

## Are Plastics at Risk?

Once we discovered that one product—Strike Hold—had an adverse effect on our test radio's plastic cover, we decided to test all of the products on a range of plastics, some of which are used in electrical assemblies and some not. You never know, though, what might be used for some seemingly unimportant, but ultimately critical, component.

Our test specimens included a plastic cable tie, a crimp terminal, heat-shrink tubing, insulated wire, white flexible hobbyists' styrene, black rigid polystyrene, Styrofoam, clear acrylic, polyethylene from a parts-storage box, a rubber band, and polypropylene storage containers.

Happily, apart from the rubber band, the only obvious casualties were in the Strike Hold test pail, where the Styrofoam nugget dissolved the instant the product touched it and the other polystyrene samples were visibly softened. The manufacturer sent us a sample of Strike Hold II, which has a “milder” solvent. While it



*Solvents like some of the electrical sprays we tested can damage plastics, rubber, and adhesives. It's always a good idea to test a product on a small area before applying it to the whole project.*

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didn't dissolve the Styrofoam on contact, the nugget did shrink over time to half its original size. The WD-40 seemed to have softened, though not melted, the white styrene. Several products appeared to affect the rubber band to some degree, most obviously LPS-1, which caused it to swell to twice its normal volume.

The conclusion we take from this test is: Beware! Some plastics, rubbers, and probably many adhesives, are susceptible to solvents. Before using a product, test it on a small section of your electrical or electronic target.