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What is coating?

- Coatings are textile finishing processes designed to add or improve function a material with specific properties.
- Coating is carried out to impart certain desired characteristics and functionalities to woven, knitted or non-woven materials.
- such application of coating compounds is imparted by means of roller system, knife coating, hot-melt and transfer coating methods.
- In coated textiles Polymer or Elastomer usually Viscose Form, is applied directly on the fabric & cured

Polymers Used in Textile Coating:

- Rubber, Acrylic, Vinyl, Polyurethane, silicone etc…

Application of Coating in Textiles:

- Coating can be applied on textile In Fibre,Yarn,Fabric stage

Application Method Used for coating the textile:

Impregnation or dipping method:

- The Liquid compound used for coating is applicable for this application method eg:polyurethe Etc….
- The carrier material is led through an immersion trough which holds the liquid coating compound.

Hot melt method:

- Ethylene, vinyl acetate, polyamide, are generally used on hot melt additives for hot melt coatings.
- With this method, granules and powders are melted between two rollers or prepared viscous plastic compounds are used, which are plasticised by the heat of the rollers.
- Between the calendar rollers, which can be arranged in various ways, films form which can be transferred to the goods via the rollers. Hot melt adhesives are thermoplastic,

based on the polymers that become liquid between temperatures of 800 C - 2200 C and solidify again by cooling down.

- It is important to handle the system carefully. The coating head is positioned near to the substrate to avoid any temperature changes of the hot melt due to cold air flow.

Powder application method:

- Here, powdered thermoplastic synthetic polymers are scattered and formed into adhesive melts.
- This coating technique is used particularly for interlining fabrics for clothes.

Coating polymers:

- The coating compounds are formulated on the basis of rubber or film forming synthetic polymers with solvent and water being used as second phase.
- The synthetic polymer dispersions and solutions, used as coating compounds, are manufactured on the basis of urethanes, esters, vinyl chlorides, etc.
- Natural latex is the only natural product in this range. The chemical and physical properties of the dispersions are varied and are according to the application area.
- The minimum film formation temperatures, hardness and elasticity of the films, as well as their resistance to water and to organic solvents, must not be ignored while selecting the proper coating polymer.

End use of Coated Fabrics:

- Coated fabrics have wide applications in fields such as medical substrates, protective clothing, flexible membranes for civil structures, airbags, geo textiles, industrial fabrics, defense, transportation, healthcare, architecture, space, sports,

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