

## Hotmelt Coating

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An interesting alternative to water-based recipes preparing yarns for weaving is coating with hotmelts, especially from an energy point of view.

Traditional coating of warp yarn is done mostly on water based recipes: single yarns are coated conventionally within a dipping and squeezing process with a protective film and afterwards dried. This is wanted in order to make the yarn prepared for the weaving process. But as the sizing agent disturbs the following process steps, it has to be washed out (desized) in a separate process before. Both processes of sizing and desizing are energy and resource intensive and are causing costs between 11.5 and 15.5 % of the total costs of the produced fabric.

An interesting alternative, especially from an energy point of view, offers the coating with hot melts. Here only the finishing means and the application plant have to be heated. Ideally the hot melt does not need to be removed (washed out) from the fabric, which helps to reduce costs and energy during desizing.

Being permanently on the yarn, the coating has to take tasks of the produced (finished) fabric, like abrasion-resistant, flame-retarding. So far, melt on hot melts could not offer this, because of their short molecular structure, which are not cross-linked.

An interesting solution offer cross-linked hot melts being highly resistant. These solvent-

free and reactive coating systems are only cured or cross-linked by using air moisture, i.e. very low energy effort. Furthermore the low requirements in space in production plants in comparison to the large drying installations makes hot melt installations economically interesting.

Traditional sizing machine versus hot melt coating machine