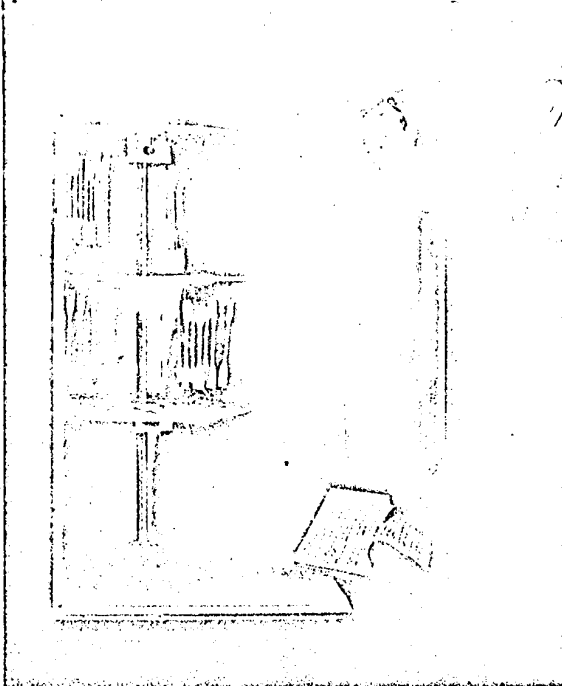




Summary of Specifications and Typical Properties

For your convenience the following chart lists Monsanto's Permanent, Sulfonamide, and Miscellaneous plasticizers. If a specific property is ideally suited for a specific application simply find the optimum value of that property in the vertical column, the name of the plasticizer offering this value may be read from the left hand listing.



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PERMANENT

Santicizer 405	—	* 1.0	* Clear, viscous liquid	* 250 (50ml.: 50ml.) 95% Ethanol	* 0.15
Santicizer 406	—	* 1.0	* Clear, oily liquid	* 200 (50ml.: 50ml.) 95% Ethanol	* 0.15
Santicizer 409	—	* 1.5	* Clear liquid	* 150 (50ml.: 50ml.) 95% Ethanol	* 0.15
Santicizer 411	—	* 1.0	* Light yellow, viscous liquid some solids on standing	* 175 (50ml.: 50ml.) 95% Ethanol	* 0.15
Santicizer 462	—	* 0.24	* Clear, oily liquid	* 150	* 0.15
Santicizer 480	—	* 0.60	* Clear, oily liquid	* 200	* 0.15
Santicizer 481	—	* 0.85	* Clear, oily liquid	* 300	* 0.15
Santicizer 482	—	* 1.1	* Clear oily liquid	* 325	* 0.15
Santicizer 483	—	* 0.24	* Clear, oily liquid	* 125	* 0.15

SULFON-
AMIDES

Santicizer 1-H	253.36	—*	* Yellow-brown fused mass	* 300 (molten)	* 0.15
Santicizer 3	199.23	* 1.60	* Practically white solid	* 60 (molten)	* 0.25
Santicizer 8	199.22	* 0.80	* Light-yellow, viscous liquid	* 200 (molten)	—
Santicizer 9	171.1	pH 4.0 (min.)	* Fine, white to light-cream granular particles	* 85 (33-1/3 wt. % in acetone)	* 1.0
Santolite MHP	—	1.0 (mg KOH/g)	* Hard, practically colorless resin	* 50 (25g:75g butyl acetate)	—
Santolite MS-80%	—	—	* Light-colored, viscous liquid. Free flowing above 20°C	* 80 (25g:35g butyl acetate)	—

