CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	1998
DateRun:	03/24/1998
Experimenters:	Jason Marshall
ClientType:	Coatings Manufacturer
ProjectNumber:	Project #1
Substrates:	Stainless Steel, Textile
PartType:	Coupon
Contaminants:	Coatings
Cleaning Methods:	
Analytical Methods:	Microphotography
Purpose:	Compare coatings on stainless steel and cardboard
Experimental Procedure:	The stainless-steel coupons coated in trials 1 & 2 were used along with pre-coated cardboard samples obtained from the client. Each coating and substrate had a 2 microL water droplet placed on the coated surface. Microphotographs were taken of the coating water interface in order to illustrate the effectiveness of the coating. The more spherical the bubble, the better the coating. One un-coated sample was photographed so that a baseline could be determined. SUBSTRATE MATERIAL: Stainless Steel, Cardboard COATING: 7426 + CH6--grey--1.7% Solids, 7426 + 2A (white) zirconium and chrome, 1.4%solids COATING PROCESS USED: Applied coating onto a glass rod using a plastic pipet. Ran glass rod across surface of the metal coupon. Dried coating for four minutes at 105 F in a conventional oven.
Results:	The two coatings behaved the same as seen in the photographs. The bubble appeared to be spherical with a near perpendicular coating-water interface. The coated cardboard was more effective than the coated stainless steel in repelling the water from the surface due to the uniform distribution of the coating. For the un-coated sample, the bubble flattened out and had a very small interface angle. See Figure 1 for to compare the two coatings and substrates.
Summary:	
Conclusion:	Both coatings demonstrated an ability to repel water from two types of substrates, stainless steel and cardboard. The sample with 7426 + 2A (white) zirconium and chrome, 1.4%solids was less effective in the coating application of the stainless steel.