unmodified polymer F. (Please supply tensile properties for these compositions, if information is available)

EXAMPLE 3

Curable organosiloxane compositions of this invention were prepared by blending polymer B with the vinyl-containing organosiloxane copolymer of Example 1, a dimethylsiloxane/methylhydrogensiloxane copolymer containing about 0.7 weight percent of silicon bonded hydrogen atoms and about 38 mole percent of methylhydrogensiloxane units, a platinum hydrosilation catalyst comprising a reaction product of hexachloroplatinic acid and sym-tetramethyldivinyldisiloxane that has been diluted with a liquid dimethylsiloxy terminated polydimethylsiloxane in an amount sufficient to achieve a platinum content of 0.7 weight percent, and 0.01 percent, based on the weight of the curable composition, of ethynylcyclohexane as a platinum catalyst inhibitor.

The concentration of dimethylsiloxane/methylhydrogensiloxane copolymer was sufficient to provide 1.2 silicon-bonded hydrogen atoms for each vinyl radical present in the curable composition, and the amount of platinum catalyst was equivalent to 0.01 weight percent of platinum, based on the weight of the curable composition.

The resultant compositions were cured using a heated press to form 1.5 mm-thick sheets from which test samples were cut in accordance with ASTM test procedures D 412 for the measurement of tensile properties and D 1938 (die B) for measuring tear propagation resistance. The sheets were cured at 170° C. for 10 minutes and post-cured for one hour at 150° C.

The concentration of the vinyl-containing organosiloxane copolymer in each of the samples together with the tensile strength, elongation and tear strength of the test samples are recorded in the following Table III

TABLE III

Weight % Copolymer*	Tensile Strength (MPa)	Elongation (%)	Tear Strength kN/m
30	5.07	398	8.05
35	4.83	390	8.40
40	5.52	270	11.90
45	6.00	133	12.25
50	8.28	100	10.85

*Relative to weight of Polymer B

The data in Table II demonstrate a continual increase in the tear strength of the corresponding cured elastomer as the concentration of vinyl-containing organosiloxane copolymer in the curable composition is increased from 30 to 45 weight percent, and an 11% decrease in tear strength when the concentration of this copolymer is increased from 45 to 50 weight percent. The decrease in tear strength occurs above the range wherein the unique decrease in viscosity of the curable composition with increasing vinyl-containing copolymer concentration is observed, and indicates a relationship between this effect and the physical properties of cured elastomers prepared from the compositions.

EXAMPLE 4

This example demonstrates (a) the improvement in physical properties of a cured elastomer prepared using a composition of this invention wherein the polydiorganosiloxane is a gum, and (b) the effect of the type of organohydrogensiloxane on the physical properties of the cured elastomer.

Two curable compositions were prepared as described in Example 3 using the polydiorganosiloxane identified as Polymer C in Example 1 together with the same types and amounts of platinum catalyst, catalyst inhibitor and 50 weight percent, based on the weight of polydiorganosiloxane, of the vinyl-containing organosiloxane copolymer described in Example 1. In one composition (X) the organohydrogensiloxane was the same one described in Example 3, and the second composition (Y) contained a trimethylsiloxy terminated polymethylhydrogensiloxane containing about 1.6 weight percent of silicon-bonded hydrogen. In both compositions the molar ratio of silicon-bonded hydrogen atoms to vinyl radicals was 1.2.

The compositions were cured and evaluated as described in Example 3. and the properties of the resultant cured elastomers are recorded in the following Table IV.

TABLE IV

Organohydrogen-siloxane	Tensile Strength(MPa)	Elongation (%)	Tear Strength kN/m
X	4.14	78	19.25
Y	6.76	800	19.78

That which is claimed is:

1. In a curable composition comprising

(1) a diorganovinylsiloxy-terminated polydiorganosiloxane,

(2) an amount of a resinous organosiloxane copolymer sufficient to improve the physical properties of the elastomer obtained by curing said composition.

(3) an amount of an organohydrogensiloxane sufficient to cure said composition, and

(4) an amount of a platinum-containing hydrosilation catalyst sufficient to promote curing of said composition.

the improvement comprising (a) selecting said polydiorganosiloxane from those exhibiting a viscosity of at least 12 Pa.s at 25 degrees C. and wherein at least 95% of the repeating units are dimethylsiloxane units and any remainder are diorganosiloxane units wherein the organic groups bonded to silicon are monovalent hydrocarbon radicals or monovalent halogenated hydrocarbon radicals (b) selecting said organosiloxane copolymer from those consisting essentially of SiO_2, trimethylsiloxy and dimethylvinylsiloxy units, where the molar ratio of the combination of trimethylsiloxy and dimethylvinylsiloxy units to SiO_2 units is from 0.6 to 1.1, inclusive and said copolymer contains from 1.5 to 3.5 weight percent of vinyl radicals, and (c) maintaining the concentration of said organosiloxane copolymer within the range of from 1 to about 45 weight %, based on the weight of said polydiorganosiloxane to achieve a reduction in the viscosity of said composition relative to the viscosity of the composition in the absence of said copolymer.

2. A composition according to claim **1** where any silicon-bonded organic groups in said polydiorganosiloxane other than methyl are selected from the group consisting of phenyl and 3,3,3-trifluoropropyl, the viscosity of the polydiorganosiloxane is up to 12,500 Pa.s and the concentration of said copolymer is from 5 to 35 weight percent.

3. A composition according to claim **2** where said polydiorganosiloxane is a polydimethylsiloxane or a copolymer containing 97 mol percent dimethylsiloxane units and 3 mol percent diphenylsiloxane units, the organohydrogensiloxane is a dimethylsiloxane/methylhydrogensiloxane copolymer, the platinum catalyst is a