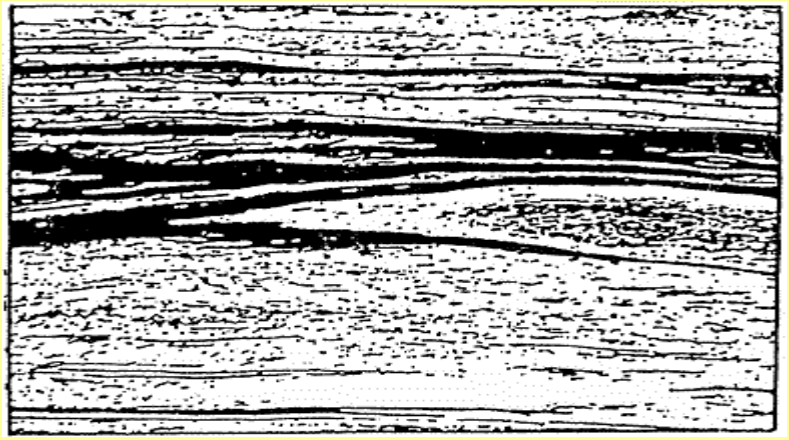
1. Laminated containers using QUORAL® BR technology

The Barrier Plastics trademark QUORAL® covers a whole range of different barrier resins. Some of these are used as barrier layers in a coextrusion process, while others are formed as monostructures by injection or blow molding. QUORAL® BR is one resin in this range.

BR is the abbreviation for "barrier resin" which describes the concept of a barrier material produced by the single-hopper processing technique. Numerous overlapping platelets – or rather layers – of polyamide are distributed over the entire wall of the container by means of special extruder tooling and careful monitoring of the extrusion process. These overlapping polyamide layers reduce the permeability of the container wall by extending the path taken by any molecule migrating (permeating) through it.



Section through a container wall with a laminated barrier layer

QUORAL® BR consists of a two-component mixture: the actual barrier resin itself (polyamide or ethylene vinyl alcohol) and a suitable coupling agent. QUORAL® BR can be further blended with the polyolefin HDPE (high density polyethylene) and then processed in conventional extrusion blow molding systems. As it is a mixture of granular materials, the concentration of QUORAL® BR can be varied and its barrier properties thus adjusted to meet specific requirements. The finished container retains the excellent physical properties of the polyolefin matrix.
With favorable processing conditions and the appropriate concentration of QUORAL® BR its barrier properties can be up to 100 times more effective than those of nonpolar hydrocarbons such as pure HDPE.

Barrier Plastics manufactures laminated containers under the brand name BARITAINER®.

2. Fields of application for BARITAINER® packaging

BARITAINER® packaging can be used for products containing solvents, such as household and industrial chemicals, cleaning agents and adhesives, as well as for flavors and fragrances in the food and cosmetics industries, additives in the automotive sector, photochemicals and agrochemicals, etc. BARITAINER® packaging is therefore an attractive and also environmentally sound alternative to glass and metal containers. It can also replace coextruded or fluorinated containers and other materials with single-layer barriers such as Barex, polyester and PVC. BARITAINER® products are lightweight and handy in use and can be manufactured in a variety of complex shapes.

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3. Environment/end-of-life disposal

QUORAL® BR is a safe, nontoxic and noncorrosive polymer. This means that it is not only safe for the user but it also does not cause any pollution when it is manufactured or when BARITAINER® packaging is finally disposed of. QUORAL® BR is compatible with food products.

4. Properties and special features of BARITAINER® packaging

- Highly effective barrier effect
- Can be completely emptied
- Rugged and impact resistant
- UN certification for hazardous substances
- Resistant to chemicals and acids (see chemical compatibility chart)
- Not hazardous to health (compatible with food products)
- Corrosion resistant
- Resistant to high and low temperatures
- Stackable – suitable for palletizing
- Blow-molded handle in top of container
- Grip recess in bottom of container
- Ideal surface for brand advertising: silk-screen printing or labeling options

5. Identification

All our BARITAINER® products are marked with the Baritainer® logo embossed in the blow mold (see photo at right) in addition to other identification markings such as the UN No., part code, manufacturer's designation and the time (production date). The marking also serves as our seal of quality for this special container.

Only containers marked in this way are genuine BARITAINER® products from Barrier Plastics located in the US.

6. Developments

QUORAL BR® technology can be used for all Barrier Plastics standard containers.

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