

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003  
DateRun: 10/20/2003  
Experimenters: Dave Hout  
ClientType: Lab  
ProjectNumber: Project #1  
Substrates: Aluminum  
PartType: Coupon  
Contaminants: Coatings  
Cleaning Methods: Immersion/Soak  
Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Four products were used at full strength at room temperature and another four were heated to 130 F on a hot plate. Twenty-four preweighed coupons were coated with PPG-Industries Hi Gord 103J and allowed to dry for a half an hour and reweighed. Three coupons were cleaned in each solution for 5 minutes using stir-bar-agitation, rinsed in a tap water bath for 15 seconds at 120 F and dried using air blow off for 30 seconds at 68 F. Coupons were allowed to dry for a half an hour and then reweighed a final time. Efficiencies were calculated.

Results:

Summary:

| <b>Substrates:</b>        |                            | Aluminum |             |                                     |               |  |
|---------------------------|----------------------------|----------|-------------|-------------------------------------|---------------|--|
| <b>Contaminants:</b>      |                            | Coatings |             |                                     |               |  |
| Company Name:             | Product Name:              | Conc.:   | Efficiency: | Effective:                          | Observations: |  |
| Finger Lakes Chemical     | Safer Stuff                | 100      | 100.15      | <input checked="" type="checkbox"/> |               |  |
| Man Gill Chemical Company | Gillite 1156               | 130      | 99.68       | <input checked="" type="checkbox"/> |               |  |
| National Diagnostic       | Histo Clear                | 100      | 96.13       | <input type="checkbox"/>            |               |  |
| Universal Photonics       | Uni Clear                  | 100      | 98.39       | <input checked="" type="checkbox"/> |               |  |
| Today & Beyond            | Beyond 2003                | 5        | 97.82       | <input type="checkbox"/>            |               |  |
| US Polychem Corporation   | Polychem A 2000 P          | 5        | -354.08     | <input type="checkbox"/>            |               |  |
| Buckeye International     | XL 100 Cleaner & Degreaser | 5        | 135.08      | <input type="checkbox"/>            |               |  |
| Dow Chemical Company      | PnB Glycol Ether           | 5        | 87.97       | <input checked="" type="checkbox"/> |               |  |

Conclusion: All products were effective at an efficiency rate of over 85% except for the product Polychem 2000P and XL 100.