CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1996

DateRun: 03/03/1996

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	0.00	☐	10, 20, 30, 40
US Polychem Corporation	Polyspray Jet 790 P	50	0.00	☐	10, 20, 30, 40
US Polychem Corporation	Polyspray Jet 790 XS	50	0.00	☐	10, 20, 30, 40
US Polychem Corporation	Product 69 MC	50	0.00	☑	10, 20, 30, 40
General Chemical Corporation	Aluminex 5834	50	0.00	☐	10, 20, 30, 40
General Chemical Corporation	Aquaclean 4784	50	0.00	☐	10, 20, 30, 40
General Chemical Corporation	Aluminex 5761	50	0.00	☐	10, 20, 30, 40

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