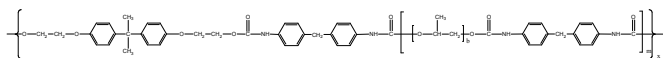


Polyurethane based on Bisphenol A-diethoxylate and propylene glycol and MDI-isocynate.

Structure:

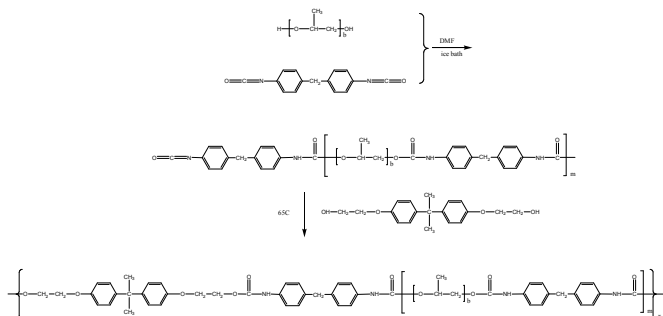


| Mw x 10 ³ | Mw/Mn (PDI) | Composition |
|----------------------|-------------|-----------------------------|
| 18.2 | 1.6 | MDI:PPO:BPAAE O |
| | | 1.35:1.0:0.36 |
| | | From HNMR 1.35:0.93:0.38 |

BPAEO: BisphenolA diethoxylate

Synthesis Procedure:

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

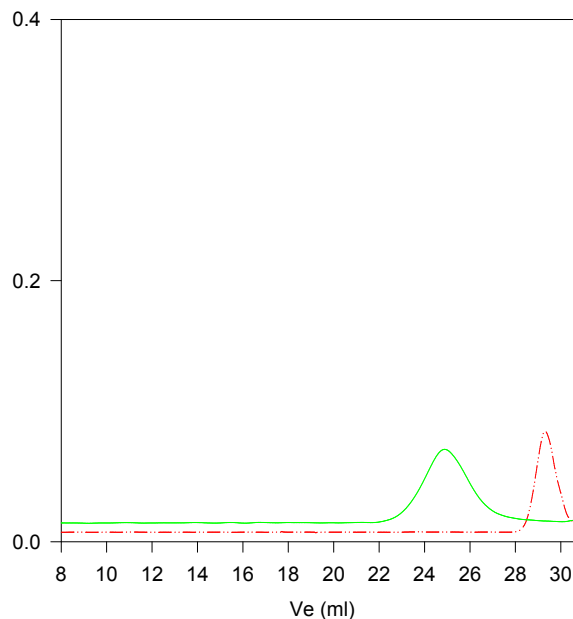


The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight, polydispersity index (PDI). The composition of the structure was determined by comparing the area of 7.04ppm deduct area of 6.880ppm (MDI), 1.0-1.4ppm (PPG) and 6.61ppm (BPAEO) in NMR spectrum.

| | | | | | |
|---------------------------------|-----------------|----------|----------|---------------------|----------------|
| MDI:PPO:BPAAEO 1.35:1.0:0.36 | Chloroform Y | DMF Y | THF Y | DMSO Y (slow) | Tg oC 23 |
|---------------------------------|-----------------|----------|----------|---------------------|----------------|

[illegible]

P7290- PU



— · — · — · Polypropylene glycol,
M_n=425, M_w=500, PI=1.18

Final polymer polyurethanes $M_w=18200$ $M_n=11400$, $PI=1.6$