

TABS

TEXTILE ANALYSIS BULLETIN SERVICE

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Discoloration From Metal Zippers & Trim

What Is The Problem?

Discoloration near a metal zipper, rivet, button or other metal trim on cotton, linen, cellulose or cellulose-blend fabrics.

What Does It Look Like?

Depending on the color of the fabric, the discoloration may be a rust, orange, yellow, green or even a pinkish shade. In some cases the discoloration will show the pattern of the teeth of the metal zipper or the shape of the metal trim. In other cases the discoloration may appear as a mark, streak or splotch.

What Caused It?

The color change can occur when the metal and fabric is in contact with moisture or water alone, but contact with other chemicals such as detergent alkalis, acids, oxidizing and reducing agents, sulfides and others can also cause the problem. Furthermore, the chemical reaction can be accelerated by heat; staining may not become objectionable until after cleaning, drying or pressing. This phenomenon occurs when residual metal ions used as catalysts to achieve the desired shade of the fabric react with the metal alloy of the zipper or trim, resulting in discoloration. The color change most often occurs on fabrics with copper zippers and trims, but brass, nickel or zinc can also cause dye damage.

Can It Be Prevented?

No. Discoloration will occur if such sensitively dyed garments come in contact with moisture in the area of the metal trim or zipper either during use, storage or cleaning.

Who Is Responsible?

It is the responsibility of the manufacturer to ensure all components of a garment, including fabric dye methods and attached trims, can withstand expected conditions of normal use and storage, as well as the acceptable cleaning process, without any adverse changes of appearance.



The yellow discoloration pattern of the zipper teeth can be seen in areas of these green pants where the metal contacted the moist fabric.

After washing and drying, these beige pants now show orange color-change areas near the zipper.



Is There A Remedy?

No. Once this type of color change takes place there is no restoration.