

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 06/03/2008

Experimenters: Ephraim Massawe

ClientType: Lab

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Coatings, Cutting/Tapping Fluids, Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Breath test

Purpose: Removing grinding fluid, rust preventatives, and cutting oil from the surface of aluminum. By using non-toxic cleaning products.

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Weigh the coupons to get an initial weight. Then you add the containment on the aluminum coupons and weigh the coupons again to go and get the dirty weight. Afterwards leave the coupons alone for 24hrs or overnight. Then clean off the coupon using immersion cleaning followed by rinsing and drying.

| Cleaner | Initial wt | Final wt | %Removed |
|---------------|------------|----------|----------|
| metinox m6310 | | | |
| | 0.1677 | 0.0928 | 44.66 |
| | 0.2553 | 0.0974 | 61.85 |
| | 0.1287 | 0.0838 | 34.89 |
| united 605 | | | |
| | 0.1313 | 0.1583 | -20.56 |
| | 0.0720 | 0.1653 | -129.58 |
| | 0.2423 | 0.1618 | 33.22 |
| metinox m6310 | | | |
| | 0.2870 | 0.1084 | 62.23 |
| | 0.2274 | 0.1155 | 49.21 |
| | 0.2143 | 0.0923 | 56.93 |
| united 605 | | | |
| | 0.2434 | 0.1742 | 28.43 |
| | 0.2056 | 0.1957 | 4.82 |
| | 0.1401 | 0.1541 | -9.99 |
| metinox m6310 | | | |
| | 0.3124 | 0.3008 | 33.71 |
| | 0.2692 | 0.2674 | 0.67 |
| | 0.5791 | 0.2833 | 51.08 |
| united 605 | | | |
| | 0.3296 | 0.2590 | 21.41 |
| | 0.2692 | 0.2902 | -7.80 |
| | 0.3184 | 0.2914 | 8.48 |

Summary:

| | | | | | |
|-----------------------------------|---------------------------------------|---------------|--------------------|--------------------------|----------------------|
| Substrates: | Aluminum | | | | |
| Contaminants: | Coatings, Cutting/Tapping Fluids, Oil | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Kyzen Corporation | Metalnox M6310 (For Comparison Only) | 100 | 47.13 | <input type="checkbox"/> | |
| Kyzen Corporation | Metalnox M6310 (For Comparison Only) | 100 | 56.12 | <input type="checkbox"/> | |
| Kyzen Corporation | Metalnox M6310 (For Comparison Only) | 100 | 18.49 | <input type="checkbox"/> | |
| United Laboratories International | Smart Solve 605 | 100 | -38.97 | <input type="checkbox"/> | |

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|-----------------------------------|-----------------|-----|------|--------------------------|--|
| United Laboratories International | Smart Solve 605 | 100 | 7.75 | <input type="checkbox"/> | |
| United Laboratories International | Smart Solve 605 | 100 | 7.37 | <input type="checkbox"/> | |

Conclusion:

None of the products tested surpassed the passing removal rate of 85%. There was one test with Smart Solve 605 when tested to remove grinding fluid actually decreased the weight of the coupon by 38.97%. Their needs to be more of a test.