Meltblown

One of several methods of producing a web of fibers from a thermoplastic resin such as polypropylene is meltblown. This particular method derives its name from the fact that fibers are blown from the spinnerettes by a jet of air that is adjacent to or surrounds the spinnerette. The melt supplied to the spinnerettes is produced by an extruder that heats and melts thermoplastic pellets to a viscosity that will allow them to flow through the spinnerettes. The picture shows the fibers being blown out of the spinnerettes and collected on a rotating drum. The drum is porous and has a vacuum inside that causes the fibers to cling to the surface of the drum. As the drum revolves, the vacuum is removed and the unbonded web proceeds to a bonding station which is usually a calender, though other methods can be used. The resultant fabric is rolled up on a winder.

One of the prime characteristics of the meltblown process is that it produces fibers of very low denier. These fibers are called micro denier. Also since the blowing process is somewhat uncontrolled at the end of the spinnerette, the resultant fibers have many deviations in denier. Meltblown fabric is usually soft because of the fine denier fibers and it also is not as strong as other nonwovens. Meltblown fabric is often sandwiched with spunbond fabric to combine the best properties of both. The most common resin used to make meltblows is polypropylene.

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“Nothing will work unless you do.”

John Wooden

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