# Study on Preparation of Polydimethylsiloxane and Polyorganosiloxane Resin

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**ABSTRACT**

Tetraethyl orthosilicate (TEOS) or mineral silicate can react with trimethylchlorosilane or hexamethyldi-siloxane to form cross-linked polyorganosiloxane resin (QxMy(OH)z , Q=SiO4/2 and M=Me3SiO1/2). Since the resin contains sufficient hydroxyl group , it is often used in conjunction with polydimethylsiloxane in special industrial application, such as, pressure sensitive, coating and surfactant. In this research, trimethysilylation of tetraethyl orthosilicate was carried out with trimethylchlorosilane (TMC) or hexamethyldisiloxane (HMD). Different molecular weight and/or distributions of molecular weight resulted from varying the concentraction of TMC and TEOS, changing the ratio of x : y and OH content were studied. The results will be informative to the industrial production technology of synthesizing hydroxy contanting polyorganosiloxane resin.

Keywords : teraethyl orthosilicate

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