

## FIBREGLASS TANKS

**RESINS.** The normal resins are used for tanks that are to contain water, petrol, diesel, etc. If the tanks are to contain chemicals or acids then specially acid/chemically resistant resins have to be used; as also if the liquid in the tank is to be kept at above normal temperatures. In all such cases please inform us of the nature of the acid/chemical: percentage of dilute/concentration; and maximum temperature likely to be encountered and we will then recommend a suitable resin.

**DRINKING WATER AND FISH TANKS.** Avoidance of styrene taint. Styrene is only present in hardened resin in ratio 50 parts per million and this level is not toxic to humans, but the tolerance of fish is less than that of humans and anything like this level is toxic to fish. Even with humans where there is a styrene presence, the flavour of any liquid or food is made unpleasant although it is not toxic. Therefore the following precautions should be taken. The work should be carried out in a good ambient temp, say 70F, adequate hardeners used so that resins harden fast; as this reduces the curing time. The finished laminates should be allowed a good seven weeks cure time in a warm temp. (70F or so) and at the end of this period should be flushed with hot water, or better still, steam. This causes any styrene still latent in the laminate to be precipitated forthwith. Another precaution that should be taken where, as with fabrication in female moulds, the FINAL gelcoat is to form the inside of the tank, wax filled final gelcoat resin should be used, which hardens the inside of the tank, wax filled final gelcoat resin should be used, which hardens very immediately non-thumb-print tacky. If construction is being made on a male mould then the INITIAL gelcoat resin is used, this forming the inside surface of the tank. The ordinary laminating resins are used for the Lay Up. Precautions are particularly important where the tanks/ponds/containers are to hold drinking water or food or live fish or animals. It is also more important to observe these precautions with drinking water tanks that are to be fitted into boats or caravans as the water in these is likely to remain unchanged for long periods, than is the case with domestic water tanks where the water is changed several times a day.

**SHEATHING OF TANKS.** This is frequently done where a steel tank is leaking. The sheathing is usually carried out on the inside of the tank because the steel shell provides plenty of structural support all round and thus a comparatively thin laminate can be used. Proceed as for Boat Sheathing described on page ---- onwards and Table 'B' at the end of this literature. Use the wax filled resin for the final gelcoat. 2

**FABRICATING TANKS.** The General Laminating Methods described in our literature are used for making moulds and tanks. In deciding what thickness of laminate to use be guided by our Table "A"; allow for the weight of the contents; water and most liquids average 10lbs to the gallon. Therefore it is usual to make the bottom of the tank thicker than the sides which can be made progressively thinner the higher one goes upwards. The other point to take into consideration is the length of the unsupported span over the area of the bottom of the tank. With square and oblong tanks extra laminations of mat are applied at all corners, thus providing an angle iron type stiffener. With all types of tanks, including cylindrical, paper rope former can be laminated over the exterior to stiffen and reinforce. With cylindrical tanks more laminations are used over the bottom and progressively less as one works up to the top of the tank. Where as with fish tanks, it is desired to fit a sheet of plate glass over one side, the usual method is to make a slot when making the laminate, into which the plate glass can be fitted with a BOSTIK or similar packing to make the fitting water tight. This is done after the laminate has hardened.

**FITTINGS.** Inlet, outlet, breather pipes etc. It is usual to braze or weld these to small steel plates spanning 6" or so round the fitting. Small holes 1" - 1½" diam. Are cut in the steel plate. Cut the outlet hole through the laminate and offer the steelplate/fitting assembly to the laminate. Bed the plate to the laminate with resin (often thickened resin or initial gelcoat is used to take up small gaps). When hard mat can be laminated over the plates and this mat adheres to the laminate underlying the plates through the 1" - 1½" holes.