

**SURFACE COATING**  
**METHOD:**  
**For Molds & Core Boxes**

Presented by: Hapco Inc.

# STEP 1 – RELEASING THE PATTERN

The first step in the surface coat method is to release the pattern, which in this case is Hapco's "h" logo. We will use 2-4 coats of the Grease-It Wax LT(liquid) or P(paste). Apply the wax using a 2" throw-away Brush. After applying the wax to the parting board and pattern, buff it off with a cloth or paper towel and repeat 2-4 more times depending on the surface finish of your pattern.



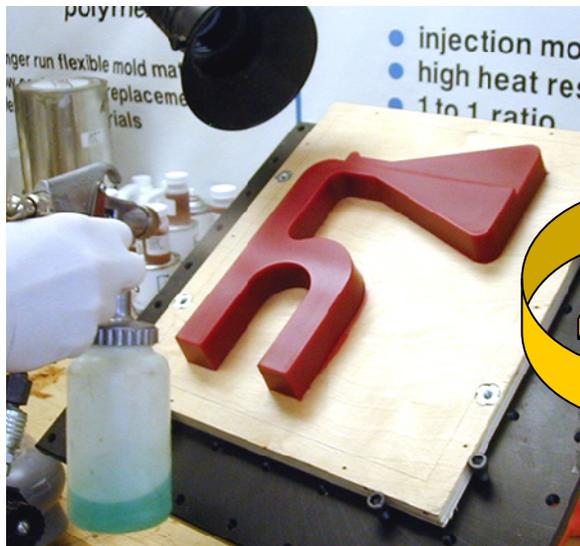
Brush on 2-4 coats of Grease-It Wax LT or P using a 2" throwaway brush.



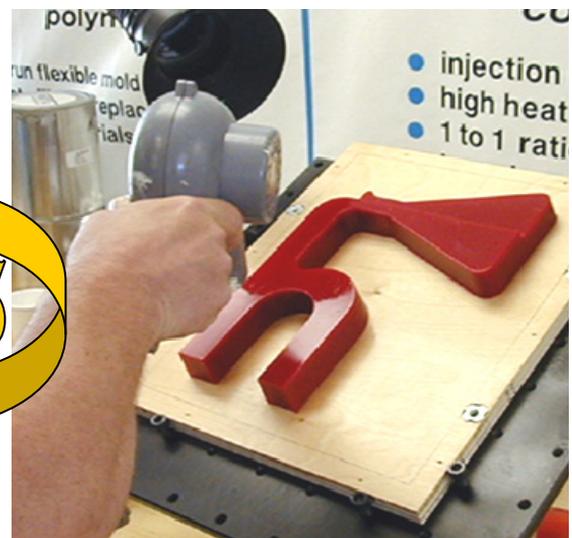
Buff thoroughly between each coat.



After buffing the pattern and board, you will need to apply 4-5 thin coats of Grease-It 2. It can be painted on; however, we recommend using it in a spray bottle under pressure and spraying it to ensure a smooth, even surface. To speed up the process



Spray light, even coats of Grease-It II.



Use a hair dryer to turn the liquid PVA into a thin film.



**It is a good idea to turn the pattern 1/4 turn between each coat.**

## STEP 2 – APPLYING THE SURFACE COAT

After the pattern and parting board are prepped and released, It is time to paint on the high performance surface coat material. In this case, we are working with the Hapcoat 3721LV with Hapcure 41. In order to mix the material inside the A side can, you must first cut the rims off with a can-opener.



Pour the B side container into the A side can and mix well using a metal spatula. Periodically scrape the sides and bottom of the container to ensure a thorough mix.



Paint the entire surface with a stiff bristled disposable brush. Follow the contour of sharp corners or lettering with the brush. Use a hair dryer to help break surface tension and eliminate bubbles. Allow to tack up to a “bubble gum” state. Touch gloved finger to the surface coat lightly and if does not stick to your finger, you are ready for a second coat. (Approximately 50% longer than gel time.)



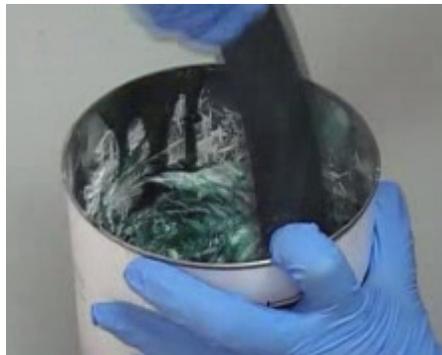
Attach the frame before applying the second coat so the back-up will not bleed through. Apply a second coat of surface coat and allow to ‘tack up’.

## STEP 3 - APPLYING THE BACK-UP

When the pattern and parting board are completely covered with the Hapcoat and it has passed its gel time, It is time to apply the back-up material. In this case, we are working with the Haprez 3744 with Hapcure 63. Haprez 3744 is a low cost, cloth laminating system that takes the guess work and hazard out of typical fiberglass lay-up procedures. The A side consists of a white epoxy resin that has been mixed in with chopped fiberglass strands about a half inch thick. When cured with one of our Hapcure catalysts, the result is a high performance, high strength composite material that can be used as a structural back-up.



In order to mix the material inside the A side can, you must again cut the rims off with a can-opener. Pour the Hapcure 63, which is tinted green, into the Haprez 3744 can and mix with a metal spatula until the entire batch is a uniform color.



Before or while the laminate is curing (approximately 30 mins.) Support ribs can be inserted for added support or as a way to clamp the two halves of a mold together. (see photo)



## STEP 4 - DE-MOLDING



After the proper amount of time has passed to allow the material to cure, it is time to de-mold and check our work. Note: De-mold time varies from resin to resin so follow Hapco's handling notes precisely to avoid de-molding too early and wasting hours of work.



Hapcoat 3721LV/41



Haprez 3744/63

The finished Hapcoat tool with a high strength , lightweight support shell.