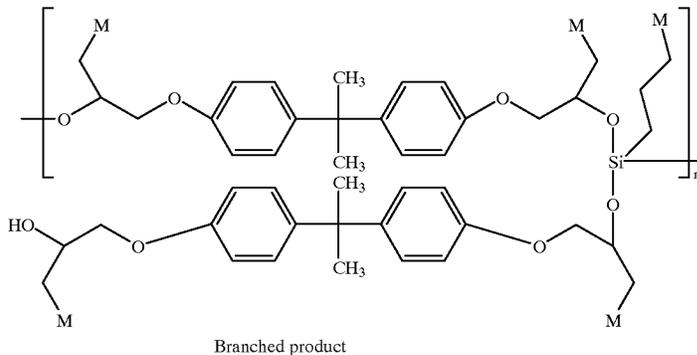


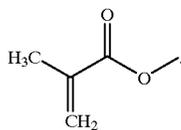
11

12

-continued



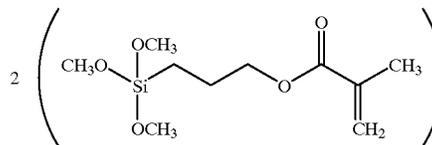
in which M is



20

25

reacts stoichiometrically with two moles of MPTMS:



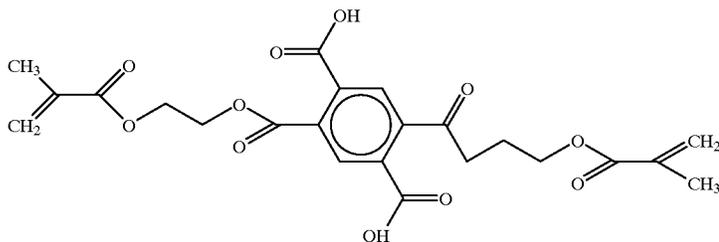
For higher molecular weight silane agents with even longer carbon chain segments, such as 10-methacryloxydecyltrimethoxysilane, the viscosity of the silyl ether derivatives is still considerably less than that of Bis-GMA. The residual hydroxyl and silyl methoxy ether content are functions of both the initial composition of the reactants, the nature of the leaving group of the silane, and the reaction conditions of time of reaction, type of catalyst, and especially, temperature.

30

35

The same type of reaction can be conducted with other functional monomers, such as, for example, carboxylated monomers. In this second embodiment, for example, one mole of pyromellitic acid di-2-methacryloyloxyethyl ester ("PMDM"):

to form the corresponding silyl ester of PMDM:



55

60