Polypropylene (PP)

- It is stiffer and more resistant to heat
- Its strength quality is somewhere between LDPE and HDPE.
- PP isn't quite recyclable and could also cause asthma and hormone disruption in humans.
- Polypropylene is **made from the polymerization of propylene gas in the presence of a catalyst system**, usually Ziegler-Natta or metallocene catalyst. ...

Uses

- PP is widely used for hot food containers.
- PP is used in thermal vests, and car parts, PP is also included in the disposable diaper and sanitary pad liners.

Recycling of PP

There are five steps in PP recycling, namely, collecting, sorting, cleaning, reprocessing, and producing new products.

Collecting:The polypropylene material must be separated from other types of plastic polymers. This is regularly achieved through a “sink-float' separation technique where polypropylene is separated based on its ability to float when other polymers will sink.

Sorting: Sorting is done manually or with machines using technology that recognises different sorts of plastic. Sorting machines are used to identify and separate large amounts of plastic. Advanced sorting machines come with infrared, x-ray or other cutting-edge sensors that can recognise a polymer's unique signature.

Cleaning: Surfaces which are only slightly dirty can be cleaned with a moistened cloth or sponge.Much dirtier parts can be cleaned using water with a neutral cleaner.

Reprocessing: In the reprocessing phase, cleaned PP products are fed into an extruder where it is melted at 4640F (2400C) and cut into granules.

And finally,the The pellets are ready to be used in the production of new products.