LENZING VISCOSE® PRODUCTION PROCESS

Wood pulp is shredded and mixed with diluted caustic soda (NaOH), which results in alkali cellulose

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The liquor is squeezed

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The molecular size of the cellulose is reduced by the first ripening (depolymerisation) with air (preaging)

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Alkali cellulose is combined with carbon disulphide (CS_2) to produce sodium cellulose xanthate, which is dissolved with diluted caustic soda during agitation to form the viscose pulp

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Second ripening under vacuum

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The dope is filtered and deaerated

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Viscose pulp is extruded through the holes of the spinning jets into a spinning bath with sulphuric acid (H_2SO_4) and salts (sodium sulphate (Na_2SO_4) and zinc sulphate ($ZnSO_4$) which neutralizes the alkaline content of the viscose and regenerates the cellulose

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The filaments are gathered together to form a tow – a rope of parallel filaments

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The tow is cut into staple fibers

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The mat is formed and cleaned by countercurrent washing with water

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The fibers are treated with hypochlorite or H_2O_2

↓

The finish is applied

↓

The fibers are dried

↓

The fibers are opened

↓

The fibers are baled

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