Use epoxy to bond the faces of the grains together. We recommend 15 or 30-minute epoxy like “AeroTech’s 30-minute Epoxy” for this process. We recommend the use of disposable gloves during the bonding process.

1) DRY FIT THE GRAINS into the liner. If the fit is too tight, peel off the outer glassine layer in order to fit the grains into the liner.

2) APPLY EPOXY to one end of the 1st (aft chamfered) and 2nd grains. NOTE: The chamfered end of the 1st grain faces the nozzle and is not coated with epoxy.

3) STACK the 1st and 2nd grains together with the epoxied ends facing each other and the cores in visual alignment. NOTE: The chamfered end of the aft (1st) grain should be facing the table surface.

4) APPLY EPOXY to the top surface of the 2nd grain.

5) SLIDE THE LINER over the two epoxied grains.

6) INSTALL THE NOZZLE into the aft (chamfered) end of the liner.

7) STAND THE LINER ASSEMBLY on the nozzle. Ensure the nozzle flange is completely seated against the end of the liner.

8) APPLY EPOXY to both ends of the 3rd grain.
9) INSERT THE 3RD GRAIN into the liner until it is seated against the 2nd grain with the cores in visual alignment.

10) INSERT A WOODEN DOWEL into the core until the cores have been aligned. Repeat steps 8 and 9 until you reach the final grain.

11) APPLY EPOXY to one end of the final grain.

12) INSERT THE FINAL GRAIN with the epoxied end facing the aft (nozzle) end.

13) APPLY EPOXY to the exposed surface of the final grain.

14) ALLOW THE EPOXY on the exposed surface of the final grain to cure completely before proceeding to step 15.

15) PLACE THE GREASED FORWARD SEAL DIS O-RING into the groove of the forward seal disk.

16) LIGHTLY GREASE the inside of the forward end of the liner and install the forward seal disc assembly.

17) LET THE GRAIN ASSEMBLY CURE for about 12 hours.

18) After the faces of the grains have been bonded, assemble the remainder of the motor per the motor assembly instructions.

M650W GRAIN FACE BONDING INSTRUCTIONS P/N 20002