



VACUUM CHAMBER PM TECHNIQUE TEL UNITY 2 DRM CHAMBER

OBJECTIVE:

TO EFFECTIVELY REMOVE POLYMER ON ESC AND OXIDE RESIDUES ON CHAMBER WALL IN A TIMELY MANNER WHILE MINIMIZING PARTICLE ISSUES AND IMPROVING TOOL PERFORMANCE

Vacuum Chamber:

TEL DRM ETCH TOOL WITH CERAMIC, ANODIZED ALUMINUM AND POLYAMIDE SURFACES

Vacuum Chamber Process Residue:

PROCESS INDUCED RESIDUE

Vacuum Chamber Components:

DRM CHAMBER, EXIT AND ENTRY PORTS, COMPONENTS

Old Procedure: Standard cleanroom polyester wipers and ScotchBrite® scrub pads

Solvent: DI water, IPA

Vacuum Chamber Products:

- (1) [HT4754](#) UltraSOLV® Sponge
- (8) [HT4790](#)-5 UltraSOLV® Wipers (40 Wipers)
- (2) [HT4540A](#)-10 or [HT4580D](#)-10 400 Grit UltraSOLV® ScrubPAD
- (2) [HT174813PD](#) ScrubTIP®
- (2) [HT173280](#) ScrubTIP®
- (2) [HT179060](#) ScrubTIP®
- (5-10) [HT1700](#) UltraSOLV® Swabs
- (15-20) [HT1732](#) UltraSOLV® Swabs
- (2) [HT1790](#)-5 UltraSOLV® Swabs

TEL UNITY 2 DRM CHAMBER PM PROCEDURE:

View "How to" instructional videos on <http://www.foamtecintlwcc.com/flash/>

Step 1: After the chamber has been vacuumed, clean the chamber with a lightly dampened [HT4754](#) UltraSOLV[®] Sponge in order to remove any loosely adhered residues

Step 2: Cover the ESC to prevent scratching. Lightly scrub the upper ceramic areas with the [HT4540A-10](#) UltraSOLV[®] ScrubPAD to remove residue. Occasionally wipe scrubbed areas with [HT4754](#) UltraSOLV[®] Sponge to remove loosened residue. The same sponge can also be used to "unload" the ScrubPAD for maximum effectiveness (See Fig 1, 2 & 3)



Fig 1: ScrubPAD loaded with deposition

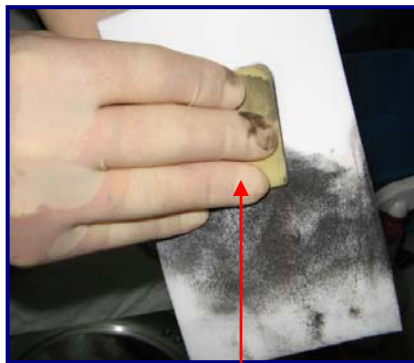


Fig 2: Pull ScrubPAD across UltraSOLV[®] Sponge

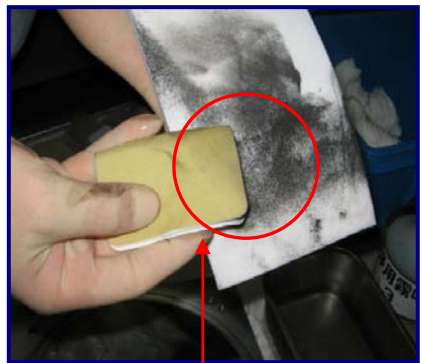


Fig 3: Unloaded ScrubPAD

Step 3: Unload UltraSOLV[®] as much as possible by placing it in container of DI water and **RINSE-OUT** thoroughly (See Fig 4 & 5)



Fig 4: Loaded-up UltraSOLV[®] Sponge

Fig 5: UltraSOLV[®] Sponge AFTER rinse



TEL UNITY 2 DRM CHAMBER PM PROCEDURE:

Step 4: Move the pedestal to process position to access areas below and around the ESC. Using a fresh UltraSOLV® ScrubPAD, lightly scrub the vertical walls of the pedestal to remove excess residue. As build-up is loosened, follow with Sponge wipe for maximum effectiveness. Remember to unload the UltraSOLV® ScrubPAD frequently to increase cleaning efficiency. Repeat above for remaining pedestal areas

NOTE: FOR PEDESTAL WALLS WITH EXTREMELY HARD RESIDUE, IT IS RECOMMENDED TO USE AN [HT4580D-10](#), 800 GRIT DIAMOND ULTRASOLV® SCRUBPAD. FOR HARD-TO-REACH AREAS AND SMALL VERTICAL SURFACES USE AN [HT174813PD](#) SCRUBTIP®. AN [HT179060](#) SCRUBTIP® SHOULD BE USED TO CLEAN VERTICAL SURFACES TO FINAL CLEAN THESE AREAS USE ENOUGH [HT1748](#) AND [HT1790](#) ULTRASOLV® SWABS UNTIL NO VISIBLE CONTAMINATION TRANSFERS OFF SURFACE TO THE SWAB

Step 5: Use an [HT173280](#) ScrubTIP® to clean areas where the bafflers are fastened to the chamber. [HT1732](#) UltraSOLV® Swabs should be used where residue has been deposited

Step 6: Vacuum the scrubbed areas to ensure final removal of loosened particles

Step 7: Finally, wipe down chamber with 25-40 [HT4790](#) UltraSOLV® Wipers and isopropyl alcohol

NOTE: IF THE BAFFLE AND CERAMIC RINGS NEED TO BE CLEANED IN PLACE, THE FOLLOWING PROCEDURE SHOULD BE USED

Step A: The ceramic focus ring can be cleaned with an [HT4536D-10](#) UltraSOLV® Diamond ScrubPAD. To final clean ceramic, wipe with [HT4790](#) UltraSOLV® Wipers until all residue is removed

Step B: The baffle is easily cleaned with [HT174813PD](#) ScrubTIP®s. The ScrubTIPs® are also effective at cleaning loose residues from the tight

TEL UNITY 2 DRM CHAMBER PM PROCEDURE:

spaces in the "fan sector" area. Remember to clean both sides of the baffle with a fresh UltraSOLV[®] ScrubPAD

TEL UNITY 2 DRM CHAMBER PM PROCEDURE (CONT'D):