OTHER

Aroclor 1221	—	* .014 (mg KOH/g)	Clear, mobile oil	* 100	—
Aroclor 1232	—	* .014 (mg KOH/g)	Clear, mobile oil	* 100	—
Aroclor 1242	—	* .015 (mg KOH/g)	* Clear, mobile oil	* 100	* 50 (ppm m)
Aroclor 1248	—	* .010 (mg KOH/g)	* Clear, mobile oil	* 100	* 50 (ppm m)
Aroclor 1254	—	* .010 (mg KOH/g)	Light-yellow viscous liquid	* 100	* 50 (ppm m)
Aroclor 1260	—	* .014 (mg KOH/g)	* Light-yellow, soft, sticky resin	* 150	* 50 (ppm m)
Aroclor 1262	—	* .014 (mg KOH/g)	* Light-yellow, sticky, viscous resin	* 150	—
Aroclor 1268	—	* .05 (mg KOH/g)	* White to off-white powder	* 1.5 NPA (molten)	—
Aroclor 4465	—	* .05 (mg KOH/g)	* Clear, light-yellow resin	2 NPA max. (molten)	—
Aroclor 5442	—	* .05 (mg KOH/g)	* Clear, yellow, sticky resin	* 2 NPA max. (molten)	—
Aroclor 5460	—	* .05 (mg KOH/g)	* Clear, yellow-to-amber brittle resin or flakes	* 2 NPA max. (molten)	—
HB-40	—	—	Clear, oily liquid	* 100	* 125 ppm
Mod-Epox	—	* 0.08 (mg KOH/g)	* Oily liquid or light-yellow solid	* 50	—
Phospard C-22-R	610.5	* 5.0	* Clear, viscous liquid	* 50	—
Triphenyl Phosphite	310.28	* 0.8 (mg. KOH/g)	* Oily liquid or light-yellow solid	* 50	—

25:

Summary of Specifications and Typical Prop

		* 1.128 to 1.132	9.41	—	— 1.1	—	—	—	—	—
		* 1.089 to 1.091	9.08	—	+16	—	—	—	—	—
		* 1.080 to 1.084	9.01	—	4	—	—	—	—	—
		* 1.104 to 1.110	9.20	—	+21.1	—	—	—	—	—
		* 1.072 to 1.077	8.95	—	—28	—	—	—	—	—
		* 1.039 to 1.046	8.72	—	-1	—	—	—	—	—
		* 1.072 to 1.078	8.96	—	10	—	—	—	—	—
		* 1.097 to 1.103	9.16	—	18	—	—	—	—	—
50		* 1.045 to 1.052	8.74	—	-31	—	—	—	—	—
		1.125	—	(in vacuum jacket) * 82.5 min.	—	350	—	—	—	—
7 (65°C)		1.166 to 1.176 (65°/65°C)	—	* 58.0 min.	340	—	0.8 (160°C)	—	—	—
		1.190	9.92	<40	—	340	0.45	5.5	—	10,000
		1.353 (solid)	—	105	—	360 (approx.)	0.25	3.2	—	—
25 (acetate)		1.35	—	62	—	—	—	—	—	—
		1.256	10.5	—	—	—	—	—	—	—
8 (20°C)		* 1.182 to 1.192	9.85	—	Crystals @ 1°C (ASTM D-97)	275 to 320	—	—	—	* 38 to 41 SUS (37.8°C)
2 (20°C)		* 1.270 to 1.280	10.55	—	-35 (ASTM D-97)	290 to 325	—	—	—	* 44 to 51 SUS (37.8°C)
9 (20°C)		* 1.381 to 1.392 (25°/15.5°C)	11.50	—	-19 (ASTM D-97)	325 to 366	—	—	—	82 to 92 SUS (37.8°C)
11 (20°C)		* 1.405 to 1.415 (65°/15.5°C)	12.04	—	-7 (ASTM D-97)	340 to 375	—	—	—	185 to 240 SUS (37.8°C)
11 (20°C)		* 1.495 to 1.505 (65°/15.5°C)	12.82	—	10 (ASTM D-97)	365 to 390	—	—	—	1800 to 2500 SUS (37.8°C)
19 (20°C)		* 1.555 to 1.566 (90°/15.5°C)	13.50	—	31 (ASTM D-97)	385 to 420	—	—	—	—
517 (20°C)		* 1.572 to 1.583 (90°/15.5°C)	13.72	—	35 to 38	390 to 425	—	—	—	—
		1.807	15.09	—	—	435 to 450	—	—	—	—
37 (20°C)		1.670	13.91	—	—	230 to 320 (4 mm. Hg)	—	—	—	—
		1.470	12.24	—	—	215 to 300 (4 mm. Hg)	—	—	—	—
35 (20°C)		1.670	13.91	—	—	280 to 335 (5 mm. Hg)	—	—	—	—
50		* 1.001 to 1.007 (25°/15.5°C)	8.37	—	-26	345 to 396	2	15	230	70.0
30		* 1.176 to 1.182 (30°/15.5°C)	9.83	25	—	360	—	11 (220°C)	—	—
34		1.425 to 1.445	11.9	None-glassy	5	Not Distillable	—	—	—	—
300		* 1.176 to 1.182 (30°/15.5°C)	9.83	25	—	360	—	11 (220°C)	—	—

