

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008
 DateRun: 11/05/2008
 Experimenters: Jason Marshall
 ClientType: Wire & Cable Mfr
 ProjectNumber: Project #2
 Substrates: Liquid
 PartType: Part
 Contaminants: Plastic
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Tactile

Purpose: To identify possible cleaning product for PVC removal.

Experimental Procedure: Ten products were selected from the lab's on-line database, www.cleanersolutions.org, based on client supplied information and past testing results. Six products were diluted to recommended concentrations using DI water. The remaining four products were used at full strength. The supplied PVC tubing was cut into 2-3 inch pieces and immersed into each solution at room temperature. Observations were made at 20 minute intervals for the first hour, than at 2 hours and 4 hours total immersion time.

Results: Successful products were determined by touching/squeezing the tubing after each interval. If there was any surface change, the product was considered to be successful. Observations for each product at each interval are listed below.

| Cleaner | Time | Observation |
|-------------------|---------|---------------------|
| Spartan | 20 min | Some surface change |
| | 40 min | Same |
| | 60 min | No change |
| | 120 min | No change |
| | 240 min | No Change |
| Pioneer Eclipse | 20 min | No Change |
| | 40 min | No Change |
| | 60 min | No Change |
| | 120 min | No Change |
| | 240 min | No Change |
| Rochester Midland | 20 min | No Change |
| | 40 min | No Change |
| | 60 min | No Change |
| | 120 min | No Change |
| | 240 min | No Change |
| Micro 90 | 20 min | No Change |
| | 40 min | No Change |
| | 60 min | No Change |
| | 120 min | No Change |
| | 240 min | No Change |
| Inproclean 3800 | 20 min | No Change |
| | 40 min | No Change |
| | 60 min | No Change |
| | 120 min | No Change |
| | | |

CLEANING LABORATORY EVALUATION SUMMARY

| | | |
|-----------------|---------|----------------------------|
| | 240 min | |
| SC 1000 | 20 min | No Change |
| | 40 min | Slightly softer |
| | 60 min | No Change |
| | 120 min | No Change |
| | 240 min | No Change |
| SC Soy Ester | 20 min | No Change |
| | 40 min | Slightly softer |
| | 60 min | No Change |
| | 120 min | No Change |
| | 240 min | No Change |
| Bean-e-doo | 20 min | No Change |
| | 40 min | No Change |
| | 60 min | No Change |
| | 120 min | Some deformation of tubing |
| | 240 min | No Change |
| DBE-6 | 20 min | Change in surface texture |
| | 40 min | Softer |
| | 60 min | Deformation |
| | 120 min | Easier to deform |
| | 240 min | Very soft |
| Smart Solve 605 | 20 min | No change |
| | 40 min | No change |
| | 60 min | Some deformation |
| | 120 min | A little more deformation |
| | 240 min | No change |

Summary:

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|------------------------------------|---|---------------|--------------------|-------------------------------------|----------------------|
| Substrates: | Liquid | | | | |
| Contaminants: | Plastic | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Spartan Chemical Company | Green Solutions Floor Stripper | 33 | 0.00 | <input checked="" type="checkbox"/> | |
| Pioneer Eclipse | Enviro Star Green Glass & Surface Cleaner | 25 | 0.00 | <input type="checkbox"/> | |
| Rochester Midland Corporation | EnviroCare Floor Stripper | 33 | 0.00 | <input type="checkbox"/> | |
| International Products Corporation | Micro 90 Conc. | 20 | 0.00 | <input type="checkbox"/> | |
| Oakite Products | Inproclean 3800 | 20 | 0.00 | <input type="checkbox"/> | |
| Gemtek Products | SC 1000 Aqueous Cleaner Concentrate | 20 | 0.00 | <input checked="" type="checkbox"/> | |
| Gemtek Products | SC Soyester | 100 | 0.00 | <input checked="" type="checkbox"/> | |
| Franmar Chemical | Bean-e-doo (Parts Washer Solvent) | 100 | 0.00 | <input checked="" type="checkbox"/> | |
| Invista S.a.r.l | Flexisolv DBE 6 ester | 100 | 0.00 | <input checked="" type="checkbox"/> | |
| United Laboratories International | Smart Solve 605 | 100 | 0.00 | <input checked="" type="checkbox"/> | |

Conclusion:

The six products that showed some signs of softening the PVC tubing will be retested at an elevated temperature.