

SHRINK CONTROLLING

This includes **losses resulting from associate theft, shoplifting, paperwork errors and even damaged merchandise**. With millions of dollars lost each year to these incidents, companies have created a variety of ways to prevent and reduce shrink, otherwise known as shrink control.

Shrinkage control

Compressive, or relaxation, shrinkage is applied to cotton and to certain cotton blends to reduce the stretching they experience during weaving and other processing. The fabric is dampened and dried in a relaxed state, eliminating tensions and distortions.

Shrinkage control processes are applied by compressive shrinkage, resin treatment, or heat-setting. Compressive, or relaxation, shrinkage is applied to cotton and to certain cotton blends to reduce the stretching they experience during weaving and other processing. The fabric is dampened and dried in a relaxed state, eliminating tensions and distortions. The number of warp and weft yarns per square inch is increased, contributing greater durability, and fabrics treated by this method are usually smooth and have soft lustre. The process involves spraying the fabric with water and then pressing the fabric against a steam-heated cylinder covered with a thick blanket of woollen felt or rubber. The manufacturer is often required to specify the residual shrinkage, or percentage of shrinkage, that may still occur after the preshrinking process.

Rayons and rayon blends may be stabilized by the use of resins, which impregnate the fibre. Such fabrics may also be stabilized by employing acetals to produce cross-linking, a chemical reaction. Such synthetics as polyesters and nylons, which are heat sensitive, are usually permanently stabilized by heat-setting during finishing.

Shrinkage of wools is frequently controlled by treatment with chlorine, partially destroying the scales that occur on wool fibres and thus increasing resistance to the natural tendency of wool to felt. Other methods employ coating with resins that attach to the scales in order to discourage felting shrinkage.

Durable press

Durable press fabrics have such characteristics as shape retention, permanent pleating and creasing, permanently smooth seams, and the ability to shed wrinkles, and thus retain a fresh appearance without ironing. Such fabrics may be safely washed and dried by machine. These useful characteristics are imparted by a curing process. Depending upon composition and desired results, fabrics may be precured, a process in which a chemical resin is added, the fabric is dried and cured (baked), and heat is applied by pressing after garment construction; or fabrics may be postcured, a process in which resin is added, the fabric is dried, made into a garment, pressed, and then cured.

Wash-and-wear was an early durable press process employing chemical treatment and curing of fabrics; at least light ironing was required to restore appearance. Later, however, processes were developed that allowed such fabrics to regain smoothness after home machine washing at moderate temperature, followed by tumble drying. Crease resistance

Crease, or wrinkle, resistance is frequently achieved by application of a synthetic resin, such as melamine or epoxy.

Soil release

Soil release finishes facilitate removal of waterborne and oil stains from fabrics such as polyester and cotton blends and fabrics treated for durable press, which usually show some resistance to stain removal by normal cleaning processes. Other finishes have been developed that give fabrics resistance to water and oil stains.

Antistatic finishes

The accumulation of static electricity in such synthetic fibres as nylon, polyesters, and acrylics produces clinging, which may be reduced by application of permanent antistatic agents during processing. Consumers can partially reduce static electricity by adding commercial fabric softeners during laundering.

Antibacterial and antifungus finishes

Antibacterial finishes are germicides applied to fabrics to prevent odours produced by bacterial decomposition, such as perspiration odours, and also to reduce the possibility of infection by contact with contaminated textiles. Fabrics may also be treated with germicides to prevent mildew, a parasitic fungus that may grow on fabrics that are not thoroughly dried. Both mildew and rot, another form of decay, may also be controlled by treatment with resins.

Moth-repellent treatments

Wool and silk are subject to attack by moths but may be made moth repellent by the application of appropriate chemicals either added in the dye bath or applied to the finished fabric.

Waterproofing and water repellence

Waterproofing is a process applied to such items as raincoats and umbrellas, closing the pores of the fabric by application of such substances as insoluble metallic compounds, paraffin, bituminous materials, and drying oils. Water-repellent finishes are surface finishes imparting some degree of resistance to water but are more comfortable to wear because the fabric pores remain open. Such finishes include wax and resin mixtures, aluminum salts, silicones, and fluorochemicals.

Flameproof, fireproof, and fire-resistant finishes

Flameproof fabrics are able to withstand exposure to flame or high temperature. This is achieved by application of various finishes, depending upon the fabric treated, that cause burning to stop as soon as the source of heat is removed. Fireproofing is achieved by the application of a finish that will cut off the oxygen supply around the flame. Fire-resistant finishes cause fabrics to resist the spread of flame.