What is modified polyphenylene ether (m-PPE)?

A generic term for polymer alloys of polyphenylene ether (PPE) resin and other resins,

This is called modified polyphenylene ether (m-PPE).

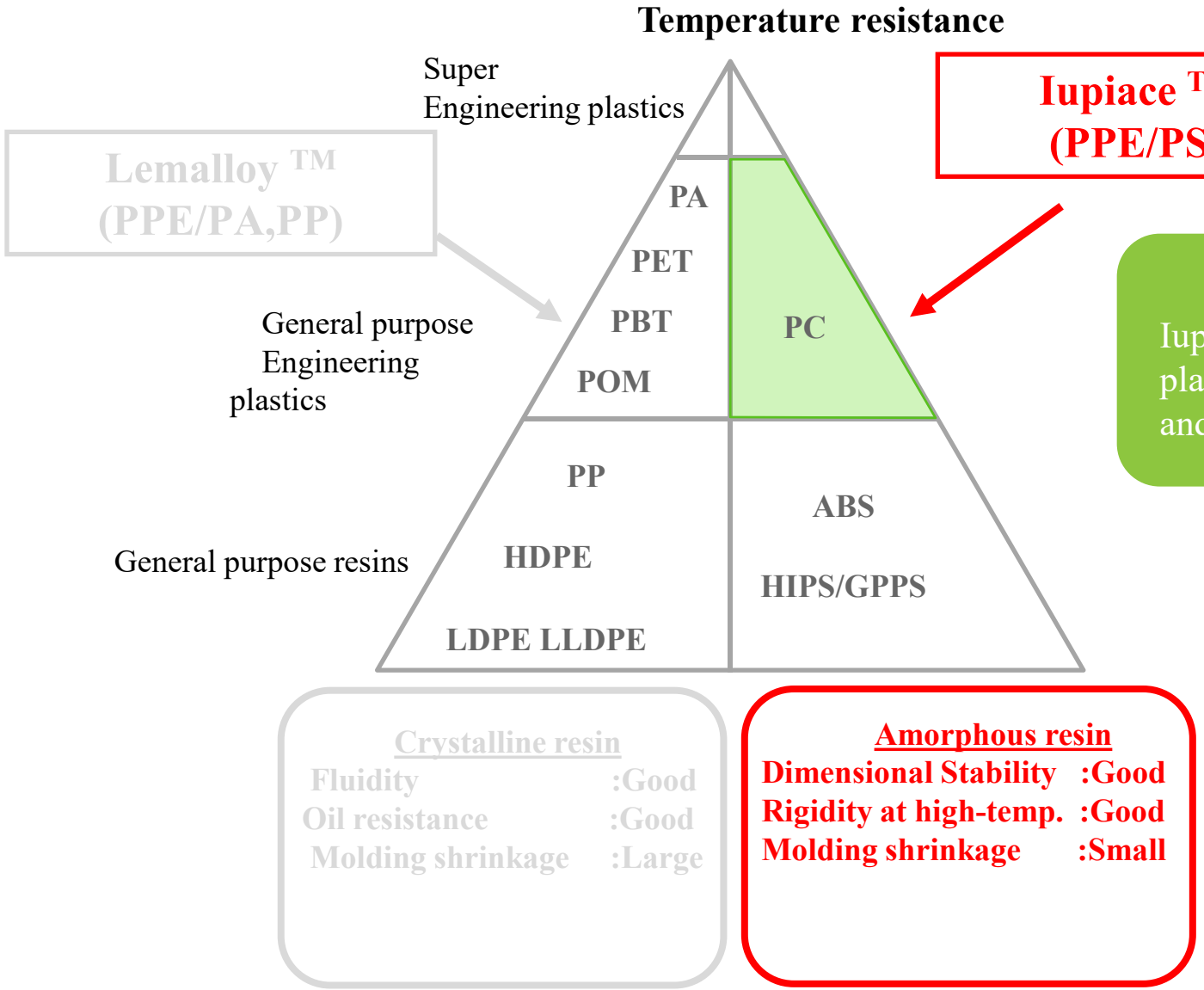
It can be alloyed with other resins to provide a variety of functions. It is used in a wide range of applications as a general-purpose engineering plastics.

