

TO: Sgt. W. T. Hall
Illinois State Police
Bureau of Special Investigation

FROM: Joseph J. Bejda, Textile Engineer
Department 817
Sears, Roebuck and Co.
925 S. Moran Ave, Chicago 7, Ill.

SUBJ: Examination of fibers mounted between glass slides with the following identity marks:

#12-C-60-1001E (Cave)
#12-C-60-1001J (Cave)
#36-C-60-1001E (Brush)

#2-C-60-1001G (Spiros)
#1-C-60-1001G (Askew)

Microscopic Examination:

Slide #12-C-60-1001E - All Orlon fiber in a blend of various deniers (fiber diameters). Within the fiber mass are red dyed Orlon and undyed Orlon fibers, predominantly red dyed Orlon. There also appears to be traces of beige dyed Orlon, one undyed wool fiber and one black fiber (highly opaque), possibly a hair fiber.

Slide #12-C-60-1001J - All Orlon fiber in a blend of various deniers (fiber diameters). Within the fiber mass are red dyed Orlon and undyed Orlon fibers, predominantly red dyed Orlon. There also appears to be traces of beige dyed Orlon fiber and one black fiber (highly opaque), possibly a hair fiber. It was indicated to us at the time the slides were submitted that this fiber mass was extracted from fiber mass in Slide #12C-60-1001E. The contents of the two slides are quite similar.

Slide #36-C-60-1001E (Brush) - Contains chiefly Orlon fiber in a blend of various deniers (fiber diameters). Within the fiber mass are red dyed Orlon and undyed Orlon fibers, as well as a significant amount of undyed wool fibers, predominantly red dyed Orlon fibers. The word "significant" in regard to the undyed wool is used to indicate its presence in sufficient quantity to differentiate this fiber mass from those in the other two slides and is not meant to indicate that it represents a high percentage of the whole fiber mass. Actually, there is a very small percentage of wool content evident. There are traces of green dyed wool, light blue wool, and a blue dyed Orlon fiber.

Slide #2-C-60-1001G (SPIROS) - Contains all wool fibers with a trace of nylon (dyed red and black).

Slide #1-C-60-1001G (ASKIEW) - Contains all wool fibers with a trace of nylon (dyed red).

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Conclusions:

The results of my microscopic examination of the slides indicate that the fiber mass in either slide #2-6-60-10010 or slide #10-60-10010 is not related to the fiber mass on any of the other three slides. Also, due to the presence of the undyed wool fiber in the fiber mass in slide #36G-60-1001E (Brush), it does not appear to be related to the fiber mass in either of the two #12 slides.

The compositions of the fiber mass in the two #12 slides and the #36 slide indicate the following possibilities as to their origin in a consumer item.

1. A plaid fabric probably of the napped blanket type construction, wherein dyed (red fiber and other colors) yarns and undyed yarns are woven in a plaid pattern. This type of fabric construction could find end use in car robes, jackets, mufflers, and caps. Due to the loft in napping of the fibers in this type of fabric to produce a soft surface texture, pilling or balls of fiber form on the surface in service use. In this process, the undyed fiber becomes entangled with the dyed fibers. Thus, it is possible that a similar condition existed in the item from which the unknown fiber mass was obtained. We are submitting a swatch of this type of red plaid Orlon which is used for a car robe or blanket. This particular sample was produced by Troy Mills, Troy, New Hampshire.
2. A simulated fur pile type fabric with a surface pile content of dyed and small amounts of undyed fibers. End use of these fabrics are in collars and linings of jackets, coats and possibly ear muffs. The Borg Industries of Delavan, Wisconsin produce fabrics of this type.

It is suggested that if information on additional producers of textile items similar to those mentioned above wherein dyed and undyed Orlon is used, it would be advantageous to contact the Fibers Division of DuPont Co., producer of the Orlon fiber. I am sure that they would be helpful in this respect.

Attached is a list of slides of mounted red Orlon fibers from various swatches obtained from our buyers. Within this group, slides #5, 7, and #11 illustrates presence of red dyed and undyed Orlon and are the only ones that would be related to the problem.

Joseph Bejda
Joseph J. Bejda
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Att.

- Slide #1 - Warden Knitting Mills - Dept. 633 75% Wool 25% Orlon
220 Arch St., Phila 3, Pa. Sweater swatch
- Slide #2 - Sweater WPI 7797 75% wool 25% Orlon - Trace of undyed Orlon
- Slide #3 - Sweater swatch - All Orlon (interlock knit), uniform dyeing of fiber
- Slide #4 - Sweater 100% Bulk Orlon, SH Co. #6043, Spencer Mfg Co.,
Spencer, West Virginia
- Slide #5 - Borg File Fabric, W474 Special DB - Color #9 - Red
7785 DB Undyed blend.
- Slide #6 - Borg File Fabric, W474 Special DB - Color #1 - Red 289 DB
- Slide #7 - Borg File Fabric, W471 Special DB - Color #9 - Red 7785 DB
Undyed blend.
- Slide #8 - Borg File Fabric, W471 Special DB - Color #5 - Red 289DB
- Slide #9 - Flannel Shirt NO 2823 - R52841/A - Red 65% Orlon 35% Wool
- Slide #10 - All Orlon Knit Cap 6 x 8567
- Slide #11 - All Orlon Fleece Car Robs, Troy Mills, Retail - R5751