

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004
 DateRun: 07/23/2004
 Experimenters: Jason Marshall, Heidi Wilcox, Andy Harris
 ClientType: Metal Finishing
 ProjectNumber: Project #2
 Substrates: Aluminum
 PartType: Coupon
 Contaminants: Coatings
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Gravimetric

Purpose: To evaluate the successful product on the last contaminant

Experimental Procedure: The supplied product was used as received in 400 ml beakers and heated to 120 F on a hot plate. Three preweighed aluminum coupons were coated with client supplied coating, Castrol Industries Rustilo 4163 (64742-46-7, 8002-74-2, 34590-94-8), using a hand held swab and then weighed a second time to determine the amount of soil added. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. Coupons were rinsed in tap water for 15 seconds at 120 F, followed by air blow off at room temperature. Once dry, coupons were weighed a final time and efficiencies for each cleaner were calculated.

Results: The Alkalume removed 97% of the contaminant from the coupons. 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 |
|-------------|------------|----------|-----------|
| Alkalume LN | 0.3965 | 0.0111 | 97.20 |
| | 0.3380 | 0.0076 | 97.75 |
| | 0.3534 | 0.0126 | 96.43 |

Summary:

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|----------------------|----------------------|---------------|--------------------|-------------------------------------|----------------------|
| Substrates: | | Aluminum | | | |
| Contaminants: | | Coatings | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| McGean Rohco Inc | Alkalume LN | 100 | 97.13 | <input checked="" type="checkbox"/> | |

Conclusion: This product and the five from the first round of testing will be used on supplied parts using ultrasonic energy.