

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1996

DateRun: 03/04/1996

Experimenters: Jay Jankauskas, Sutherman Ramesh

ClientType: Coatings Manufacturer

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Adhesive, Coatings

Cleaning Methods: Immersion/Soak

Analytical Methods: Peel test

Purpose: To determine the most effective aqueous cleaner

Experimental Procedure: The purpose of this trial is to determine the most effective aqueous chemistry in removing the basecoat #51144 coating for Coatings Manufacturer. Seven chemistries will be tested at identical cleaning conditions (160F for 30 minutes with stir-bar agitation). The concentration of chemistry used will start out at 50% and decrease by increments of 10 %. Cleanliness will be determined by a peel test. If an aqueous chemistry is effective, the urethane should easily be peeled off of coupon after cleaning.  
SUBSTRATE MATERIAL: 304 Stainless Steel Coupons  
CONTAMINANTS: Durane Base Coatings #51144  
CONTAMINATING PROCESS USED: Rubbed on with swab and allowed to cure overnight

| Results: | Conc | Aluminex 5761 | Aluminex 5834 | Aquaclean 4874 | Polyspray P | 69MC | Polyspray XS | Polyspray C |
|----------|------|---------------|---------------|----------------|-------------|------|--------------|-------------|
|          | 50%  | X             | X             | *              | X           | X    | X            |             |
|          | 40%  |               |               | *              | X           | X    |              |             |
|          | 30%  |               |               |                |             | X    |              |             |
|          | 20%  |               |               |                |             | X    |              |             |
|          | 10%  |               |               |                |             |      |              |             |

\*The Aquaclean works on a dissolving mechanism (due to high glycol ether content) performed a 100% removal.

X-indicates that the Basecoat #51144 was able to be peeled off of the coupon after cleaning

Summary:

|                              |                    |                      |        |             |                                     |                |
|------------------------------|--------------------|----------------------|--------|-------------|-------------------------------------|----------------|
| Substrates:                  | Stainless Steel    |                      |        |             |                                     |                |
| Contaminants:                | Adhesive, Coatings |                      |        |             |                                     |                |
| Company Name:                |                    | Product Name:        | Conc.: | Efficiency: | Effective:                          | Observations:  |
| US Polychem Corporation      |                    | Polyspray Jet 790 C  | 50     |             | <input type="checkbox"/>            | 10, 20, 30, 40 |
| US Polychem Corporation      |                    | Polyspray Jet 790 P  | 50     |             | <input type="checkbox"/>            | 10, 20, 30, 40 |
| US Polychem Corporation      |                    | Polyspray Jet 790 XS | 50     |             | <input type="checkbox"/>            | 10, 20, 30, 40 |
| US Polychem Corporation      |                    | Product 69 MC        | 50     |             | <input checked="" type="checkbox"/> | 10, 20, 30, 40 |
| General Chemical Corporation |                    | Aluminex 5834        | 50     |             | <input type="checkbox"/>            | 10, 20, 30, 40 |
| General Chemical Corporation |                    | Aquaclean 4784       | 50     |             | <input type="checkbox"/>            | 10, 20, 30, 40 |
| General Chemical Corporation |                    | Aluminex 5761        | 50     |             | <input type="checkbox"/>            | 10, 20, 30, 40 |

Conclusion: U.S. Polychem's 69MC outperformed all other aqueous cleaners tested to date.