

# TRIDENT FOAMS LIMITED



✂ TRIPOR ✂ TRICAST ✂ TANCAST ✂ AUTOFROTH ✂ AUTOPOR ✂ MHD ✂ FLORAL FOAMS 25/09/07

## TANCAST AND TRICAST IN MODEL MAKING

Both Tancast and Tricast are rigid polyurethane foam products. Their cellular nature allows them to be both strong and light in weight, and their polyurethane polymer matrix ensures that they are resistant to a wide variety of solvents. These combined properties makes Tancast and Tricast ideal candidates for most model making applications.

The Tancast foam products are available in a density range of 128 – 256Kg/M<sup>3</sup>, and are supplied in ‘rough cast’ block, Tancast 8, the 128Kg/M<sup>3</sup> density material, is usually available ex stock, other densities may have to be manufactured to order. Generally sized at 2M x 1M x 150mm nominal, sizes of 1M x 1M x 150mm nominal and 1M x 500mm x 150mm nominal are also available.

The Tricast foam products are lower density and range from 32 - 96Kg/M<sup>3</sup>, these products are cast in 2.44M x 1.22M the available height being dependant on the density of the Tricast type. Tricast is normally provided in sheets or shapes that have been cut from cast blocks, the minimum thickness is 10mm the maximum is dependant on the Tricast type.

All Tancast and Tricast products may be machined or hand carved, as a general rule the lower the density the lower the price, also the lower the density the easier it is to shape. All woodworking hand tools are suitable for shaping the foam materials, engineering applications usually require a higher density product so that it may be clamped in a vice or lathe chuck.

For thick sections Tancast and Tricast products may be bonded to either themselves or a wooden armature. As Tancast and Tricast are resistant to most solvents there are a wide range of adhesives available, contact adhesives, polyester resin and epoxy resin are among the most popular. Tancast and Tricast will not bond using solvent weld techniques. Water based products may be used if the substrate that the Tancast or Tricast is to be bonded to is moisture absorbent, such as paper or wood. It should be noted that the bond or joint line may affect the surface of your model, a hard adhesive such as epoxy will be more likely to leave a raised area particularly when hand finishing, whereas a soft adhesive such as most contact types may leave a ‘rubbery’ deposit on machine tools. One method of combating these anomalies is to ‘groove’ or ‘gouge’ the bond line back from the required finished surface, this can then be filled and flushed back to the finished surface.

As Tancast and Tricast are of a cellular nature, the surface will be made up of many tiny cells locked together in the polymer matrix. To improve this surface it must be filled. Body fillers, and most water based fillers (although thick sections will take time to dry), and dental plaster may be used. It may be preferred that a cellulose, acrylic or ‘twin pack’ high build primer is used for speed of application, these of course may be sprayed or hand applied. Once the surface preparation is satisfactorily completed the resultant model may painted and finished as required.