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729795

30 Charles River Road, Cambridge, Massachusetts

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FSB-HBS

July 13, 1942

Dr. Melvin Calvin
Department of Chemistry
University of California
Berkeley, California

Dear Dr. Calvin:

In accordance with your request while in Cambridge I attach a copy of the properties of organo silicate oils.

The particular sample of oil (48-54-4), which you took with you, has the following properties:

Vis	365 Saybolt secs. @ 25° C.
Flash	above 575° F.

It was a pleasure to have you with us last week, and I trust you had a safe and uneventful return trip.

Sincerely yours

F. S. Bacon

F. S. Bacon - Consultant
for
Earl P. Stevenson
Chairman
Section B-7
Division B

Enclosure
CC - Dr. C. C. Furnas

PROPERTIES OF ORGANO SILICATE OILS

Specific Gravity	0.98 (25° C)
Color	None
Lubricating Properties	(Good under light load (Fair under heavy load
Viscosities Obtainable	300 to 5000 Saybolt seconds
Flash Point	Up to 360° C. (The lowest viscosity oils may have flash points as low as 150° C)
Melting Point	-40° C. to -85° C. depending on composition
Boiling Point	Slow decomposition starts about 360° C.
Oxidation Resistance	Good
Acidity	Nil
Effect on Natural Rubber	
At normal temperature	Nil
At 100° C.	Slight, if any
Effect on Metals	Nil, although in one test oil increased in viscosity in the presence of lead

K.V.I. =

Viscosity (Centistokes)		K.V.I.
75 (100°C.);	216.4 (37°C.)	137.7
50 (100°C.);	144.0 (37°C.)	143.7
15 (100°C.);	43.3 (37°C.)	170.8

Dielectric - as good as polystyrene

Solubility -

Soluble

Benzene
Xylene
n-amyl alcohol
Carbon Tetrachloride
Ethyl Acetate
Chloroform
Napthenic Petroleum Oils

Insoluble

Dioxane
Ethylene Glycol
Ethyl Alcohol
Ethylene Dichloride
Parrafinic Petroleum Oils

(HBS)