**Forming new fabrics**

Imagine nonwoven fabrics that can stop a 2.5-ton vehicle moving at 60 miles per hour, insulate a house, cover a floor, make a chair comfortable to sit in.

These fabrics already exist. Many of them owe their usefulness to the bonding agent, a Durez® phenolic resin.

Brake linings in normal city traffic heat up to 200-400°F. Even a few normal stops at 40 mph raise the temperature to 700°F. The partnership of asbestos and Durez resin in the lining takes this ovenlike heat without deteriorating. The thermosetting resin also helps the lining wear longer and gives it better frictional properties.

**More ideas.** With a dusting of phenolic resin and a quick bake, jute fibers become a mat that can be molded to fit every contour of a car floor, eliminating hand tailoring. Cotton fibers bonded with resin are finding a market as low-cost resilient upholstery padding. Mixed with fibrous glass and heat-cured, another Durez resin helps produce a stiff, springy mat that won’t sag when used in rolls or batts as thermal insulation.

**Bountiful board**

Potential of these thermosetting resins seems endless. Another interesting use is in a kraft board that can be formed easily and quickly into permanent shapes like those you see here.

Resin is dispersed in kraft fiber, yielding board of various thicknesses from .060 in. to .150 in. and ranging up to 55 x 72 in. in size.

In use, the board is hot-pressed into the desired shape in 5 to 15 seconds, using pressure of only 300 to 500 psi. Its surface is a good base for baked-on enamel and for vinyl and other coverings, keeps its rigidity even after 24 hours in oil, and won’t stain or bleed through fabric coverings.

**Rubber + resin → !!!**

Mix some Durez phenolic resin with nitrile rubber, cure the resulting compound for 15 minutes at 310°F—and notice how property curves take on a new look.

In typical formulations, tensile strength increases in direct proportion to the amount of resin used. Hardness and abrasion resistance both climb.

Use 100 parts or more of resin, and you can forget about sulfur and accelerators. You don’t need them; the resin cures the rubber, with or without filler, and often in record time. Think of the advantage a no-sulfur compound gives you in gaskets or other molded pieces that must coexist with a lead-oxide paint or must remain neutral in an electrical environment.

You can get Durez resins for modifying the properties of nitrile rubber or SBR, natural rubber or neoprene, and for making solvent-type adhesives. To find out more about them, write us.

Get this idea-book on how, where to use phenolic resins for more durable products. Tells how 12 different industries employ Durez resins to add strength, hardness, heat and moisture resistance at low cost. Write today for a copy—free.