0 to 13500	—	—	—	555	—	—	—	Practically insoluble
0 to 9500	—	—	—	535	—	—	—	Practically insoluble
0 to 3500	—	—	0.00071	530	570	—	—	Practically insoluble
0 to 9800	—	—	—	540	—	—	—	Practically insoluble
291	—	—	—	—	—	—	—	Practically insoluble
556	—	—	—	475	535	—	—	Practically insoluble
3878	—	—	—	485	535	—	—	Practically insoluble
6422	—	—	—	525	580	—	—	Practically insoluble
156	—	—	—	485	525	—	—	Practically insoluble
—	—	—	—	—	—	—	—	0.00045 (30°C)
—	—	—	—	371	—	—	—	Slight
358.0	6.0	44.5 (25°C)	—	345	—	—	—	0.13 (23°C)
—	—	—	—	420	—	—	—	1 (34°C)
—	—	—	—	—	—	—	—	Practically insoluble
—	—	—	—	—	—	—	—	Nil
to 37 SUS (54.4°C)	30 to 31 SUS	—	0.00071 (15-40°C)	286 to 302	349	—	—	Practically insoluble
to 41 SUS (54.4°C)	31 to 32 SUS	—	0.00073 (25-100°C)	305 to 310	460	—	—	Practically insoluble
to 56 SUS (54.4°C)	34 to 35 SUS	—	0.00068 (25-65°C)	348 to 356	None to boiling point	—	—	Practically insoluble
to 80 SUS (54.4°C)	36 to 37 SUS	—	0.00070 (25-65°C)	379 to 384	None to boiling point	—	—	Practically insoluble
to 340 SUS (54.4°C)	44 to 48 SUS	—	0.00066 (25-65°C)	None to boiling point	None to boiling point	—	—	Practically insoluble
to 4500 SUS (54.4°C)	* 72 to 78 SUS	—	0.00067 (20-100°C)	* None to boiling point	* None to boiling point	—	—	Practically insoluble
to 850 SUS (71.0°C)	* 86 to 100 SUS	—	0.00064 (25-65°C)	None to boiling point	None to boiling point	—	—	Practically insoluble
—	—	—	0.00067 (20-100°C)	None to boiling point	None to boiling point	—	—	Practically insoluble
—	90 to 150 SUS (130°C)	—	0.00061 (25-65°C)	None to boiling point	None to boiling point	—	—	Practically insoluble
—	300 to 400 SUS	—	0.00123 (25-99°C)	477	> 662	—	—	Practically insoluble
—	—	—	0.00179 (25-125°C)	None to boiling point	None to boiling point	—	—	Practically insoluble
10 (37.8°C)	3.8	40.1 (25°C)	—	345	385	—	—	—
—	—	—	—	375	525	—	—	Hygroscopic
—	* 50 to 60	—	—	* No self supporting combustion	—	—	—	Nil
17.5	—	—	—	375	525	—	—	Hygroscopic