CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2005

DateRun: 08/10/2005

Experimenters: Jason Marshall

ClientType: Metal

ProjectNumber: Project #1

Substrates: Carbon Fiber

PartType: Part

Contaminants: Mold Releases, Graphite

Cleaning Methods: Ultrasonics

Analytical Methods: Photography, Visual, Wipe

Purpose: To evaluate two products on supplied mold parts using ultrasonic cleaning.

Experimental Procedure: One product was diluted to 10% and 5% concentrations. Each solution was suspended in water heated to 120 in a Branson 200 ultrasonic 40 kHz tank. The solutions were degassed for five minutes.

Two presoiled unbaked molds were received coated with the Acheson Colloids Co Aquadag M mold release agent (CAS#: 7782-42-5, 84122-50-6, 70131-67-8, 1333-86-4, 107-21-1, 9002-84-0). One part was suspended in each solution and cleaned for 5 minutes using ultrasonic energy. Parts were then rinsed with tap water at 120 F for 15 seconds and dried using compressed air at room temperature for 30 seconds. Cleaned parts were then visually inspected and compared to each other. In addition, the parts were also compared to the client supplied cleaned parts. A second 5 minute cleaning cycle was performed. Photographs were taken after each cleaning.

Results: Both the Coil Bright and Micro 90 removed a majority of the graphite based mold release agent from the molds. After wiping the molds with a white Kimberly Clark Kimwipe, Coil Bright resulted in the least amount of soiling remaining. The Micro 90 was slightly better than the supplied clean part. All three clean parts had much less soil than the uncleaned, unbaked mold part.

Cleaner	Observation	Rank
Coil Bright	Least amount of soil	1
Micro 90	Slightly less than supplied part	2
Supplied Clean		3
Dirty Part		4

Summary:

Substrates:	Carbon Fiber				
Contaminants:	Mold Releases, Graphite				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Watson Technical Associates	Coil Bright	10	0.00	☑	
International Products Corporation	Micro 90 Conc.	5	0.00	☑	

Conclusion: The two cleaners Coil Bright and Micro 90 removed the graphite mold release agent from the molds.