



## Terminology

**Double Poly Coated Board** (sometimes called **PE coated board**)

PE stands for polyethylene, an oil-based plastic that is applied to the paper board in a thin coating during the manufacturing process. PE board is a replacement for wax coatings used extensively for juice, milk cartons, yogurt pots, cream pots and ice cream containers, as well as hot and cold cups.

At the seams of a cup, heat and pressure is applied to melt the PE coating, and weld the cup together. This results in a waterproof joint.

**PET**



Polyethylene terephthalate, also known as PET, PETE, or PETP, is a thermoplastic resin of the polyester family. It is widely used in the production of food and beverage containers. Its popularity originated from its high clarity and durability. In the use of disposable plastic cups, the clarity of PET cups is unmatched by other commonly used materials such as PP and PS.

[PET cold cups](#) are not only freeze/heat resistant (-22° F to 180° F), but also crack resistant. Their durability makes PET cups the most popular disposable plastic cups on the market. PET cups are used for a wide range of products such as ice tea, slush, juice, ice cream, cold beer and more.

PET is also known for its ability to maintain product integrity. It is odor free and able to maintain the original flavor and aroma of food and beverages. It has also replaced PVC in the use of food containers, as PET offers a higher degree of sterilization.

Its polymer chain could be recovered for additional use. Its resin identification code is 1.

## PLA



Poly(lactic acid), or Polyactide, more commonly known as PLA, is derived from 100% renewable resources. PLA, comparable to petroleum based plastic, is now used in a variety of industries including packaging, clothing, medicine and more. Classified as [GRAS](#) (Generally Recognized as Safe) by FDA, PLA is a nonvolatile and odorless polymer.

### PLA- Life Cycle



The life cycle of PLA starts with starch rich plants such as corn, wheat and sugar beet. These plants are first milled to separate the starch, from which is unrefined dextrose is processed. The unrefined dextrose went through a fermentation process and result in lactic acid. After the chemical process called Condensation, two lactic acid molecules were converted into one lactide. The lactide molecule is then purified through vacuum distillation and a solvent-free melt causes the ring shaped molecule to turn into long chain polymers.

[PLA](#) is fully compostable in commercial composting facilities. It can be converted back to monomer and polymer.

## PP



Compared to Polyethylene Terephthalate, Polypropylene (PP) has a lower degree of clarity. Like PET, PP is a durable and tough material, and is resistant to heat, chemicals, and oil. In applying to the beverage packaging, PP cup (also known as translucent cup) is semi-transparent in color.

KaratCup.com's [PP cup](#) is, however thinner and therefore enjoys a higher degree of clarity than average translucent cups. Its resin identification code is 5.

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