

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 11/07/2008

Experimenters: Jason Marshall

ClientType: Electro-Optical Devices

ProjectNumber: Project #1

Substrates: Glass/Quartz

PartType: Coupon

Contaminants: Films

Cleaning Methods: Manual Wipe

Analytical Methods: Visual

Purpose: To evaluate products with better pH values for EVA Film removal

Experimental Procedure: The top five products from the previous retesting were used at full strength and room temperature. Glass coupons were contaminated with a strip of the supplied EVA Film. Coupons were then cleaned with each solution. Cleaning was performed by soaking a WypAll X60 reinforced paper towel with the cleaning solution. The coupons were then manually wiped for up to 2 minutes. Visual observations were made and recorded during cleaning.

Results: All five of the products removed the EVA film within 10 seconds of the manual wiping. The table lists the amount of time required to remove the film from the glass surface.

| Product                 | Time      |
|-------------------------|-----------|
| Free & Clear            | 5 seconds |
| Scout Glass & Surface   | 3 seconds |
| Kernel Clean            | 7 seconds |
| Clean Environment Glass | 4 seconds |
| SC More Than Glass      | 3 seconds |

Summary:

| <b>Substrates:</b>       | Glass/Quartz                      |        |             |                                     |               |
|--------------------------|-----------------------------------|--------|-------------|-------------------------------------|---------------|
| <b>Contaminants:</b>     | Films                             |        |             |                                     |               |
| Company Name:            | Product Name:                     | Conc.: | Efficiency: | Effective:                          | Observations: |
| Seventh Generation       | Natural Glass and Surface Cleaner | 100    |             | <input checked="" type="checkbox"/> |               |
| Scout Systems            | Scout Glass & Surface Cleaner     | 100    |             | <input checked="" type="checkbox"/> |               |
| Franmar Chemical         | Kernel Clean glass cleaner        | 100    |             | <input checked="" type="checkbox"/> |               |
| The Clean Environment Co | Glass and Hard Surface Cleaner    | 100    |             | <input checked="" type="checkbox"/> |               |
| Gemtek Products          | SC More Than Glass Cleaner        | 100    |             | <input checked="" type="checkbox"/> |               |

Conclusion: The five products will be evaluated on the supplied flux.