

# Q+A

YOUR QUESTIONS—PRO ANSWERS

## Melted vinyl siding

**Q** The north side of my vinyl-sided house is approximately 20 yd. from a neighboring house that has a second-story window. The siding on my house is warped and has a melted appearance. Could the damage have been caused by the sun reflecting off windows on the neighboring house? If so, what can be done to prevent this damage?

—DANIEL PECK  
asked at Green Building Advisor

**A** Senior editor Martin Holladay responds: Unfortunately, the problem you describe is fairly common. Reports are increasing about vinyl siding that has melted due to sunlight reflected from nearby windows. This melted-siding problem makes vinyl manufacturers nervous—so nervous that they rarely discuss the topic.

There are two factors causing this problem: high-temperature reflections and siding with a low melting point. According to a statement released by the Vinyl Siding Institute, “The typical heat-distortion [melting] temperature of vinyl siding is approximately 160°F to 165°F. When temperatures reach these levels, the siding could distort.” Because sunlight reflected

from windows can, under the right circumstances, raise the temperature of siding to 219°F, vinyl’s low melting point makes it vulnerable to damage.

Why now? One reason for the apparent increase in cases of melted siding may be the growing use of high-performance glazing on windows. Glass with a low solar heat-gain coefficient has a high solar reflectance.

“What we are getting is very, very good windows,” says Jim Petersen, director of R&D at Pulte Homes. “Now the energy that is not getting in the house has to go somewhere, and it’s being reflected.”

Unfortunately, you and other homeowners have little recourse because siding warranties won’t cover the damage. Dave Johnston, technical director for the Vinyl Siding Institute, says that the phenomenon is rare. But changes to the warranties of all major manufacturers seem to indicate otherwise. CertainTeed’s vinyl-siding warranty, for example, “does not apply to ... vinyl-siding products which have been distorted or melted due to an external heat source (including, but not limited to, a barbecue grill, fire, or reflection from windows, doors, or other objects).”



**Unforeseen siding effects.** As modern windows get better at reflecting the sun’s energy, homeowners with vinyl siding are paying the price. The melted siding shown here was caused by sunlight reflected from windows on the house next door. The diagonal warping pattern shows the sun’s path as it travels across the sky.

Even when manufacturers or builders are willing to step up to the plate, solutions remain elusive. According to Tim Singel, a marketing representative at Guardian Glass, there is no simple cure for the problem. “The issue you are describing is fairly complex, having to do with geometry and building materials as well as orientation to sun, wind, and shading,” Singel says. “There have been

circumstances over the years where glass and siding have both been replaced to no avail.” While some builders may decide to switch to fiber-cement siding or brick veneer, the substitution is costly. The Vinyl Siding Institute suggests three possible solutions: planting a large bush or tree to block the reflection, installing an awning to shade the window, or installing a window screen.