

# UOP MOLSIV™ MASTER BATCH ADSORBENT

A next-generation moisture-removing additive



## MOISTURE: THE HIDDEN CHALLENGE IN THERMOPLASTIC PROCESSING

Many thermoplastic polymers naturally absorb moisture due to their hygroscopic properties. This invisible threat can lead to serious issues during high-temperature processing—such as steam formation, surface defects, and internal voids—compromising the final appearance and performance of the product.

Moisture doesn't just affect the surface; it breaks down polymer chains through hydrolysis, reducing mechanical strength and long-term durability.

To avoid these problems, effective moisture control is essential before and during processing.

## ENHANCE MOISTURE CONTROL IN THERMOPLASTICS

### Discover the Power of Molsiv™ MB by Honeywell UOP

Moisture inside thermoplastic polymers can compromise processing, surface quality, and final, mechanical performance. Traditionally, calcium oxide (CaO) has been used as a chemical desiccant to solve this issue—but at a cost.

#### The challenge?

CaO's high usage rate leads to excessive mineral filler, which often causes structural weaknesses and inconsistent results in finished parts.

#### The solution?

Molsiv™ MB — a next-generation moisture-removing additive from Honeywell UOP.

## WHY CHOOSE MOLSIV™ MB?

### Superior Adsorption Efficiency

Removes intrinsic moisture with up to 7x higher loading capacity compared to calcium oxide.

\*(Application in the field show 7x higher loading capacity compared to calcium oxide.)

### Improved Mechanical Performance

Requires significantly lower dosage, minimizing filler content and preserving part integrity.

### Excellent Resin Compatibility

Blends seamlessly into most thermoplastic resins, without affecting color, transparency, or finish.

### Ideal for Masterbatch Formulations

Perfect for integrating into desiccant masterbatches or direct thermoplastic applications.

### Upgrade Your Process. Enhance Your Product

Join leading manufacturers who are already switching to Molsiv™ MB to improve production consistency and product performance.

## PHYSICAL PROPERTIES

APPEARANCE	WHITE POWDER
Particle size (microns)	<10
Bulk density	32 (lb/ft <sup>3</sup> )
Moisture content (Wt-%)	1.5
Equilibrium H <sub>2</sub> O capacity (Wt%)*	27
Storage stability of powder	Good if normal precautions are taken to exclude moisture
Toxicity	Avoid breathing dust and prolonged or repeated skin contact. In case of contact with eyes, immediately flush with water for at least 15 minutes.

\* Measured at 17.5 mm Hg H<sub>2</sub>O and 25°C

Sources: [Zeolites as effective desiccants to solve hygroscopicity issue of post-consumer mixed recycled polyolefins - ScienceDirect](#), [Assessment of Melt Compounding with Zeolites as an Effective Deodorization Strategy for Mixed Plastic Wastes and Comparison with Degassing](#)

#### For more information

For more information on Molsiv™ MB adsorbent or other UOP adsorbents, please contact your UOP representative or visit us online at <https://uop.honeywell.com>

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