

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007
 DateRun: 12/05/2007
 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: The two products from the previous trial are being further testing on client supplied parts. Circular steel parts approximately 6 inches in diameter with resin on them were immersed in the two solutions of 100% concentration at 120 F to determine if heating the solutions will decrease the cleaning time. The parts were allowed to sit in the heated solution to determine what effect the cleaning products would have on the resin. Observations were made at 60, 120, 180 and 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 |
| 60 min | Solution was darkening in color. Resin seemed to be softening faster than when cleaned at room temperature. |
| 120 min | Solution darkening much more than at RT. Resin still softening |
| 180 min | Same |
| 300 min | Same |
| overnight | Solution very dark. Seemed to remove more resin than at RT |
| Green Solutions | Clear, fizzed and saw streaks of color |
| 60 min | Solution darkening quickly. Resin softening. Thinner areas down to metal |
| 120 min | Solution very dark, resin still softening. |
| 180 min | Same |
| 300 min | Same |
| overnight | Solution black. Resin softening, thin areas down to metal |

Summary:

| | | | | | |
|-------------------------------|--------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| Substrates: | Steel | | | | |
| Contaminants: | Paints, Resins/Rosins | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Rochester Midland Corporation | EnviroCare Floor Stripper | 100 | | <input checked="" type="checkbox"/> | |
| Spartan Chemical Company | Green Solutions Floor Stripper | 100 | | <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. The difference between heating and room temperature cleaning was that the solutions blackened, the resin dissolved, and the resin seemed to soften faster with heat. Thinner areas of resin may be able to be cleaned off in 3-5 hours rather than overnight. The

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main issue will be bath life with the resin dissolved. These products will be tested with heated ultrasonics next.