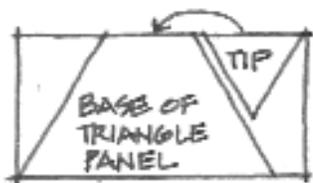


exterior panels

A Natural Spaces dome uses 3/4" exterior grade plywood for the exterior triangular sheathing panels. At a time when other dome companies were figuring out how to use thinner sheathing, we were looking at the quality of our system. 3/4" plywood allows us to "free-span" each triangle without requiring expensive and time-consuming bracing between the struts.



This is how we get a full triangle out of each sheet of plywood

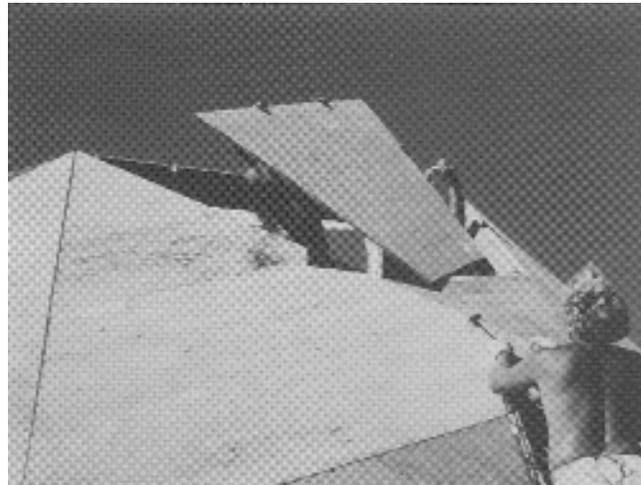
Our triangles are cut from 4'x8' sheets that have a tongue and groove edge on each long side. It's a plywood called underlayment grade, which is readily available from any lumber yard.

When the two pieces of the triangle panel come together, there is a tongue and groove edge along the joint line. This creates a very stiff joint that does not require additional bracing behind it, except in very extreme structural loading situations.

We then use the rest of the plywood sheet to make our gusset plates for our super-wal strut, thereby almost completely eliminating any scrap.

Other dome companies use 1/2" plywood or 1/2" chipboard. In order to use 1/2" plywood dome triangles, you have to add 2x4 braces at 16" O.C. to support the roof load. All of these braces create additional areas for heat loss to occur directly thru the framing. They also create dead air spaces and make it almost impossible to ventilate the wall-roof cavity. In other hub and strut dome systems this additional bracing adds tremendously to the time involved in putting up the frame, not to mention the additional costs which can be significant.

Chipboard or waferboard also has expansion problems with moisture present.



insulation

Fiberglass batt insulation, we have found, is the safest and most economical type for our domes.

Some dome companies claim they can get an R-35 using 2x4 construction. Building codes allow only a maximum r-value of 6.25/inch for figuring foam-insulating values. Multiply that times 3 1/2" thick struts and you get an R-22.

Other companies also say that there are vastly diminishing returns beyond a certain R-value. Currently, the minimum ceiling R-value for the northern tier of the U.S. is R-38. 25 years ago these same "authorities" were suggesting an R-19 ceiling. How will it change in the future? Why build a dome home with 2/4's or 2x6's that starts out 25 years behind the times?!

You actually pay substantially less for a Natural Space dome with an R-44 value than you do for the competition's dome with an R-30!

We offer industrial type dense batts in various thicknesses of 6", 8" and 9 1/2". We put in 2 layers creating 12", 16" and 19". We also offer widths of 60", 72" and 96". This allows for one-piece triangles with no splices and quicker installation.

Other insulation types are:

" Sprayed Urethane Foam- does not require condensation ventilation if done properly. Because of high installed cost, this type is usually used for larger, commercial domes.

" Rigid Insulation Board- this type will work only if provisions are made for at least 1 1/2" of ventilation space between the outside sheathing and the insulation. Its R-value is twice that of fiberglass but its cost is four times greater

Cellulose, Icynene™, lamb's wool, natural cotton are some of the other insulations currently available. We can help you figure out what's best for you.

