

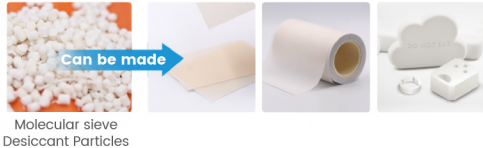
**FLEXIBLE**

WiseFlex

# WiseFlex

## Desiccant Film-MS (Molecular Sieve Based)

Through years of research and experimentation, Wisesorbent Technology has launched two types of self-moisture-absorbing polymer particles. These polymer particles can be processed into various films, injection-molded or blow-molded parts, or sheet products to meet the needs of moisture-sensitive products with high packaging requirements.



WiseFlex Desiccant Film is a functional film with moisture-absorbing capabilities, produced through the blown film process using moisture-absorbing polymer particles. The film has uniform and dense moisture-absorbing pores that can evenly absorb water molecules. When this desiccant film is laminated with other films such as aluminum, PET, or PE, it can effectively reduce the moisture content in the packaging environment, inhibit oxygen reactions, and ensure continuous dryness inside the packaging, thus protecting the stability of the packaged products.

WiseFlex Desiccant Film-MS is a functional film that uses molecular sieve as the primary absorbent material. **The moisture absorption of this film relies on the physical pore adsorption properties of molecular sieves, which provide stable moisture absorption under various conditions.** Compared to other absorbent materials, molecular sieves perform better at low temperatures, effectively absorbing moisture even in lower humidity environments. The material remains highly stable after absorbing moisture and does not undergo any chemical reactions, ensuring no adverse impact on the products it comes into contact with. This guarantees both product safety and the reliability of the packaging environment.

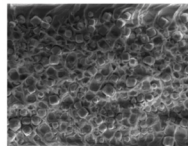
## CHARACTERISTICS

### Selectable & Controllable Moisture Absorption Effect

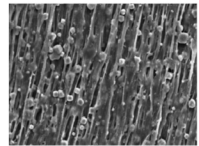
\*The moisture absorption rate of the desiccant layer is influenced by thickness and composition variations. Under identical environmental conditions (25°C, 40%RH):

Thickness	Moisture Absorption Capacity
60 μm	≥ 4.0g/m <sup>2</sup> (0.12oz/yd <sup>2</sup> )
80 μm	≥ 6.0g/m <sup>2</sup> (0.18oz/yd <sup>2</sup> )
110 μm	≥ 8.0g/m <sup>2</sup> (0.24oz/yd <sup>2</sup> )

### Uniform and Fine Moisture-Absorbing Pore Distribution



Vertical View



Horizontal View

These properties make WiseFlex Desiccant Film-MS particularly suitable for packaging moisture-sensitive products such as **biological diagnostic reagents**. Its stable moisture absorption not only extends the shelf life of the product but also prevents product failure due to moisture intrusion during transportation and storage. Additionally, this product can be laminated with various materials to provide comprehensive and continuous moisture protection for a wide range of packaging needs, making it an ideal choice for the demanding packaging requirements of the medical and diagnostic fields.



WiseSorbent Technology LLC

11 E Stow Rd, Marlton, NJ 08053, USA

Wisesorbent.com

140 Rue du Canal du Midi - ZAC de La Masquere, 31750 Escalquens - France

wisesorbent.com.fr

No. 8 Lorong Jalak, Kawasan Perusahaan Kebun Baru, Batu 9, 42500 Telok Panglima Garang, Selangor, Malaysia

info@wisesorbent.com



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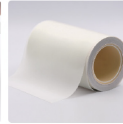
WiseFlex

# WiseFlex

## Desiccant Film-CO (Calcium Oxide Based)



Can be made

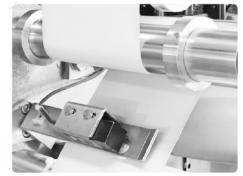


Calcium Oxide  
Desiccant Particles

In addition to offering desiccant films made from molecular sieve as the absorbent material, Wisesorbent Technology has also introduced calcium oxide-based desiccant films. Calcium oxide desiccant film is a common raw material in the desiccant film market. Unlike molecular sieve desiccant film, which operates via physical adsorption, calcium oxide desiccant film uses chemical adsorption. Its moisture absorption is highly effective, capable of quickly capturing and retaining moisture, making it particularly suitable for packaging applications that require high moisture absorption. Furthermore, calcium oxide desiccant film exhibits excellent compatibility when laminated with other types of films.

\*The moisture absorption rate of the desiccant layer is influenced by thickness and composition variations. Under identical environmental conditions (25°C, 40%RH):

Thickness	Moisture Absorption Capacity
60 μm	≥ 4.5g/m <sup>2</sup> (0.13oz/yd <sup>2</sup> )
80 μm	≥ 6.5g/m <sup>2</sup> (0.19oz/yd <sup>2</sup> )
110 μm	≥ 8.5g/m <sup>2</sup> (0.25oz/yd <sup>2</sup> )



In comparison, calcium oxide desiccant film has a more alkaline property, which gives it unique advantages in certain applications. For example, due to its alkaline nature, calcium oxide desiccant film is more suitable for packaging in the pharmaceutical and medical device sectors, as opposed to molecular sieve, which is better suited for humidity-sensitive and environmentally delicate products like biological diagnostic reagents.



**Molecular sieve desiccant film**

Molecular sieve desiccant film gradually changes from opaque white to semi-transparent white upon moisture absorption



**Calcium oxide desiccant film**

Calcium oxide desiccant film does not undergo any noticeable color change after absorbing moisture

Another distinction between the two materials lies in their appearance after moisture absorption. Molecular sieve desiccant film gradually changes from opaque white to semi-transparent white upon moisture absorption, providing users with a visual indication of its absorption status. In contrast, calcium oxide desiccant film does not undergo any noticeable color change after absorbing moisture, maintaining its original appearance.

