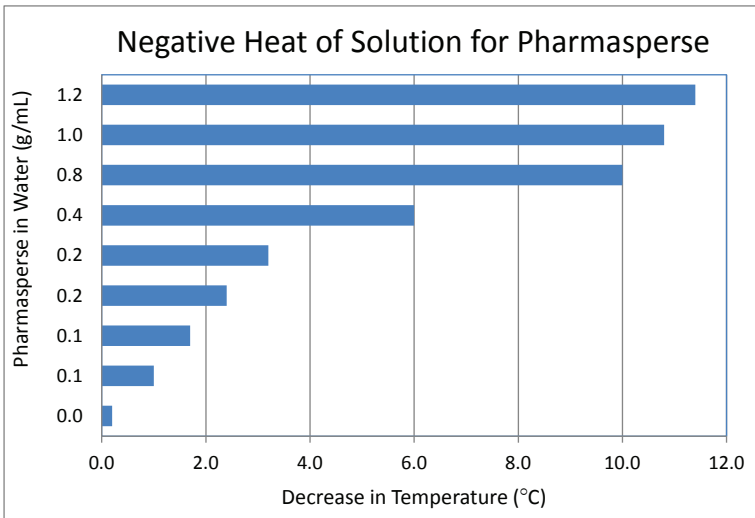
- The figure at left demonstrates the speed of suspension for sample formulations as measured by the time to completely disperse and swallow the contents of a sachet by a test panel



#### Low Hygroscopicity

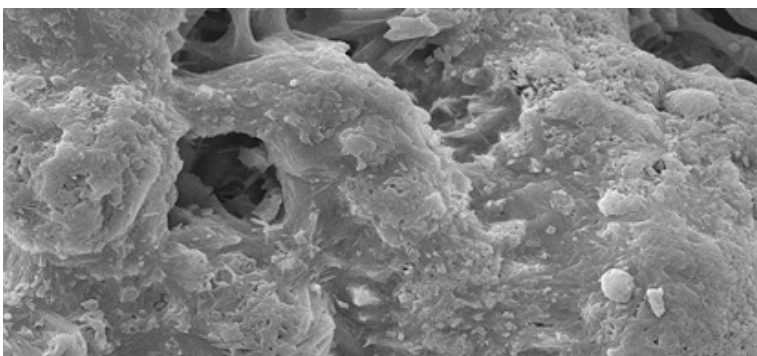
Pharmasperse is chemically stable and has low hygroscopicity.

- The low hygroscopicity helps to protect moisture sensitive active pharmaceutical ingredients (API) and can improve the stability of the formulation



#### Excellent Organoleptics

- Pharmasperse provides pleasant taste with a refreshing cooling sensation due to its negative heat of solution. This can help counter the poor taste of some APIs
- The porous nature of Pharmasperse, along with its wetting characteristics, allow it to quickly disperse without agglomeration or over-drying in the mouth. See SEM at below left



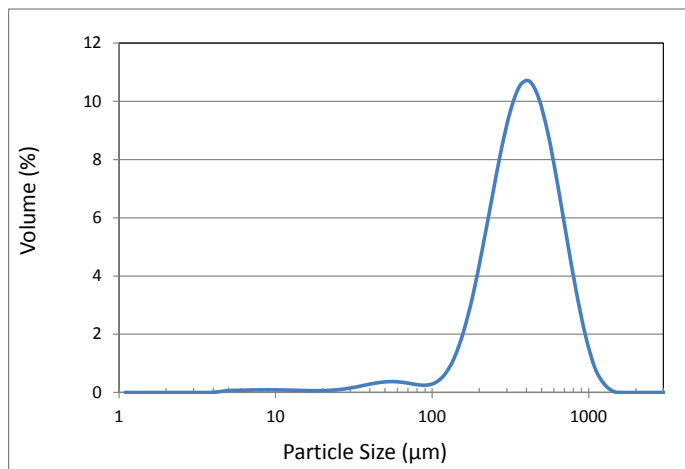
#### Streamlined Manufacturing Process

- Pharmasperse is a preformulated system that streamlines the development and manufacturing process
- Less excipients needed in the formulation result in fewer ingredients to handle, test, and inventory
- Manufacturing only requires dry blending with the API and the appropriate levels of sweeteners, flavors, and colors using standard processing equipment

# Pharmasperse® 416

## Typical Properties\*

<b>Description</b>	A white to off-white and free flowing granular powder
<b>Mean Particle Size d(0.5)</b>	Approx. 350 µm
<b>Bulk Density</b>	Approx. 0.6 g/mL
<b>Tapped Density</b>	Approx. 0.7 g/mL
<b>Flow/Carr's Index</b>	Approx. 14



\*Typical properties not intended to be product specifications.

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### ANTACID ACTIVES

The global leader in immediate-relief antacid actives, we specialize in aluminum, magnesium, calcium products, and preformulated solutions for the production of antacid suspensions and tablets.

### DRUG DELIVERY SYSTEMS

A full spectrum of ODT products, services, and technologies to support every stage of your product life cycle.

### TASTE-MASKED ACTIVES

Our Actimask® technology provides an excellent taste barrier and mouthfeel without hindering API release and onset of therapeutic relief.

### FUNCTIONAL EXCIPIENTS

Ingredients and formulation expertise to support a wide range of patient friendly dosage forms.

### VACCINE ADJUVANTS

Years of expertise in aluminum hydroxide chemistry ensure our vaccine adjuvants exhibit a very regular profile in terms of compliance, morphology, particle size distribution, and protein adsorption capacity.

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