

QUESTIONS & ANSWERS

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St., Amesbury, MA 01913] supplies the glazing frames and accessories to local distributors who make up the window units.

Suntan in Sunspaces

Q: Does any greenhouse manufacturer make a unit with glazing that transmits the tanning rays of the sun? If not, what materials would one substitute for standard glazing?—*Frank L. Barham, Trenton, N.J.*

A: We know of no sunspace systems that are intentionally glazed with a material that passes ultraviolet rays. But Cyro Industries [155 Tice Blvd., Woodcliff Lake, NJ 07675] makes a special acrylic sheet designated as OP-4 for the suntanning industry that does just what you require. Except for a possibly higher cost, there is no reason this material couldn't be used in sunspaces meant for suntanning, according to Cyro technologist Peter Colburn. The ultraviolet band of solar radiation tans

your skin. The range between .285 and .380 microns triggers the release of melanin, and the next band, .315-.380 microns, continues the tanning process, Colburn says. Glass and most common sunspace glazings transmit only from 5 to 10 percent of the tanning range (but admit enough UV to fade fabrics). Low-coated glass even blocks most of these rays.

Solar Gains and Losses

Q: I am designing a passive home and am considering using Heat Mirror instead of clear double glass. Am I correct in assuming that I can increase the glazing area in relationship to the mass to compensate for Heat Mirror's lower transmittance?—*Bob Hutchinson, Kingsville, Ontario*

A: Not according to Timothy Johnson, passive solar specialist at MIT. He advises just the opposite: Reduce the glazing aperture. The reasoning goes something like this: The

transmittance of clear, double glass is around .89, and that of Heat Mirror 88 is .69—22 percent less. So you get less solar gain than with clear double glass. But the insulating value of Heat Mirror 88 (1 ¼-inch thickness) is R-3.84, 52 percent better than the R-2 of double glass. In going from clear double glass to Heat Mirror 88, the increased insulation value outweighs the decreased transmittance. You get less heat in, but lose still less to the outside. To prevent overheating you need to reduce the aperture to about 75 percent of that for double glass, suggests Johnson.

Address your questions about articles and issues covered in *Progressive Builder* to Q&A, *Progressive Builder*., P.O. Box 470, Peterborough, N.H. 03458-0470. If you want a reply, send a self-addressed stamped envelope and a member of our staff will respond. Questions and answers of general interest will be printed in the magazine.