

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2005
 DateRun: 01/20/2005
 Experimenters: Jason Marshall, Ephraim Massawe
 ClientType: General
 ProjectNumber: Project #1
 Substrates: Other
 PartType: Coupon
 Contaminants: Waxes
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Visual

Purpose: To identify additional floor strippers using a preliminary screening method

Experimental Procedure: Six biobased cleaners were selected from the lab's inventory of biobased alternatives. A seventh non-biobased "green" floor stripper was also included in the screening. An approximate 1 inch square piece of cured coating (4 days) was placed into a glass Petri dish. Each solvent was applied to the coating using a hand held plastic swab and allowed to soak for 10 minutes. Observations were made throughout the ten minute soaking time. At the end of the soaking, each cleaning solution was ranked by two lab personnel to determine which products worked the best. Ranking were based on visually observation for opacity and coating stiffness as compared to an untreated cured sample.

Results: All seven products appeared to have some effect on the cured coating. The non-biobased "green" floor stripper was ranked as having the most success by both staff members. Observations and rankings are listed in the table below.

| Cleaning Product | Observations | Rank 1 | Rank 2 |
|---------------------------------|-----------------------------------------------------------------|--------|--------|
| SolSafe 245 | Soft, more transparent than translucent | 5 | 2 |
| Corn Solv | Some softness, translucent | 6 | 6 |
| Soy Solv II Plus | Soft, more transparent than translucent | 3 | 3 |
| Soy Solv | Not soft, mostly opaque | 7 | 7 |
| DBE 5 | Very soft, translucent | 2 | 4 |
| DBE 6 | Soft, translucent | 4 | 5 |
| Envirostar Green Floor Stripper | Initially became soft, then total dissolved into white solution | 1 | 1 |

Summary:

| Substrates: | Other | | | | |
|-----------------------------|-------------------------------------------|--------|-------------|-------------------------------------|---------------|
| Contaminants: | Waxes | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Bio Chem Systems | Solsafe 245 | 100 | | <input checked="" type="checkbox"/> | Rank ~ 3.5 |
| Soysolv Industrial Products | Cornsolv industrial solvent | 100 | | <input checked="" type="checkbox"/> | Rank 6 |
| Soysolv Industrial Products | Soysolv II solvent Plus | 100 | | <input checked="" type="checkbox"/> | Rank 3 |
| Soysolv Industrial Products | Soysolv industrial solvent | 100 | | <input checked="" type="checkbox"/> | Rank 7 |
| Invista S.a.r.l | Flexisolv DBE 5 ester | 100 | | <input checked="" type="checkbox"/> | Rank ~ 3 |
| Invista S.a.r.l | Flexisolv DBE 6 ester | 100 | | <input checked="" type="checkbox"/> | Rank ~ 4.5 |
| Pioneer Eclipse | Enviro Star Green Glass & Surface Cleaner | 100 | | <input checked="" type="checkbox"/> | Rank 1 |

Conclusion:

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All seven products will be tested using manual wiping in the Gardner Abrasion Tester under conditions similar to the previous trials.