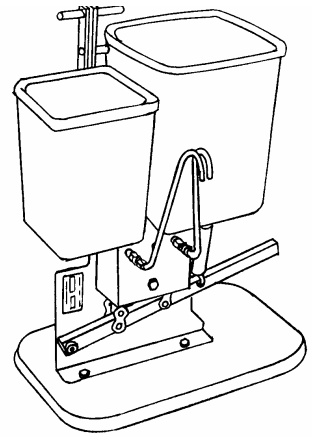




TOUCHSTONE™

EASY MIX DISPENSER



OPERATING INSTRUCTIONS

THE FOLLOWING INFORMATION WILL HELP YOU UNDERSTAND AND OPERATE YOUR DISPENSER.

PRIMING: The idea in priming is to get the air out of the system and the resin in. Fill the hardener reservoir first since it may be the more difficult to prime. Hold the hardener shipping can under the spout to prevent waste and mess. Operate the handle. 10 or 20 times should produce hardener at the outlet. If not, use a dowel to hold down the intake valve head inside the reservoir while slowly depressing the operating handle a few times. This will allow the escape of trapped air and the pump will begin to work. After the hardener side is working, fill the resin side. Two or three strokes will usually prime the resin side.

RATIO CHECK: It is a good idea to learn how to test the ratio and verify that the dispenser is delivering its intended ratio. Epoxy mixed at the wrong ratio may never develop its full strength. The resin and hardener can be compared by volume or weight. Find out from your resin supplier exactly what the limits are for this resin, in volume or weight. The ratio check is the responsibility of the user, check that it is right, in order to verify the factory setting. Note that the factory setting is ratio by Volume.

To find the Weight Ratio - weigh two empty cups separately, record the weight of each. Place one cup under the resin side and one under the hardener side outputs. Pump several shots of material into each cup and record the weight of each individually. Subtract the weight of the previously recorded empty cup weight. Then divide the weight of the hardener by the weight of the resin.

Example ratio by Weight:

| | Hardener | Resin | |
|----------|---------------|---------------|--|
| Full cup | 76.7g | 166.8g | |
| Cup wt. | <u>-15.5g</u> | <u>-26.4g</u> | |
| Net wt. | 61.2g | 140.4g | 61.2 / 140.4 = .436 or 43.6:100 by wt. |

If the ratio is off, the problem may be cavitation (incomplete pump filling). Hold the down stroke a couple of seconds to allow the pumps to fill. Or you may have a problem in the check valves. Make sure the valves have no blockage. Remove blockage or clean check valves in acetone solution.

RESIN CHECK: A good practical test of resin curing is to press a knifepoint against material left in the mixing cup. Hardness equals strength. If the ratio, mixing, and curing are proper, the material will be hard. If the material shows any sign of softness, the reason should be found or joints and coatings won't have full strength. There are a few exceptions; epoxies designed to be soft.

SPEED OF OPERATION: The dispenser is designed to be operated at any comfortable or reasonable speed, either full or part stroke. There is, however, a maximum speed above which the resin will not follow the pistons on the intake stroke. When this happens, metering can be inaccurate. Except for low temperatures, when the resin is thickened, the critical operating speed will probably not be exceeded. During your ratio check you should operate the dispenser as you intend to or at the highest speed you are likely to use. If the metering is inaccurate, either slow down or allow a 1/10 to 1/2 second wait at the bottom of the stroke to allow the resin to catch up to the piston. Warming the machine by placing a light bulb under the dispenser helps. Placing a cardboard or wooden box over the dispenser helps more. 90°F is a good temperature for some materials, do not exceed 140 F.

OPERATION: Maintain a minimum of one inch of material above the valve in the reservoir to prevent air from being drawn into the system. Don't leave your dispenser in the sun, the resin will discolor and thicken.

LUBRICATION: Use only resin, hardener, or silicone grease for lubrication with black rubber (EP) seals. Petroleum products will destroy them. With white Teflon seals, any grease is ok. We use common automotive grease. Teflon seals can be identified by a "T" after the seal size on the parts list or just remove a piston and look for a white or black ring inside of the bore. Oil the pivot and connecting links in the handle and pistons. The pistons are resin lubricated and should pass a few drops per hundred strokes.

CLEANING: Unhardened epoxy can be removed with one of the following:

Acetone, Methylene Chloride, MEK, lacquer thinners, or some chlorinated solvents.

Any general purpose household cleaner that contains ammonia.

Paint remover.

Soap and water (some hardeners) on loose parts only.

Acetone will not harm any of the seals. Hardened epoxy can be removed by soaking parts in Rim Mold Cleaner (available from us). Water will cause rusting so dry and oil steel parts quickly.

LEAKS: More than 1 or 2 drops of resin dripping from an exhaust tube may mean the valve is not sealing properly. If the resin to hardener ratio is correct, the decision to attempt a repair or not can be based on the convenience of the owner. First make sure that the operating handle is returning to a firm stop. A handle not completely against the stop may continue to expel resin a drop at a time. Sticky resin on the pistons may be slowing the return stroke or the pivots need oiling. If the drip persists, disassemble the outlet valve and clean it or replace it. Clean by wiping the ball and seat with cloth or paper. Tap the ball smartly against its seat with a hammer and brass punch to insure proper sealing. Do not scratch or mark the ball.

Material being drawn back into an exhaust tube on the down stroke is a sign of a leaking exhaust valve. Resin flowing back out of an intake valve, in the reservoir, on handle up stroke, is a sign of a leaking intake valve. Clean or replace it.

SEAL LEAKS: If the seals are passing more than a few drops per hundred strokes, they may need to be replaced. Minor leaks are a normal part of seal operations and do not affect the ratio.

TO CHANGE SEALS: Remove the pump body from the bracket or remove the operating handle and pull out the piston. The seal is in a recessed groove and must be lifted out. Do not scratch the recess behind the seal as it may not seal properly. Use an awl, or knife carefully to spear through the center and remove the seal. Two tools used together works better than one. Put in the new seal with your fingers or a dowel. Lubricate the piston with its proper lubricant, either hardener, resin, silicone grease or auto grease, before wiggling it back into place.