



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2013_IRJPAC_7257
Title of the Manuscript:	New Methylphenylsiloxane Resins and High Temperature Resisting Enamels on Their Basis
Type of the Article	

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	1. The method of preparing the polymer is very important because the method decides the structures and properties of the polymers. So the method should be described in detail. And the materials should be described in detail too. 2. The talbe1 shows there are many ethyloxy groups in the polymer, but the formulas and Fig 1b do not display the ethyloxy group. 3. The polymers prepared in this article have very low molecular weights. When they are heated, the condensation polymerization of hydroxyl groups and ethyloxyl groups has taken place which can be concluded from Fig. 2a and Fig. 2b. This article does not explain the condensation polymerization. 4. The phenyl groups in the polymer is more, the polymer is more stable when the polymer is be heated. But the table 1 do not show so. Чем больше фенильных групп в	. 200 g of toluene, 32.8 g of oligophenylsiloxane (OphS), 53.4g of MTEOS (methyltriethoxysilane), catalytical amounts of sulfuric acid are fed to the reactor with temperature control heating, a stirrer, a backflow condenser The reaction mixture under continuous stirring is heated to the temperature of 60-70°C, is held for an hour, then acetic acid is added dropwise. The reaction mass is held for 1-4 hours at a temperature of 75-85 °C depending on required resin properties. Then ethylacetate reaction by product is distilled and the reaction mass is brought to neutral reaction of the environment by the conventional methods. The solvent is next distilled to volatiles content not more than 3 wt %. Element analysis.%C=47.20, %H=4.63 %Si=23.18 2. Structure fragment ratio and the formula presented in the paper were obtained on the basis of silicon signal integrated intensities in ²⁹Si spectra. As signals of Si-OH and SI-OEt groups containing fragments signals were not observed in ²⁹Si spectra, we did not include them in the formula. However taking into



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	полимере, тем более он стабилен при нагревании. Но таблица 1 не показывает это 5. The introduction is not right exactly. Now lots MPhSR are produced using the cyclosiloxanes. And the cyclosiloxanes are produced from chlorosilanes.	consideration your comment we believe that they should be included in the formulae and we have to explain that the indices at terminal structure fragments were determined by means of chemical analysis. 3. This process is well described in literature. It may be presented by the following mechanism (polymerization process) proceeding at the elevated temperature. $2\equiv\text{SiOH} \rightarrow \text{Si-O-Si} + \text{H}_2\text{O}$ $\equiv\text{SiOH} + \text{EtOSi}\equiv \rightarrow \text{Si-O-Si} + \text{C}_2\text{H}_5\text{OH}$ See Andrianov K.A. Methods of organoelement chemistry, Silicon, "Nauka", Moscow, 1968, p.550 4. Within the selected range of $[\text{PhSi}]_a / [\text{MeSi}]_b$ ratios while MPhSR is synthesized the combination of two parameters responsible for thermal stability increase: namely: phenyl radicals content and Mw increase occurring at MPhSR content rising was observed (see Table 3) Table 3 demonstrates that as compared with starting OPhS whose inorganic residue yield amounts to 45 wt %, for synthesized MPhSR inorganic residue yield increase within the range of 62-80 wt % is observed. 5. In the present process with the use of alkoxysilanes and oligophenylsiloxanes as raw material chlorine ions content is much less as compared with other methods where chlorosilane are used.
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		Thank you for the comments. .
<u>Minor</u> REVISION comments	1. All formulas in the article are wrong. 2. Figure 1a is NMR spectrum.	Thank you for the comments. .We'll make the amendments
<u>Optional/General</u> comments		