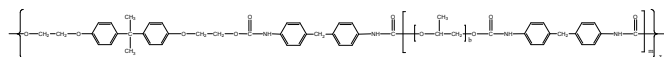


Sample Name:

Polyurethane based on Bisphenol A-diethoxylate and propylene glycol and MDI-isocyanate

Lot Sample #: **P7277-PU**

Structure



Composition

Mw x 10 ³	Mw/Mn (PDI)	Composition
49.7	2.1	MDI:PPO:BPAEO 1.35:1.0:0.36 feed ratio
		From H NMR 1.35:1.47:0.25

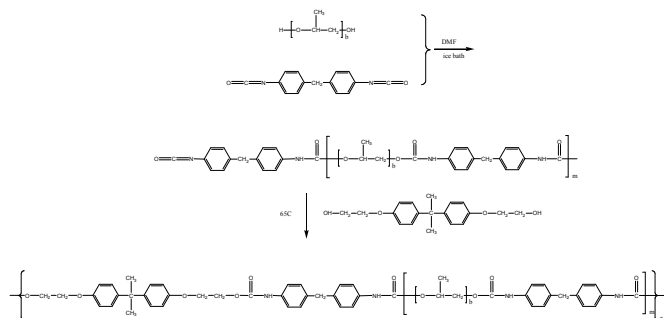
MDI: 4,4'-Methylenebis(phenyl isocyanate)

PPO: Poly(propylene glycol) (425)

BPAEO: Bisphenol A + ethylene oxide

Synthesis Procedure:

The synthesis method was followed the literature offered by costumer. The scheme of the reaction is illustrated below:



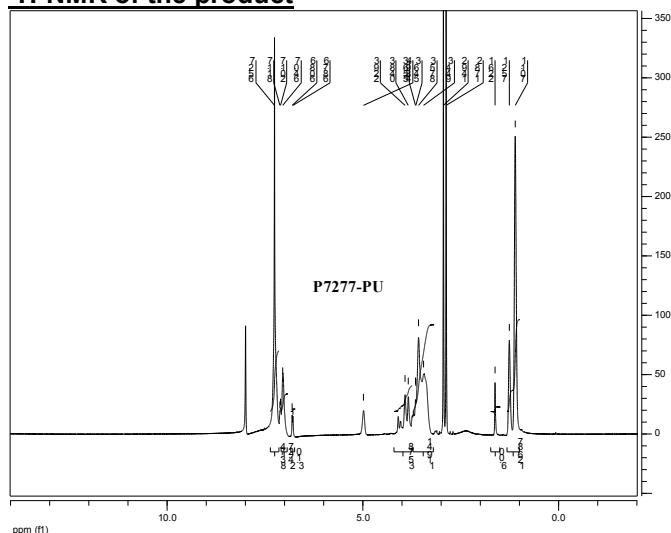
Characterization:

The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight, polydispersity index (PDI). The composition of the structure was determined by comparing the area of 7.04ppm deduct area of 6.780ppm (MDI), 1.0-1.4ppm (PPG) and 1.59ppm (BOAEO) in NMR spectrum.

Solubility:

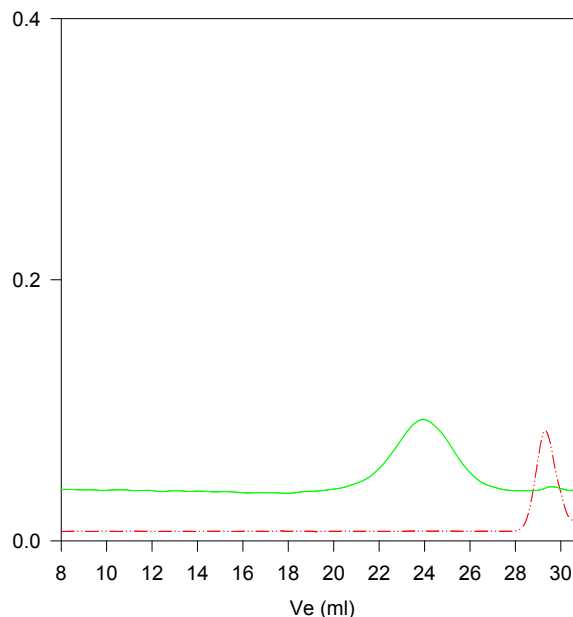
MDI:PPO:BPAEO 1.35:1.0:0.36	Chloroform Y	DMF Y	THF Y	DMSO Y (slow)	Tg oC 23
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¹H-NMR of the product



SEC of the product:

P7277- PU



Size exclusion chromatography:

--- Polypropylene glycol,
M_n=425, M_w=500, PI=1.18

— Final polymer polyurethanes Mw=49700 Mn=22900, PI=2.1