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7.3.3.4. Regenerated Fibres (Rayon)

Regenerated fibre is made by dissolving the cellulose fraction of plant fibre in chemicals and then again making it a fibre by viscose method. It is also termed as **regenerated cellulose fibre** as it consists of cellulose like cotton and hemp.

Synonyms

Regenerated cellulose and viscose rayon.

Source

Rayon is an artificial fibre, composed of regenerated cellulose in which not more than 15% of hydrogen of hydroxyl groups have been replaced by the substituents.

Preparation

At the present time rayon is produced by the viscose method:

- 1) The pulp form of cellulose of coniferous wood is processed into viscose rayon. The pulp contains about 80-90% of cellulose and hemicellulose.
- 2) Cellulose is treated with sodium hydroxide to yield sodium cellulose, and further treated with carbon disulphide and sodium hydroxide to yield a viscous solution of sodium cellulose xanthate.
- 3) This solution after ripening is made to pass through fine nozzles into the bath of sodium sulphate and sulphuric acid to form continuous filaments.
- 4) These filaments are drawn together to form yarn, which is de-sulphurised, bleached, washed, twisted, and then dried.

Features

- 1) Etymologically, rayon is also termed **artificial silk** as it is a shiny ray with gloss-like silk.
- 2) It has a smooth texture, unique gloss, moisture absorption and desorption properties, and superior staining property.
- 3) It is commonly used because it does not get soft and melt with heat.

Uses

It is used for making fabrics, surgical dressings, and viscose rayon absorbent wool.

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