

# the world of plastics

News you can use

## Plastics industry takes share of I-R awards

Industrial Research magazine has recognized the plastics' industry contribution to technological advancement in its list of product achievements to receive I-R 100 awards.

Awards are made annually to the year's most significant technical products on the basis of their "importance, uniqueness and usefulness."

Winning developments associated with the plastics industry include a recyclable, polymeric soft drink container, a group of low-molecular-weight liquid polymers and a glass fiber-reinforced molding sheet.

Receiving awards were:

**Monsanto Commercial Products Co.** for its Cycle-Safe carbonated beverage container made of acrylonitrile and styrene. It's the first commercially available soft drink container and the first of its type to be easily recycled to original use. The polymer is compatible with emerging solid-waste systems. Molecular orientation allows retention of strength in the thin-wall container.

**W. R. Grace & Co.**, for its Hypol FHP one-component foamable hydrophilic polyisocyanate that can be easily foamed in place by mixing large amounts of water in non-critical volumes, rather than the small, precise amounts used to trigger a conventional urethane reaction. Because of the large volume of water present, Hypol accepts a wide range of functional additives, producing a variety of end-product characteristics.

**PPG Industries** for its XMC fiber glass reinforced sheet that can be molded into such structural auto components as door beams, transmission supports and bumper back-ups. Pound for pound the high-strength molding compound is up to four times stronger than steel at about one-half the weight.

**Ferro Corp.** for its P-111 process for manufacturing continuous Type E glass fibers that adapt the advantages of electric direct-melt technology. The



Wide variety of foams can be made from single grade of W. R. Grace's Hypol FHP foamable urethane polymer.

process can be used economically by both high and low-volume producers, reduces fuel waste while increasing production per unit of heat.

**Carborundum Co.** for its Boron carbide fiber composites that are strong enough for use as a structural material in high-temperature gas turbine engines. The composite is made of boron carbide filament tape impregnated with a thermosetting resin. The plastic is converted to a carbon matrix by heating at elevated temperatures.

**Dow Chemical USA, Texas Division** for its experimental epoxy curing agent XD-7080.00 that allows cure of water-based epoxy paints.

**Branson Sonic Power Co.** for its vibration welder, Series 2000 for joining thermoplastics by means of frictional heat generated by the vibration of contacting parts. The welder, particularly suited to large parts, provides an economical method for welding modern plastics.

Award-winning container developed by Monsanto Commercial Products Co. is made of biaxially oriented polymeric acrylonitrile and styrene.

