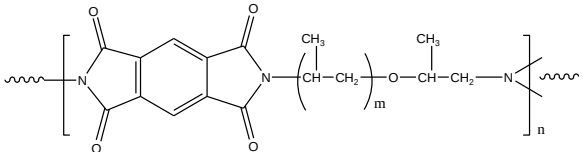
Sample Name:
Poly(poly(propylene oxide)pyromellitimide)

Sample #: **P7027-PPOMDA**

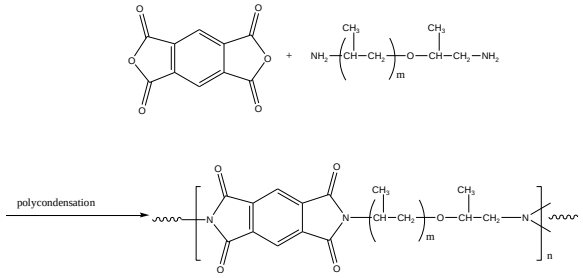
Structure:



Composition:

Mn x 10^3	PDI
51.4	1.9

Synthesis Procedure:
The polyimide was prepared with polycondensation polymerization using TEA as base and the reaction is illustrated below.

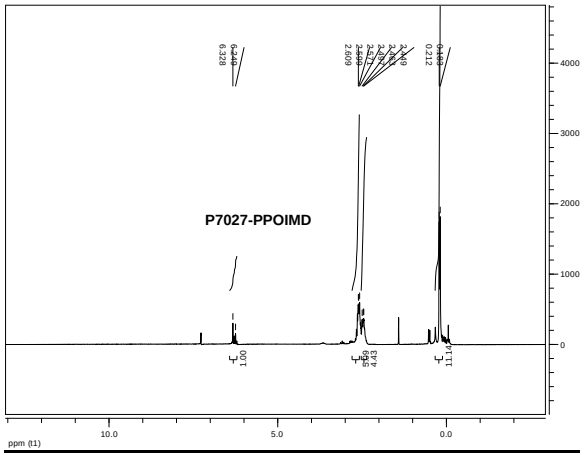


Characterization:

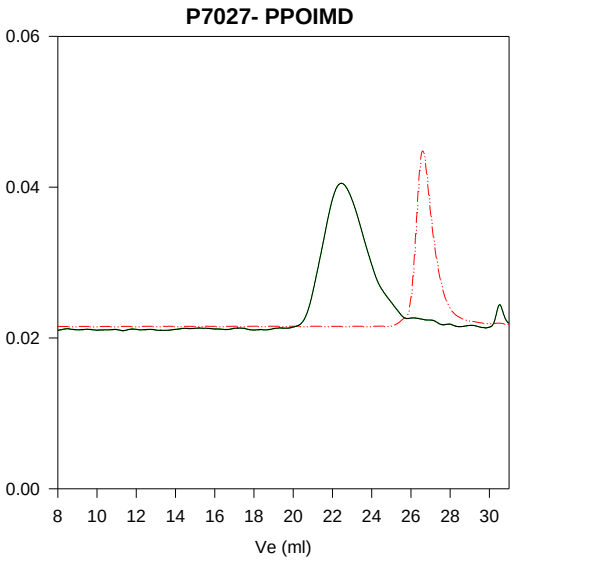
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

Solubility:
Polyimide is soluble in acetone, toluene, ethanol and methanol. The polymer is insoluble in hexane.

^{1}H-NMR Spectrum of the polymer:



SEC of polymer:



Size exclusion chromatography:
α−ω− diamino terminated Poly (propylene oxide): M_n=2000, M_w=3400, PI=1.19
Polyimide based on 1,2,4,5 benzene tetracarboxylic anhydride and poly(propylene oxide).
Mn=51400 Mw=97900 PI=1.9 (w.r.t polystyrene calibration)
Composition from ^{H} NMR