

Nanoclays and Nanocomposites

Example:

● Used in packaging, like beer bottles, as a barrier, allowing for thinner material, with a subsequently lighter weight, and greater shelf-life.

Impact: \$480B packaging and \$300B plastics industries. Reduced weight means transportation costs decline. Changing from glass and aluminum - think beer and soda bottles - to plastic reduces production costs. Nanoclays help to hold the pressure and carbonation inside the bottle, increasing shelf life. It is estimated that beer in these containers will gain an extra 60 days (from 120 to 180) of shelf life, reducing spoilage, and decreasing overall costs to the end user. Nanocor is one company producing nanoclays and nanocomposites, for a variety of uses, including flame retardants, barrier film (as in juice containers), and bottle barrier (as shown above). "They are not only used to improve existing products, but also are extending their reach into areas formerly dominated by metal, glass and wood." See [Nanocor](#)

Nanocomposite Coatings

Example:

- Wilson Double Core tennis balls have a nanocomposite coating that keeps it bouncing twice as long as an old-style ball. Made by [InMat LLC](#), this nanocomposite is a mix of butyl rubber, intermingled with nanoclay particles, giving the ball substantially longer shelf life.

● **Impact:** Tires are the next logical extension of this technology: it would make them lighter (better millage) and last longer (better cost performance). See [Nanocomposites in tennis balls lock in air, build better bounce](#)