



Synthesis and Physico-Chemical Properties of Homopolycyanurates Based on *s*-triazine Ring

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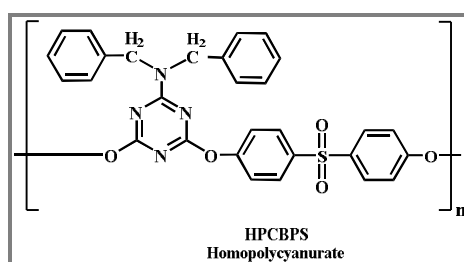
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ABSTRACT

Various homopolycyanurates were synthesised by polycondensation of the diacid chloride of *N,N*-Dibenzyl-4,6-dichloro-1,3,5-triazin-2-amine with different diols such as: Bisphenol-A [BPA], Bisphenol-C [BPC], Bisphenol-S [BPS], Ethylene glycol [EG], Triethylene glycol [TEG], Propylene glycol [PG], Catechol [C], Resorcinol [R], Hydroquinone [Hq] and Phenolphthalein [Ph]. All the synthesized polycyanurates were characterized by solubility, density, viscosity measurements, IR spectra, NMR spectra and thermo gravimetric analysis [TGA]. The densities of homopolycyanurates are measured pycnometrically, the highest density is 1.798 g cm^{-3} is found for HPCBPS while lowest density is 1.322 g cm^{-3} found for HPCDM13PD. Most of the homopolycyanurates are found to stable more than $350 \text{ }^\circ\text{C}$ temperature thus it can be used for high temperature applications.

Graphical Abstract



Keywords: Homopolycyanurates, Polycondensation.