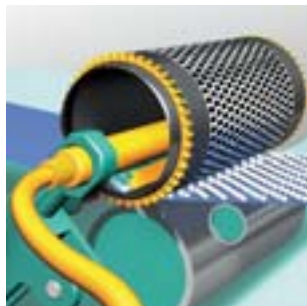
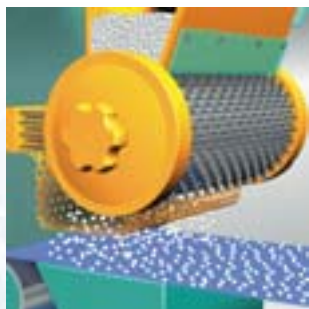




Copolyamides and Copolyesters  
Hotmelt Adhesives



- **Paste Dot**
- Double Dot
- Powder Scattering
- Powder Dot
- Hotmelt Print/  
Extrusion



# Paste Dot with Rotary Screen Printing

## Procedure

In the rotary screen printing process, an aqueous suspension of finely divided thermoplastic powder adhesives and additives, the paste, is pressed through the holes of a rotating, perforated cylinder, the screen stencil, onto a cold web of fabric. This procedure is particularly gentle to the substrate, and the wide range of options for formulating the paste grants the user flexibility in the application procedure. The process is characterized by high and economical coating rates ranging between 30 and 60 m/min. In particularly favorable cases, rates of 90 m/min have been attained. For these reasons, this application has surpassed the dry processes and now ranks first among powder applications (about 60%).

## Composition

A paste is an aqueous suspension consisting chiefly of the hotmelt adhesive powder and various additives that improve its properties. A typical paste contains the following ingredients:

- Water as the matrix
- Thickener for controlling the paste viscosity
- Dispersing agent to ensure that powder is uniformly distributed in the water
- Plasticizer to reduce the temperature of the joint and improve the joint's adhesion
- Wetting agent to improve adhesion: The wetting agent provides better wetting of hydrophobic surfaces.
- Slip additive/ flow enhancer for stabilizing the aqueous phase paste: The slip additive holds the water in the paste upon application; improvement of the dot geometry.
- Hotmelt adhesive powder

## Application Method

In the paste dot process, the aqueous adhesive dispersion is pumped through a hollow doctor blade into the interior of the rotating screen stencil. The viscosity of the paste can be adjusted to allow stencils of either coarse or fine screens to be used. The blade of the internal, adjustable hollow doctor blade presses the paste through the holes of the stencil and onto the web of fabric, which is running over a counter-roller coated with hard or soft rubber. The paste dots are then dried, and circulating-air or infrared radiators are next used to sinter the textile web.

In paste-dot coating, the blade system is of paramount importance because a perfect paste dot print pattern is expected to have the following properties:

- exact coat weight
- proper dot shape
- complete dot pattern
- no penetration of the fabric (strike through)

## VESTAMELT copolyesters standard grades

VESTAMELT	Properties, Suitability
4481-P1	Wide fusing range, very good adhesion on synthetic fibers, (e.g. Alcantara), soft feel, for ladies wear
4580-P1	Wide fusing range, good resistance to dry cleaning due to paste formulation, for ladies wear, shirts, labels, bonding with PVC
4680-P1 4681-P1	Low fusing temperature, good adhesive strength, fusing with hand iron, good resistance to dry cleaning due to paste formulation

Particle sizes:  
P1 = 0 to 80 µm

## VESTAMELT copolyamides standard grades

VESTAMELT	Properties, Suitability
171-P1	Paste additive for low viscosity grades, improves the resistance to strike back
250-P1	Good adhesion, high resistance to temperature, washing and steam, needs higher fusing temperatures
350-P1	Good resistance to temperature, multi-purpose standard adhesive for garments and industrial textiles
430-P1	Low melt viscosity, good resistance to steam, for pressure-sensitive and thermally sensitive face fabrics
450-P1	Low melting point, low fusing temperature, good resistance to strike back
470-P1	Low melting point, high melt viscosity, paste additive for low viscosity grades, improves the resistance to strike back
640-P1	Very low melting point for leather and furs, additive for grades with high melting point
730-P1	Low melting point, low melt viscosity, very good adhesion to surfaces that are difficult to fuse and to siliconized fabrics
750-P1	Good adhesion and good resistance to washing and dry cleaning, for light garments, decreased tack after coating
755-P1	Low melting point, high melt viscosity, good resistance to strike back, well adapted to substrates with polyester parts
840-P1	Medium melt viscosity, wide fusing range, high resistance to steam, multi-purpose applications in textiles

## VESTAMELT copolyamides development grades

VESTAMELT	Properties, Suitability
X1017/25-P1	Very low melt viscosity, low fusing temperature, excellent adhesion to face fabrics that are difficult to fuse, also as paste additive for grades with higher melting point
X1027-P1	Low melt viscosity, low fusing temperature, good resistance to steam, very good adhesion to surfaces that are difficult to fuse, well adapted to colored interlinings
X1310-P1	Thermal cross-linkable hotmelt adhesive Before cross-linking: Low melting point and low melt viscosity, good adhesion to surfaces that are difficult to fuse After cross-linking: Increased resistance to temperature, washing, steam and dry cleaning
X1316-P1	Thermal cross-linkable hotmelt adhesive Before cross-linking: High melting point and high melt viscosity After cross-linking: Very good resistance to temperature, washing, steam and dry cleaning
X1338-P1	High melt viscosity, high resistance to steam, needs higher fusing temperatures, very good adhesion to surfaces that are difficult to fuse, well adapted to colored interlinings

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For more information please contact our local office or the Marketing or Technical Marketing Department in Marl.

**Degussa AG**  
**High Performance Polymers**  
**45764 MARL**  
**GERMANY**

**Marketing**  
**Phone +49 2365 49-4322**  
**Fax +49 2365 49-6305**  
**e-mail: [hans-willi.losensky@degussa.com](mailto:hans-willi.losensky@degussa.com)**

**Technical Marketing**  
**Phone +49 2365 49-4684**  
**Fax +49 2365 49-5103**  
**e-mail: [andreas.pawlik@degussa.com](mailto:andreas.pawlik@degussa.com)**

**[www.vestamelt.com](http://www.vestamelt.com)**