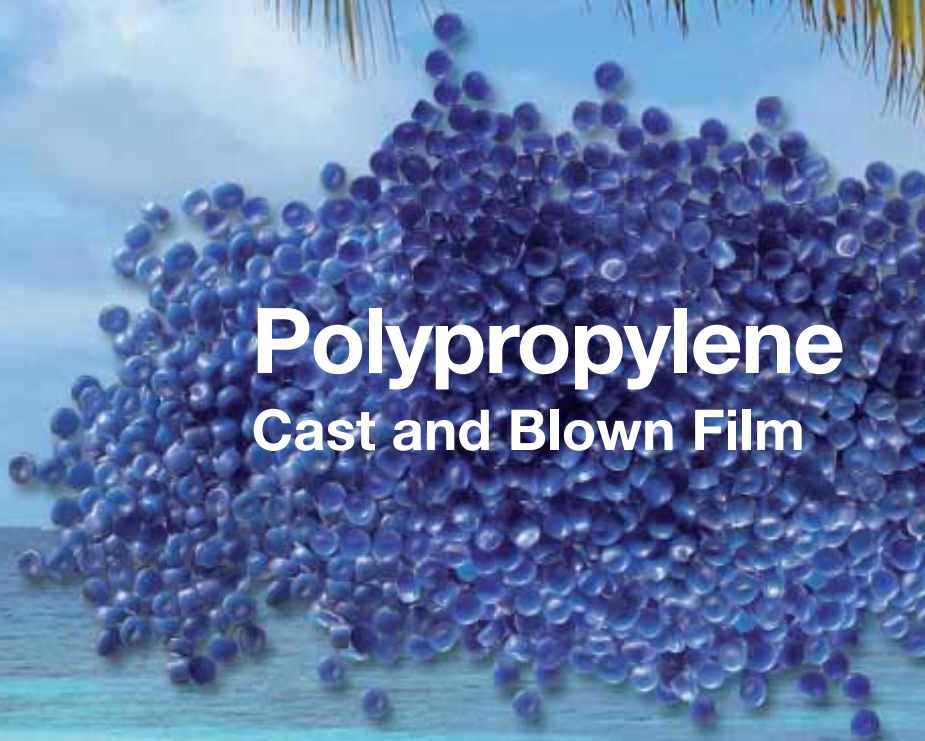


At home in your world

# Polypropylene

Cast and Blown Film



**TOTAL PETROCHEMICALS**



**TOTAL**

# Solutions for retortable packaging

Polypropylene is appreciated both for the mechanical properties it gives to the film and for its excellent temperature stability. These properties are particularly advantageous for instance in the manufacture of retortable or microwavable package (stand up pouches).

Polypropylene block copolymers **PPC 2660** or **PPC 3660** feature excellent mechanical properties as well as very high perforation resistance. In addition, both grades provide very high seal strength, which guaranties the seal integrity over the package shelf life. Films produced with **PPC 2660** or **PPC 3660** display high impact properties and low gels level, which make them particularly suitable for lamination.

**PPC 2660** has a very high viscosity. This makes it suitable for blown film. Like **PPC 3660** it is a gel free material with good processability offering outstanding bubble stability.

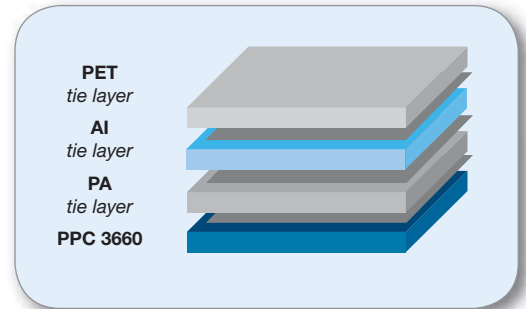


Figure 5: multilayer structure of a retort pouch with PPC 3660 as the seal resin

# Blown Film for transparent packaging

In blown film Total Petrochemicals recommends to use **PPR 3221** in the outer layer of multilayer films (*cf*r fig 6). Films with **PPC 2660** or Total Petrochemicals **Lumicene®** polyethylene as core layer and **PPR 3221** as skin layer offer remarkable gloss and transparency. These films are particularly adapted for the manufacture of bread bags or textile packaging.

■ PPR 3221 / PPC 2660 / PPR 3221  
■ PPR 3221 / M 2310 EP / PPR 3221

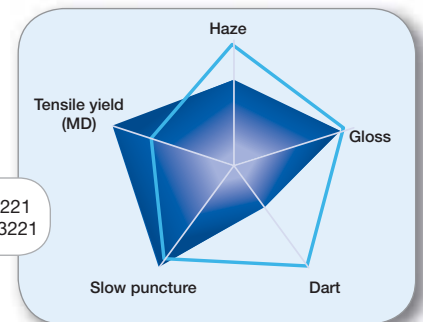


Figure 6: 40µm three layers coextruded blown films

# High stiffness film

**PPH 4026** has been especially developed for the production of very stiff film. Processed on cast film lines, **PPH 4026** allows significant downgauging. Its specific design enables to maintain higher stiffness at elevated temperature compared to conventional resins.

**PPH 4070** has been specially designed to combine stiffness and metallization. Both product are beneficial for hot filling or the retort process.

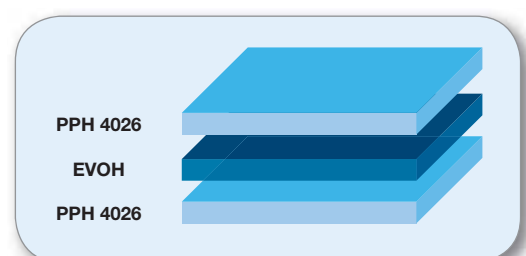


Figure 7: multilayer barrier for retortable and microwavable packaging