

## What is the Product?

Wilson Double Core Tennis Balls



## What is it used for?

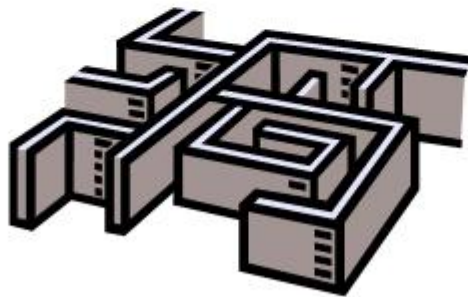
- You can play tennis longer with the same ball because of its improved ability to retain air.
- The balls maintain a usable ball pressure above 11 psi\*, which is twice as long as a normal ball.

## What's nano about it?

- This technology utilizes a nano-coating called Air D-Fence from The Innovative Materials Company (In Mat®).
- The nano-coating is a second core on the inside of the tennis ball that is sprayed or rolled onto the rubber. It is made up of overlapping exfoliated\* clay plates approximately 1 nanometer thick and 0.1 to 10 micrometers in length.
- The coating is 10-30  $\mu\text{m}$  thick after drying and does not change the appearance of the material that is coated.

## How does it work?

- Exfoliated clay is added to a liquid polymer that lines the inside of the ball.
- The filler plates are suspended in a mesoscopic\* state. The clay plates are parallel to one another but overlap.
- The coating is kept flexible and the space between the plates is maintained through proprietary\* methods.
- Since the plates are overlapping, the air inside the ball must travel through a maze of clay sheets to escape the ball bladder. Therefore the air stays inside the ball longer.



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## Does it have other applications?

Yes.

- The coating can be used in other sports equipment like soccer, rugby and basketballs.
- It can be used in tires for the automotive industry to increase the tire lifetime, reduce manufacturing costs, and reduce tire weight.
- The coating can also be used in safety chemical gloves to protect your hands from dangerous chemicals.
- It is also being used in food packaging as well.

## Price?

The price is around \$1.00 per ball.

## Glossary:

- **Psi** (abbr) - pounds per square inch. It is a rating used to describe the air pressure inside a ball or tire
- **Exfoliated** (v) - separated into flakes, scales, or layers
- **Mesoscopic** (adj) - when all the localized filler particles are aligned or parallel
- **Proprietary** (adj) - Information that is privately owned and is kept secret and patented\* to prevent others from reproducing the results for profit.
- **Patent** (n) - A grant made by a government that confers upon the creator of an invention the sole right to make, use, and sell that invention for a set period of time.

## This information was obtained from:

- The Innovative Materials Company (In Mat®).
- Definitions were obtained from Dictionary.com

