Dow Solutions for Soft, Efficient Nonwovens
Produced with ASPUN™ MB Meltblown Fiber Resins
Softer, more cloth-like nonwoven materials are essential to the development of improved health and hygiene products that combine comfortable fit, outstanding performance, and efficient processing.

**ASPUN™ MB Meltblown Fiber Resins** address the difficult challenges of increasing the softness and comfort of nonwovens while maintaining strength, durability, and processability for:

- Composites such as SMS using bicomponent spunbond
- Monolithic spunbond fabrics

This new, patent-pending family of polyethylene (PE) resins from Dow is an ideal fit for diapers, wipes, medical drapes & garments, sterilization packs, filtration, and other hygiene and industrial applications where increased softness offers added value.

**Unparalleled Performance**

The “secret” behind this breakthrough is Dow’s proprietary INSITE™ Technology, which allows production of softer, finer fibers than existing PE and polypropylene (PP) materials. As the first of its kind in PE, ASPUN™ MB technology enables a new generation of nonwoven materials with opportunities for:

- **Increased comfort** – Significantly improved drapeability/softness compared to PP.
- **Improved barrier properties** – Finer fibers enable better web coverage and opacity, which contribute to reduced air permeability (Figure 1) and increased barrier (Figure 2).
- **Greater structural durability** – Composite nonwoven fabrics such as SMS with bicomponent spunbond can enjoy improved strength and elongation for enhanced fit compared to composite nonwovens using PP meltblown (Figure 3).
- **Better odor control** – Does not require additional process or additive technologies to achieve the desired melt index, enabling improved sensory performance in face masks, hygiene absorbent products (HAP), wipes, filtration, medical, and other applications.
- **Enhanced gamma sterilization resistance** – ASPUN™ MB resins have the potential to offer significantly better gamma sterilization resistance than PP, making them well-suited for medical and other applications.

**Processing Efficiency**

ASPUN™ MB Meltblown Fiber Resins offer the same high levels of processability Dow customers have come to expect from ASPUN™ Fiber Resins, plus:

- Comparable throughput rates with lower extruder and die pressures than PP
- The potential for lower production costs based on reduced air temperature, air flow rate, and melt temperature

**Figure 1: Air Permeability of Selected Nonwoven Fabrics (50 GSM)**

<table>
<thead>
<tr>
<th>Industry Standard PP (1200 MFR)</th>
<th>Developmental Meltblown Fiber Resin®</th>
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<tr>
<td>120</td>
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**Figure 2: Hydrohead Failure Pressure of Selected Monolithic Spunbond Fabrics (50 GSM)**

<table>
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<tr>
<th>Industry Standard PP (1200 MFR)</th>
<th>Developmental Meltblown Fiber Resin®</th>
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</table>

**Figure 3: Tensile Strength and Elongation at Break of SMS Composites**

Data per tests conducted by Dow. Additional information available upon request. Properties shown are typical, not to be construed as specifications.

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ASPUN™ Meltblown Fiber Resins

GSM = grams/m²

50 GSM = grams/m²
Committed to Innovation…and to You

ASPUN™ MB Meltblown Fiber Resins represent Dow’s strong commitment to the development of advanced solutions that deliver competitive advantage for our customers. Our long track record of innovation is backed by growing global capabilities, one of the industry’s most comprehensive product portfolios, and the Pack Studios network, which enables collaborative, accelerated development of new technologies and applications around the world.

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