

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2011

DateRun: 12/11/2011

Experimenters: Jason Marshall, Junhee Cho, Timothy Weil, Johnny Le

ClientType: Cleaning Equipment Mfr

ProjectNumber: Project #1

Substrates: Textile

PartType: Coupon

Contaminants: Fibers

Cleaning Methods: Mechanical Agitation

Analytical Methods: Gravimetric, Visual

Purpose: To evaluate the pet hair removal process of lint roller tool

Experimental Procedure:

Uniform application process:
 Take 0.0150 (+/- 0.0015) g of cat hair
 Pull hair clump apart into smaller fibrous bundles
 Place the bundles evenly across the 83 sq in surface, focusing hair application within center 3.5 inch path
 A plastic bag is then passed over the surface to better distribute the hair and impart static charge to the surface and hair

Hair removal process:
 Weigh uncovered lint roller tape
 Pass the roller across the surface to complete one cycle (up and back)
 Weigh the roller to determine hair collection
 Due to some surface materials, weights may exceed total hair weights as the roller may remove some of the fabric during the process
 Repeat Uniform application process and the Hair removal process for the initial tape piece until no hair is removed by the soiled lint roller tape
 Record total number of hair removal passes completed

Agitator-hair removal process:
 Use the uniform soiled process
 Weigh uncovered lint roller tape
 Pass the agitator across the surface for a half cycle
 Pass the roller across the surface to complete cycle
 Weigh the roller to determine hair collection
 Due to some surface materials, weights may exceed total hair weights as the roller may remove some of the fabric during the process
 Repeat Uniform application process and the Hair removal process for the initial tape piece until no hair is removed by the soiled lint roller tape
 Record total number of hair removal passes completed

Agitator-hair removal process 2nd option:
 Use the uniform soiled process
 Weigh uncovered lint roller tape
 Pass the agitator across the surface for a half cycle using four to five short movements of the agitator
 Pass the roller across the surface to complete cycle
 Weigh the roller to determine hair collection
 Due to some surface materials, weights may exceed total hair weights as the roller may remove some of the fabric during the process
 Repeat Uniform application process and the Hair removal process for the initial tape piece until no hair is removed by the soiled lint roller tape
 Record total number of hair removal passes completed

Results:

Fleece Surface –
 The Evercare classic roller showed that an individual section of the lint tape was completely used up within 4 cleaning cycles. The Ezpeel unit varied from 7 to 8 cycles and the comparative product ran for 6 cycles. When using the multiple short strokes across the surface, the nub and wave agitator increased the number of cleaning cycles to more than 10.

Conclusions: Both the supplied agitator handles were found to increase the life of a single piece of the adhesive when compared to using the adhesive alone.
 Nub: ~2X (7-8 vs 10+)
 Wave: ~2X (7-8 vs 10+)

Chair Surface –
 The Evercare classic roller showed that an individual section of the lint tape was completely used up within 13 cleaning cycles. The Ezpeel unit varied from 10-14 cycles and the comparative product ran for 7-10 cycles. When using the multiple short strokes across the surface, the nub increased the number of cleaning cycles to more than 17-18 and the wave was still successful after 20 runs.

CLEANING LABORATORY EVALUATION SUMMARY

The use of the agitators improved the life of the tape roll and resulted in more dust removal from the fleece surface. The wave agitator slightly outperformed the nub agitator. Both of the oneCare agitators worked better than the supplied tapeless agitator. This comparative product had issues with static electricity interfering with soil removal and/or capture from the surface. The unit was no longer effective after 10 runs.

Summary:

Conclusion:

Both the supplied agitator handles were found to increase the life of a single piece of the adhesive when compared to using the adhesive alone.

Nub: 1.5X (12 vs 18)

Wave: 2X (12 vs 20+)

Fur Fighter: <1 (12 vs 10)