

# Meltblown technology for premium nonwovens



# Unlimited possibilities – product diversity for your premium nonwovens

Meltblown plants from Oerlikon Neumag produce a wide variety of reliable, high-quality meltblown fabrics. To meet current various market requirements, the systems can be configured to process a variety of polymers and to produce a broad range of fabric performance characteristics.

Oerlikon Neumag's Meltblown systems are utilized in two distinctly different production lines:

- 1. Stand-alone mono and bicomponent meltblown equipment for a variety of filtration, insulation and sorbents applications. In this case, a meltblown web can be utilized alone or combined inline or offline with additional media for the purpose of creating filtration, insulation or sorbent composites.
- "Plug & Produce" inserts in existing and new outside vendor SXS plants for a variety of medical and hygiene applications. In this case, meltblown systems are inserted between an upstream and downstream spinning system (typically spunbond) for the purpose of creating a barrier or liquid impervious layer.

This "Plug & Produce" solution enables a cost-efficient upgrading of new or existing spunbond systems hence offering the nonwoven producers the benefit of access to markets with particularly high quality standards.

### Our meltblown systems convince web producers with their key benefits

- Low OPEX: An optimized melt flow, short downtimes and a rotational web formation system significantly reduce the waste rate (adjustable production width).
- Long spinneret lifetime due to an optimized melt flow design.
- Short downtimes due to a quick-change technology for spinpack and heating elements.
- Adjustable production width.
- High product quality: homogeneous web characteristics, low filament size distribution, high hydro-head, high filtration efficiency.
- Variable fiber and pore sizes to meet absorption, barrier and filtration specifications.
- Optional fiber quenching improves fabric loft, pore size uniformity, increases air permeability, enhances opacity, filtration efficiency and hydro-head.

#### **Disposables**

Meltblown fabric provides excellent barrier characteristics. When combined with larger dtex nonwovens, the composite fabric demonstrates high strength and superior hand while maintaining breathability and barrier properties.

End uses include:

- Cloth-like diaper back sheet and leg cuff
- Surgical gowns
- Drapes
- Facemask media and wraps
- Chemical and thermally sensitive protective wear

### **Liquid and Air Filtration**

As a standalone structure or when combined with spunbond, paper, fiberglass or carded webs, meltblown fabric provides high opacity with open, breathable areas, for superior air permeability, pressure drop and controllable filtration efficiency to meet finished product requirements.

End uses include:

- Automotive cabin
- Engine air/hydraulic/fuel filtration
- Water purification and cartridge filtration
- HVAC air filtration

#### **Insulation and Absorption**

Meltblown fabric alone or combined with larger dtex nonwovens or impregnated with discrete filaments provides unique absorption and insulation characteristics. The finer fibers provide increased surface for insulation and aid in wicking action for absorbency. The meltblown fabric displays high strength with controllable void volume for excellent thermal and sound insulation as well as liquid retention. For absorption specifically, polymers can be treated with surfactants or plasma or corona surface modifications to provide improved aqueous wetability. Treatments can also provide hydrophobic or oilphyllic fiber properties to provide effective oil absorbency.

End uses include:

- Thermal and sound insulation
- Consumer and industrial wipes
- Oil recovery booms and socks

#### **Oerlikon Neumag**

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