

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007

DateRun: 05/16/2007

Experimenters: Jason Marshall, Shweta Bansal

ClientType: Metal

ProjectNumber: Project #1

Substrates: Alloys

PartType: Coupon

Contaminants: Lubricating/Lapping Oils

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate alternative cleaners on second supplied contaminant.

Experimental Procedure: Six products from the previous trial were selected and used at full strength. The cleaning solutions were all heated to 130 F on a hot plate.

Eighteen preweighed alloy coupons were coated with the second supplied lubricant and weighed a second time to determine the amount of contaminant added to each coupon. Three coupons were immersed into each solution and cleaned for 5 minutes using stir-bar agitation. Coupons were rinsed in room temperature tap water for 15 seconds and air dried using compressed dry air for 30 seconds. A final weight was recorded, and efficiencies were calculated for each coupon cleaned.

Results: Five of the six products removed over 95% of the lubricant. Three of these removed over 99%. The table below lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

| Cleaner | Initial wt | Final wt | % Removed |
|-----------------|------------|----------|-----------|
| Soy Gold 1100 | 1.4978 | 0.0286 | 98.09 |
| | 1.5557 | 0.0541 | 96.52 |
| | 1.5184 | 0.0291 | 98.08 |
| Solsafe 245 | 1.9557 | 0.0186 | 99.05 |
| | 1.9062 | 0.0077 | 99.60 |
| | 2.1998 | 0.0053 | 99.76 |
| Shopmaster RC | 2.1195 | 0.0117 | 99.45 |
| | 1.8953 | 0.0095 | 99.50 |
| | 1.2542 | 0.0080 | 99.36 |
| DS 108 | 2.2218 | 0.0181 | 99.19 |
| | 1.7480 | 0.0167 | 99.04 |
| | 1.3172 | 0.0106 | 99.20 |
| D Greeze 500 LO | 2.1602 | 0.1368 | 93.67 |
| | 1.5610 | 0.0311 | 98.01 |
| | 2.0320 | 0.0392 | 98.07 |
| SC Supersolve | 1.8005 | 0.5534 | 69.26 |
| | 2.2033 | 0.4855 | 77.96 |
| | 1.8246 | 0.5985 | 67.20 |

Summary:

| Substrates: | | Alloys | | | | |
|---------------------------|--|------------------------------|--------|-------------|-------------------------------------|---------------|
| Contaminants: | | Lubricating/Lapping Oils | | | | |
| Company Name: | | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| AG Environmental Products | | Soy Gold 1100 | 100 | 97.57 | <input checked="" type="checkbox"/> | |
| Bio Chem Systems | | Solsafe 245 | 100 | 99.47 | <input checked="" type="checkbox"/> | |
| Buckeye International | | Shopmaster RC | 100 | 99.44 | <input checked="" type="checkbox"/> | |
| Dysol | | DS 108 Wipe Solvent | 100 | 99.14 | <input checked="" type="checkbox"/> | |
| Transene Company, Inc. | | D Greeze 500 LO | 100 | 96.58 | <input checked="" type="checkbox"/> | |
| Gemtek Products | | SC Supersolve Safety Solvent | 100 | 71.48 | <input type="checkbox"/> | |

Conclusion: The five products that removed over 95% will be tested on the third supplied contaminant under the same conditions.

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