

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007  
 DateRun: 11/28/2007  
 Experimenters: Heidi Wilcox  
 ClientType: Wire & Cable Mfr  
 ProjectNumber: Project #1  
 Substrates: Steel  
 PartType: Part  
 Contaminants: Paints, Resins/Rosins  
 Cleaning Methods: Immersion/Soak  
 Analytical Methods: Tactile, Visual

Purpose: To screen potential cleaning products for removing paint/resin from steel parts

Experimental Procedure: Two products from the previous trial were identified for further testing on client supplied parts. While all 6 previous products showed potential, products were picked for more extensive testing based on performance, EH&S and possible cost considerations. Circular steel parts approximately 6 inches in diameter with resin on them were immersed in the two solutions of 100% concentration at room temperature, approximately 68F.

The parts were allowed to sit in the solution to determine what effect the cleaning products would have on the resin. Observations were made at 60, 120, 180, 240 and 300 minute intervals as well as overnight. Any signs of interaction between paint/resin and cleaner were recorded.

Results:

| Product                   | Initial Appearance and observations   |
|---------------------------|---|
| EnviroCare Floor Stripper | Clear fizzed with streaks of color  |
| 60 min                    | soln was amber in color and resin was still hard  |
| 120 min                   | Resin softening more. Can scrape off thin areas of resin on the side of the part. Solution darkening.   |
| 180 min                   | Top layers softening. Can scrape more resin off. Solution was darker  |
| 240 min                   | Same, top layer of resin softening and easier to scrap thin layers. Solution became dark.   |
| 300 min                   | Same  |
| overnight                 | Solution very dark. Thinner areas of resin can be scraped and wiped off. Top layer of thicker areas is softening.                                 |
| Green Solutions           | Clear   |
| 60 min                    | Soln slightly amber in color so some dissolving. Resin softening on top   |
| 120 min                   | Resin softening more, can wipe off top layer  |
| 180 min                   | Same. Resin softening on top layers, easy to wipe/scrape off.   |
| 240 min                   | No change   |
| 300 min                   | Thinner layers of resin down to the bare metal with wiping and scraping. Thicker areas of resin, 3/4 to 1/2 inch, half gone as top layers soften. |
| overnight                 | Same  |

Summary:

|                    |       |
|--------------------|-------|
| <b>Substrates:</b> | Steel |
|--------------------|-------|

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|                               |                                |               |                    |                                     |                      |
|-------------------------------|--------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| <b>Contaminants:</b>          | Paints, Resins/Rosins          |               |                    |                                     |                      |
| <b>Company Name:</b>          | <b>Product Name:</b>           | <b>Conc.:</b> | <b>Efficiency:</b> | <b>Effective:</b>                   | <b>Observations:</b> |
| Rochester Midland Corporation | EnviroCare Floor Stripper      | 100           | 0.00               | <input checked="" type="checkbox"/> |                      |
| Spartan Chemical Company      | Green Solutions Floor Stripper | 100           | 0.00               | <input checked="" type="checkbox"/> |                      |

**Conclusion:**

Both the Rochester Midland and Spartan products worked. The cleaners soften the resin on the top which allows it to be wiped or scraped off in increments. These two will be tested warm, at 120F to see if this will speed up cleaning time.