

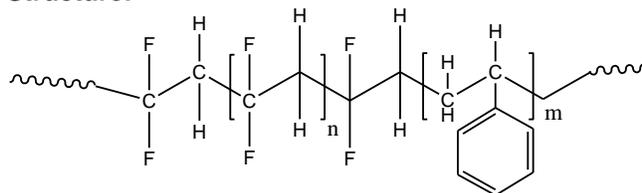
Solubility: Polymer is soluble in DMF, THF.

Sample Name:

Poly (Vinylidene difluoride-b-Styrene)

Sample # P18718C-VDFS

Structure:



Composition:

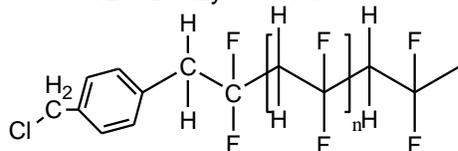
Mn x 10 ³	PDI
9.0-b-9.0	1.9

Synthesis Procedure:

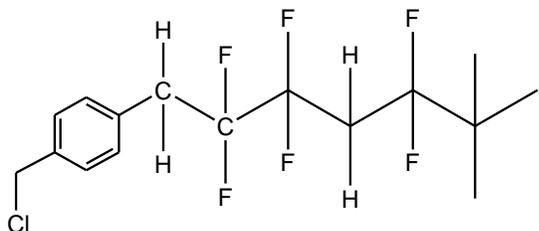
Synthesis of

Benzyl Chloride Terminated Vinylidene difluoride

P 18750-VDF-Benzyl Chloride

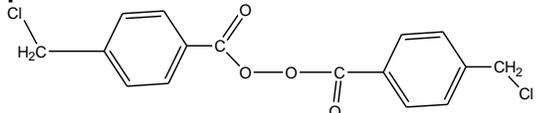


Head to Tail arrangement



Head to Head or tail to tail

Radical process using 4-Chloromethyl benzoyl peroxide as radical initiator

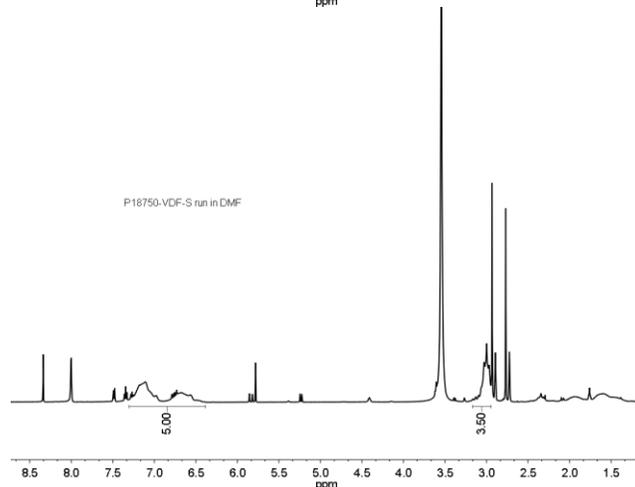
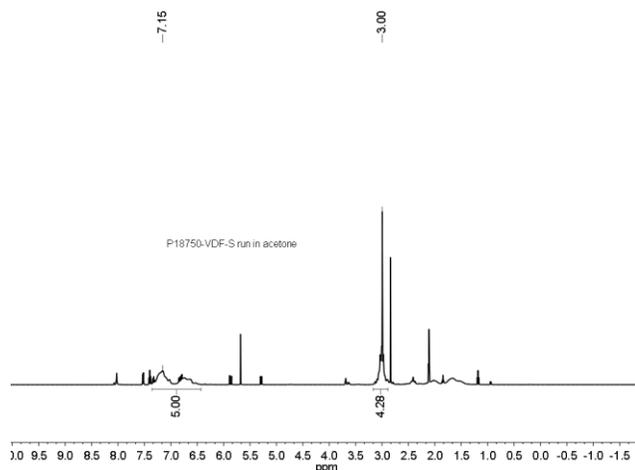


Block copolymerization with styrene using ATRP process

Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) in DMF and by HNMR. In DMF it gives negative response because of low dn/dc. It only provide Mw/Mn of the polymer and Mn calculated from its HNMR analysis using end group analysis. GPC of the final polymer with respect to polystyrene as reference material gives much higher values than determine by HNMR analysis. We only consider Mw/Mn of the polymer using this analysis.

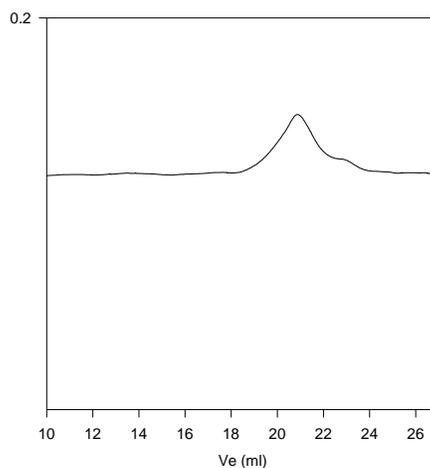
H NMR:



VDF-b-S Run in DMF values are w.r.t PS reference

SEC of sample:

P18718C -VDF-S



Size exclusion chromatography result:

— M_n=18,000 Mw=36,000 PI=1.95

From GPC we only indicate Mw/Mn . These values are w.r. to Polystyrene as reference material.