Table IV. Physical mixtures and corresponding chemical mixtures.

No.	1 mole	2 mole	Chemical mixture	PSU No.
25_2-113_1				110
25_1-113_2				111
25_1-90_2				19

physical mixture (C/P) is 5% except for one case, PSU 110 at 135°C and 345 bars. This single discrepancy is doubtless due to the fact that the viscosity here was very low and the accuracy of the rolling-ball method is least for short roll times. The average discrepancy was only 3%. This agreement is truly noteworthy when it is remembered that the viscosity of both the mixtures and the corresponding pure compounds increase 5000 to 10 000 percent. *The coincidence of the viscosity values indicates that with molecules of this size*

Table V. Comparison of the viscosities of chemical compounds and corresponding physical mixtures at elevated pressures.

Mixture at °C	Atmos	345	689	1030	1380	1720	2070	2410	2760	3100	3450	(bars)
$(25)_2+(113)_1$												
37.8°C	9.43	15.1	25.1	38.8	60.3	89.0	127	181	253	348	475	viscosity (cp)
	1.00	1.01	0.98	0.99	0.97	0.97	0.99	0.99	0.99	0.99	0.99	ratio C/P[a]
60	4.99	7.84	12.1	18.0	26.3	37.5	52.4	72.0	97.9	129	171	viscosity (cp)
	1.00	0.98	0.97	0.96	0.95	0.95	0.95	0.96	0.96	0.97	0.96	ratio C/P[a]
98.9	2.28	3.37	4.95	6.92	9.48	12.6	16.7	21.8	28.2	36.1	45.6	viscosity (cp)
	0.99	1.01	1.02	1.01	0.97	0.97	0.97	0.97	0.97	0.97	0.98	ratio C/P[a]
135	1.47	1.96	2.79	3.76	4.98	6.42	8.21	10.2	12.8	15.7	19.3	viscosity (cp)
	1.00	1.11	1.05	1.02	0.99	0.98	0.97	0.99	0.98	0.98	0.95	ratio C/P[a]
$(25)_1+(113)_2$												
37.8°C	13.66	24.3	42.0	68.2	108	167	253	376	552	798	1140	viscosity (cp)
	0.99	0.98	0.98	0.98	1.00	1.00	1.00	1.02	1.02	1.02	1.03	ratio C/P[a]
60	6.79	11.5	18.4	28.8	43.2	63.7	92.8	132	185	258	351	viscosity (cp)
	1.00	0.98	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.01	ratio C/P[a]
98.9	2.90	4.54	6.82	9.60	13.6	18.8	25.7	34.7	46.3	60.9	79.2	viscosity (cp)
	0.99	1.00	1.00	1.01	1.01	1.02	1.02	1.02	1.01	1.02	1.02	ratio C/P[a]
$(25)_1+(90)_2$												
60°C	12.27	23.7	44.2	79.1	140	236	393	650	1060	...	...	viscosity (cp)
	0.96	0.95	0.97	0.97	0.96	0.97	0.97	0.99	0.99	...	...	ratio C/P[a]
98.9	4.16	7.21	11.8	19.0	29.7	46.0	69.8	103	154	224	326	viscosity (cp)
	0.98	0.99	0.97	0.96	0.96	0.95	0.95	0.97	0.95	0.95	0.93	ratio C/P[a]

[a] Ratio of viscosity of pure compound or chemical mixture to viscosity of physical mixture. For example the ratio of viscosity of chemical mixture PSU 110 to physical mixture 25_2-113_1 at 37.8°C and 689 bars is 24.6/25.1 = 0.98.