

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009

DateRun: 03/04/2009

Experimenters: Daniel Pina

ClientType: Lab

ProjectNumber: Project #1

Substrates: Steel

PartType: Coupon

Contaminants: Cutting/Tapping Fluids

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: Using non-toxic aqueous cleaning products to remove cutting/tapping fluid off of steel using a manual wipe method.

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Weigh the steel coupons to get an original weight before adding the cutting/tapping fluid. The weigh the dirty coupons get a second reading. Setup the manual wipe machine for 20 cycles = 30 seconds and add the cleaning solution to the coupons that is designated to be tested with this cleaning product. After that reweigh the coupons to get a final reading and see what percentage of the tapping/cutting fluid has been taken off.

| | | | | |
|----------|---|-------------|-----------|-----------|
| Results: | Cleaner | Initial Wt. | Final Wt. | % Removed |
| | AG Environmental Soygold 1000 | 0.1584 | 0.0003 | 100.19 |
| | | 0.283 | 0.0028 | 99.01 |
| | | 0.1852 | 0.0006 | 99.68 |
| | AG Environmental Soygold 1100 | 0.3161 | 0.0012 | 99.62 |
| | | 0.2767 | 0.0029 | 98.95 |
| | | 0.3388 | 0.0015 | 99.56 |
| | AG Environmental Soygold 2000 | 0.3123 | 0.0057 | 98.17 |
| | | 0.3289 | 0.0089 | 97.29 |
| | | 0.3347 | 0.003 | 99.1 |
| | BioGenesis Enterprises BG Clean 648 | 0.4239 | 0.0063 | 98.51 |
| | | 0.3732 | 0.0061 | 98.37 |
| | | 0.2405 | 0.0053 | 97.8 |
| | Bi-O-Clean Industry Soy Cream Cleaner | 0.3009 | 0.0057 | 98.11 |
| | | 0.499 | 0.0031 | 99.38 |
| | | 0.3753 | 0.0047 | 98.75 |
| | Franmer Chemical Bean-e-doo | 0.3032 | 0.0089 | 97.06 |
| | | 0.3841 | 0.0074 | 98.07 |
| | | 0.4406 | 0.0045 | 98.98 |
| | Franmar Chemical Emerge | 0.3403 | 0.0078 | 97.71 |
| | | 0.2947 | 0.0101 | 96.57 |
| | | 0.2461 | 0.0074 | 96.99 |
| | Franmer Chemical Soy Gel | 0.0444 | 0.0058 | 86.94 |
| | | 0.266 | 0.0014 | 99.47 |
| | | 0.3776 | 0.0079 | 97.91 |
| | Gemtek Products Ez Solv | 0.4238 | 0.0043 | 98.99 |
| | | 0.4342 | 0.0063 | 98.55 |
| | | 0.3804 | 0.0071 | 98.13 |
| | Gemtek Products SC Oven & Grill Cleaner | 0.432 | 0.0062 | 98.56 |
| | | 0.2893 | 0.0005 | 99.83 |
| | | 0.4031 | 0.0028 | 99.31 |

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|----------|----------------------|------------------------|
| Summary: | Substrates: | Steel |
| | Contaminants: | Cutting/Tapping Fluids |

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| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
|----------------------------|---|--------|-------------|-------------------------------------|---------------|
| AG Environmental Products | Soy Gold 1000 | 10 | 99.63 | <input checked="" type="checkbox"/> | |
| AG Environmental Products | Soy Gold 1100 | 10 | 99.38 | <input checked="" type="checkbox"/> | |
| AG Environmental Products | Soy Gold 2000 | 10 | 98.19 | <input checked="" type="checkbox"/> | |
| BioGenesis Enterprises Inc | BG Clean 648 | 10 | 98.23 | <input checked="" type="checkbox"/> | |
| Bi-O-Kleen Industries | Soy Cream Cleaner | 17 | 98.74 | <input checked="" type="checkbox"/> | |
| Franmar Chemical | Bean-e-doo (Parts Washer Solvent) | 10 | 98.04 | <input checked="" type="checkbox"/> | |
| Franmar Chemical | Emerge super infusion surfactant (one gallon NVC) | 10 | 97.09 | <input checked="" type="checkbox"/> | |
| Franmar Chemical | Soy Gel Paint Stripper | 10 | 94.77 | <input checked="" type="checkbox"/> | |
| Gemtek Products | SC EZ Solv Safety Solvent | 10 | 98.56 | <input checked="" type="checkbox"/> | |
| Gemtek Products | Safe Care (SC) Oven & Grill Cleaner | 10 | 99.23 | <input checked="" type="checkbox"/> | |

Conclusion: All the products passed the acceptable cleaning rate of 85%. Each product shows that it is a great contender for cleaning cutting/tapping fluid off of steel.