

## Oligomethylphenylsiloxanes and methylphenylsiloxane resins: preparation, use and compositions

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### Abstract

A review is given on the class of organosilicon compounds of oligomethylphenylsiloxanes and methylphenylsiloxane resins. The review includes the main chemical methods for producing oligomethylphenylsiloxanes and methylphenylsiloxane resins, the main reactions, occurring with the participation of oligomethylphenylsiloxanes, areas of application of oligomethylphenylsiloxanes. The review provides compositions of oligomethylphenylsiloxanes. The review consists of 50 literature sources.

To obtain oligomethylphenylsiloxanes, several production methods are used. Basically, this is a method of hydrolytic co-condensation of the corresponding organochlorosilanes with subsequent catalytic rearrangement of the hydrolysis products, a heterofunctional condensation reaction, or exchange decomposition. High-polymer organosilicon compounds are obtained as a result of synthesis from alkyl and aryl-substituted esters of orthosilicic acid or from alkyl and arylsilane chlorides, which upon hydrolysis form hydroxy derivatives (silanols), condensing into resins when heated. At present, new fields of application of oligomethylphenylsiloxanes have appeared. This is the creation of radiation-resistant materials, heat-resistant paints, protection of concrete structures, heat-resistant fiberglass.

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