



TD Seal HT  
Application Notes

1. The TD Seal HT sprays very similarly to automotive clear coat and the same type of HVLP equipment and spraying distance should be used.
2. OPTIONAL but recommended: thoroughly mix container of TD Seal HT (using electric paint mixer, or paint stick according to container volume and convenience, DO NOT SHAKE); draw 100 grams of the TD Seal HT material into a disposable cup and add 1.5 gm of MEKP 925H (or MEKP 9H) initiator; mix with paint stick or stirrer. Start a timer and note when mixture has notably thickened. This time will be the approximately pot life at your current environmental conditions.
3. Clean the machined tool surface to prepare for coating. Recommended machined surface finish is 125 micro-inches (RA 3.2 micro meters) or better. For sanding 180-320 grit or better is recommended. Surface should be cleaned with a substrate compatible solvent using a wipe-on, wipe-off with clean rag procedure followed by blowing off with dry, oil-free compressed air. Always clean the surface after any sanding.
4. After thoroughly mixing (using electric mixer, drill, or paint stick according to volume being prepared, DO NOT SHAKE) the TD Seal HT material and straining into HVLP spray cup add MEKP 925H (or MEKP 9H) initiator (1.5wt%) and stir in well with paint stick.
5. Use swab to fill visible surface porosity and wait 5 minutes prior to applying first full coat. If porosity does not fill in one application using a swab, then you will need to allow material in the pore to gel - pot life + 5 minutes (approximately 30 minutes) and reapply prior to first sprayed coat.
6. Spray tool surface with even coat approximately 0.002 to 0.004 inches thick (use mil gauge).
7. After 30 minutes to an hour inspect the tool surface for low areas, pinholes, or other flaws. Sand surface using a Dual Action (DA) sander with 500 grit paper to make the flaws visibly apparent. After noting locations of any surface flaws clean surface with dry oil-free air and a tack cloth.



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- 8.** Retouch flaws using method described in step 5 above and allow 5 minutes to flash.
- 9.** Repeat step 6 until .006-.03" total coating thickness is achieved. Approximately 6-7 layers total.
- 10.** Apply final 0.002 to 0.004 inch thick coating to achieve a total coating thickness of 0.006" to 0.03".
- 11.** Heat cure for 30 minutes at 140F.
- 12.** Inspect tool surface for entrapped dust or other debris, if present remove with a DA using 500 grit paper.
- 13.** Post cure at 250F\* for 2 hours or:
  - a. If you want to buff the tool to a higher finish or if there were flaws removed in step 12 above, sand surface in the following sequence: 500, 800, 1500, and 2000 grit before buffing using rubbing compound equivalent to 3M 36060, followed by 3M 06064 and finally 3M 06068. It's possible to start buffing after 800 grit, with an increase in rubbing compound consumption. If you have buffed the tool surface, wash with any substrate compatible general-purpose surfactant and solvent.
  - b. Post cure at 250F for 2 hours
- 14.** Seal and release surface just like any other composite tool at any time after cooling to room temperature following post-cure in accordance with sealer recommended procedure.
- 15.** Tooling Surface – TD Seal HT can be used as the tooling surface being much easier to sand, buff, and polish than gel coat. If the resin base of the part is an epoxy a standard mold release can be used. If the part is a vinyl ester or polyester base use 5 coats, or more, of Chemtrend MPP 2737 or MPP 2180 before the mold release to prevent hazing.



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- For vacuum integrity on AM printed tools it is recommended to repeat steps 6-9 until 10 layers have been applied for a total coating thickness of .03"

\*Heat lamps can be used to cure the material. It is important to evenly space the heat lamps to ensure consistency of cure. Lower temperature ovens can be used by extending the cure time.