

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007
 DateRun: 06/28/2007
 Experimenters: Andrea Cheeseman
 ClientType: General
 ProjectNumber: Project #2
 Substrates: Fiberglass
 PartType: Coupon
 Contaminants: Waxes
 Cleaning Methods: Manual Wipe
 Analytical Methods: Visual

Purpose: To screen a second batch of potential floor stripping products.

Experimental Procedure: A search of the lab's on-line database at www.cleansolutions.org was conducted to identify additional products that were considered to contain some level of bio-based materials. From this second search an additional 10 products were selected for screen testing. Furthermore, another eight products were identified from on-line sources.

Fiberglass coupons were coated with a layer of Johnson Show Place floor wax and allowed to dry for 30 minutes. During the 30 minutes, a Master Appliance Heat gun was used to speed up the drying process. Two subsequent coating layers were applied follow the same drying process. After application of the third coating, the coupons were allowed to sit overnight for continued drying.

Each bio-based product was applied at full strength to a separate coupon using a plastic squeeze bulb. Approximately, 3 ml of product was applied to the contaminated coupon. The product was allowed to sit for 10 minutes. At the end of this period, the coupons were wiped with a paper towel and the surface was observed for any signs of change resulting from the bio-based product. Successful products were then compared to each other to determine which products performed the best.

Results:

| Product | Observations |
|----------------------|--|
| Citrus Pure Remover | Strong citrus odor, spreads easily and evenly, removes wax if scraped very hard, peels |
| D-Limonene | Strong citrus/chemical odor, spreads easily and evenly, filmy residual, did not remove wax |
| Super Bio-Wash | Strong chemical odor, spreads easily and evenly, very cloudy discoloration, filmy residual, did not remove wax |
| Pinnacle | Thick, did not spread well, cloudy discoloration, filmy residual, did not remove wax |
| Bean-e-doo | Soybean odor, thin, watery, spreads easily and evenly, did not remove wax |
| Soy-Strip | Showed signs of removing wax |
| Emerge | Showed signs of removing wax |
| Soy-Gel | Showed signs of removing wax |
| Green Solutions(100) | Sticky, gummy wax removed if scraped hard |
| Green Solutions(9.2) | Very little wax removed |
| Cycle Strip (74) | Wax removed if scraped (after 5 minutes of soak) |
| Cycle Strip (74) | Wax removed if scraped hard, easier than the five minute (10 minutes of soak) |

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|--------------------------|--|
| Household Paint Stripper | Strong odor, sticky, thick, some wax removed if scraped hard |
| Graffiti Remover | Very strong odor, thick, some wax removed if scraped hard, could be peeled off |
| SoyStrong | Watery, did not remove wax |
| Ink Zapper | Very strong odor, water, ver little wax removed |
| Graffiti Remover SAC | Strong odor, very little wax removed, must scrape hard |

Summary:

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|--------------------------|---|---------------|--------------------|-------------------------------------|----------------------|
| Substrates: | Fiberglass | | | | |
| Contaminants: | Waxes | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Franmar Chemical | Bean-e-doo (Parts Washer Solvent) | 100 | | <input type="checkbox"/> | |
| Franmar Chemical | Soy Strip Paint Stripper | 100 | | <input checked="" type="checkbox"/> | |
| Franmar Chemical | Emerge super infusion surfactant (one gallon NVC) | 100 | | <input checked="" type="checkbox"/> | |
| Franmar Chemical | Soy Gel Paint Stripper | 100 | | <input checked="" type="checkbox"/> | |
| Abatement Technologies | Citrus Pure AS850 | 100 | | <input type="checkbox"/> | |
| Florida Chemical Company | D-Limonene | 100 | | <input type="checkbox"/> | |
| Chemtronics Inc | Super Bio Wash | 100 | | <input type="checkbox"/> | |
| EcoLink | Pinnacle | 100 | | <input type="checkbox"/> | |
| Spartan Chemical Company | Green Solutions Floor Stripper | 100 | | <input checked="" type="checkbox"/> | |
| Spartan Chemical Company | Green Solutions Floor Stripper | 9.2 | | <input checked="" type="checkbox"/> | |
| The Clean Environment Co | C-8 Cycle Strip | 74 | | <input checked="" type="checkbox"/> | |
| Vertec BioSolvents | Household Paint Stripper | 100 | | <input checked="" type="checkbox"/> | |
| SoySafe | Graffiti Remover | 100 | | <input checked="" type="checkbox"/> | |
| Spartan Chemical Company | Soy Strong | 100 | | <input type="checkbox"/> | |
| Vertec BioSolvents | Ink Zapper | 100 | | <input type="checkbox"/> | |
| Spartan Chemical Company | Graffiti Remover SAC | 100 | | <input type="checkbox"/> | |

Conclusion:

Three of the products showed signs of removing the wax from the fiberglass coupons during the screening process. These will be tested using mechanical agitation.