

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 03/25/2008

Experimenters: Jason Marshall

ClientType: Electro-Optical Devices

ProjectNumber: Project #1

Substrates: Aluminum, Glass/Quartz

PartType: Part

Contaminants: Adhesive, Dirt, Fingerprints

Cleaning Methods: Manual Wipe

Analytical Methods: Visual

Purpose: To evaluate top products on supplied part using manual wiping.

Experimental Procedure: The top four products were selected from the previous trial. Each product was used at full strength and room temperature and used to clean one section of the supplied part. Cleaning was performed by soaking a WypAll X60 reinforced paper towel with the cleaning solution. The surface was manually wiped for unto 2 minutes followed by a 5 second wipe with a dry towel. Visual observations were made and recorded during cleaning.

Results: The table below lists the observations made during cleaning of the front and back portion of the part.

| Cleaner | Observations |
|---------------|--|
| SC Actisolv | Good removal of dirt and fingerprints; adhesive softened but not removed. |
| | Backside cleaning removed 2nd most as apparent by the coloring of the wipe after cleaning. |
| Ionox HC 2 | Good removal of dirt and fingerprints; adhesive softened more than the SC Actisolv but still not completely removed. |
| | Backside cleaning removed the most as apparent by the coloring of the wipe after cleaning. |
| DS 144 | Okay removal of dirt and fingerprints; adhesive softened but still remained. |
| | Backside cleaning removed the least as apparent by the coloring of the wipe after cleaning. |
| Shopmaster RC | Left residue behind - squeaky when wiped, some visual streaks. |
| | Backside cleaning removed 3rd most as apparent by the coloring of the wipe after cleaning. |

Summary:

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|-----------------------|------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| Substrates: | Aluminum, Glass/Quartz | | | | |
| Contaminants: | Adhesive, Dirt, Fingerprints | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Gemtek Products | SC Actisolv Safety Solvent | 100 | | <input checked="" type="checkbox"/> | |
| Kyzen Corporation | Ionox HC 2 | 100 | | <input checked="" type="checkbox"/> | |
| Dysol | DS 144S Wipe Solvent | 100 | | <input checked="" type="checkbox"/> | |
| Buckeye International | Shopmaster RC | 100 | | <input type="checkbox"/> | |

Conclusion: Each of the four products were successful in cleaning residual dirt and fingerprints from the glass and aluminum surface. All had some difficulty removing the adhesive without first scraping the tape from the surface with a razor. The Ionox HC2 and SC Actisolv had the most success on the adhesive.