GPAC branded

Iupiace™ ・・・ **Fully compatible polymer alloy material of PPE and PS.**

LEMALLOY™ ・・・ **Polymer alloy material of PPE and crystalline resin (PA or PP).**

What is the Iupiace ™?



Iupiace ™ (modified PPE resin) is an amorphous engineering plastic composed mainly of polyphenylene ether resin (PPE) and polystyrene resin (PS).

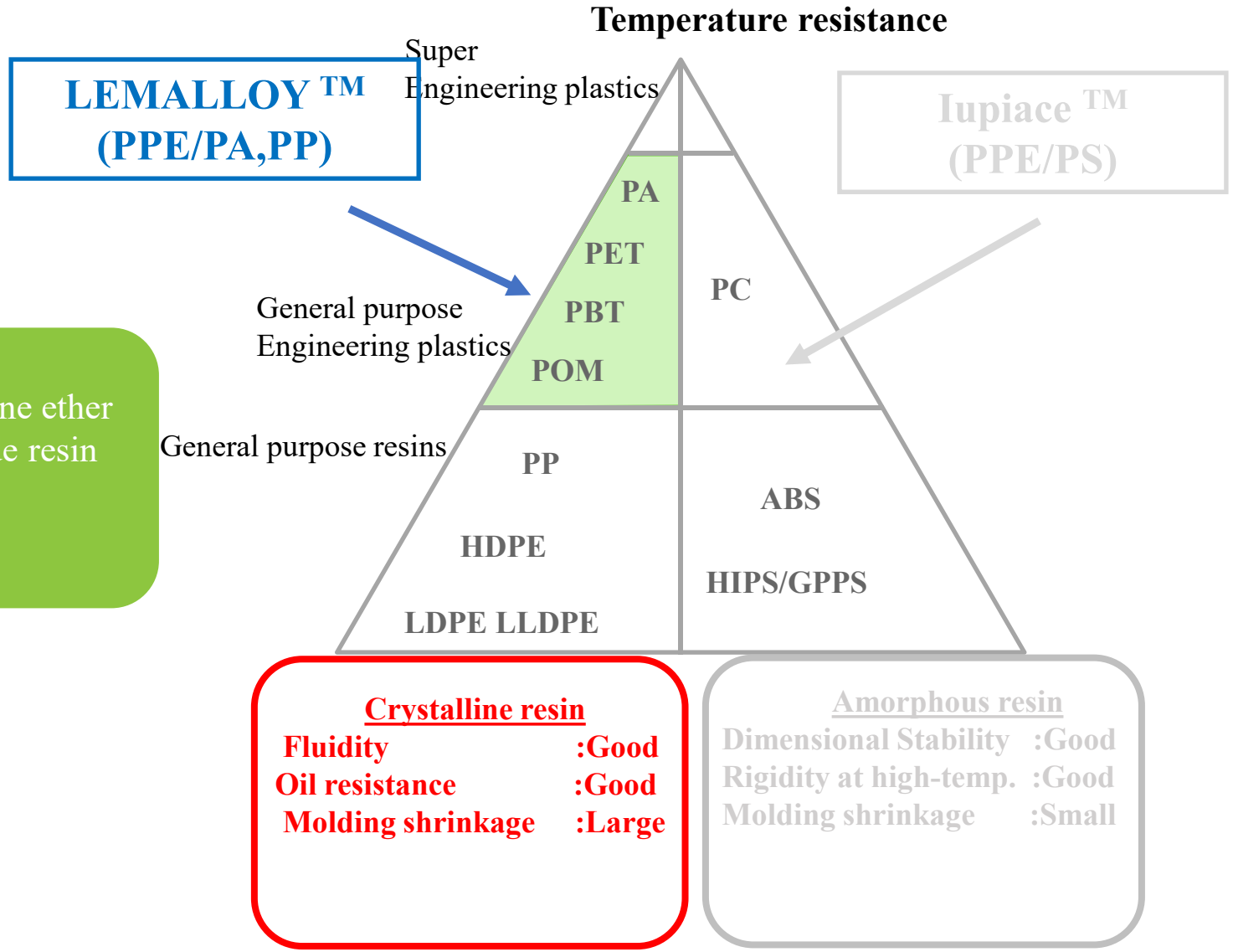
Features of the Iupiace ™

GLOBAL POLYACETAL

- **Low density**
  (1.06g/cm³)
- **Dimensional stability**
  Low molding shrinkage
- **Fluidity and mold releasability**
  Wide molding temperature range
- **Insulating properties**
  Low dielectric constant,
  low dielectric loss tangent
- **Water resistance**
  Without hydrolysis
  Low water absorption and water absorption physical property change minimum
- **High load deflection temperature**
  Physical stability by heat treatment
- **Flame retardant**
  (self-extinguishing)
- **Alkali resistance**
  Acid resistance
- **Stable stiffness over a wide temperature range**
  Impact resistance, fatigue resistance, etc.

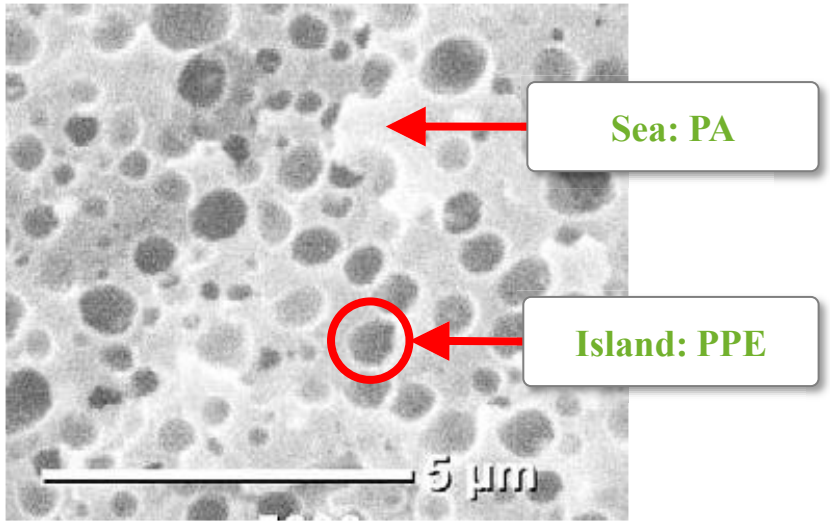
What is LEMALLOY ™?

LEMALLOY ™ is a polymer alloy of polyphenylene ether resin (PPE) and crystalline resins such as polyamide resin (PA) and polypropylene resin (PP).



Characteristics of LEMALLOY ™

- LEMALLOY™ has excellent low water absorption, high temperature stiffness and oil resistance due to sea : PA, PP and other crystalline resins, islands : PPE's sea-island structure
- Low water absorption and high-temperature stiffness can be imparted without using reinforcement, and PPE has a lower density than other crystalline engineering plastics due to its own density.
- PA/PPE alloy has good dielectric breakdown strength and excellent tracking-resistance comparable to PPE/PS



Water absorption lower than that of PA alone

Dimensional change by water absorption is small.

Changes in physical properties due to water absorption is small

Low density

(especially non-reinforced materials)

Higher high-temperature stiffness than PA alone

Long-term thermal resistance

Minimal dimensional change due to thermal effects

Good dielectric breakdown strength

Tracking resistance

Oil resistance superior to PPE/PS