

# Wood-Based Polymer

This plastic is eco-stealthy: Users can't tell it's a biopolymer



**Existing Use:** Motorola RAZR cases are currently made with this polymer.

## DETAILS

As consumers increasingly demand that manufacturers produce eco-friendly products and packaging, manufacturers have had to seek out sustainable materials that work within existing manufacturing constraints. The plastic shown, Naturacell™, is made from renewable cellulose. It boasts visible qualities, such as superior clarity and high surface gloss, and has high impact strength and strong chemical resistance. But not as obviously — and fairly unique among plastics — it feels warm to the touch.

The plastic is made by processing and purifying wood pulp to create polymer pellets. Any waste created during the process is captured and reused. These pellets can then be processed using the same sheet/profile extrusion- and injection-molding machinery that is used with conventional polymer pellets. The material also accommodates secondary fabrication processes including solvent polishing, cutting, cementing, drilling, vacuum forming, metallizing and decorating. The final product is virtually indistinguishable to consumers from anything made with petroleum-based plastics, yet is highly marketable in greentailing.

Any industry's products can use Naturacell™ instead of conventional petroleum-based polymers. Currently this biopolymer is used to make jewelry, lighting fixtures, mobile phone accessories and handles on tools like screwdrivers, which take advantage of its impact resistance and warm, tactile quality. Naturacell™ is priced slightly higher than conventional polymers, but is less expensive than many biopolymers.

See the database (<http://technology.inventables.com>) for more details.



**Existing Use:** Claire's Stores take advantage of this polymer's superior clarity and surface gloss when making jewelry for clients.



**Existing Use:** Extruded phthalate-free plastic is used to make lighting fixtures for Day-Brite/Capri/Omega (a Philips group brand).