APPENDIX A. — SUMMARY OF COMBUSTION PROPERTIES OF LIQUID AND GASEOUS COMPOUNDS[1] (GASEOUS COMBUSTION IN AIR AT ATMOSPHERIC PRESSURE) — Continued

Combustible	Formula	Mol wt	Sp gr (air = 1)	BP, °C	C_{st} (in air), vol pct	ΔH_f (25° C), kcal/mol	ΔH_c (net, 25° C), kcal/mol	Flash-point, °C	Minimum AIT, °C	Flammable limits	
										L_{25}, vol pct	U_{25}, vol pct
CYCLIC HYDROCARBONS (UNSATURATES)											
Methylcyclopentadiene	C_6H_8	80.10	NA	NA	2.55	NA	799	49	445	[7]1.3	[7]7.6
Cyclohexene	C_6H_{10}	82.15	2.8	83	2.40	−1.3	852	NA	310	[7]1.2	NA
Dipentene (dl-limonene)	$C_{10}H_{16}$	136.24	4.7	178	1.47	−13.2(l)	1,390	45	237	[10].75	[10]6.1
α-Pinene (turpentine)	$C_{10}H_{16}$	136.24	4.7	156	1.47	−4.1(l)	1,399	33	255	[7].7	NA
AROMATIC HYDROCARBONS (BENZENES)											
Benzene (benzol)	C_6H_6	78.12	2.69	80	2.72	19.8	757.5	−11	560	[7]1.3	[7]7.9
Toluene	C_7H_8	92.15	3.18	111	2.27	12.0	901.5	4	480	[7]1.2	[7]7.1
Ethylbenzene	C_8H_{10}	106.17	3.67	136	1.96	7.1	1,049	15	430	[7]1.0	[7]6.7
o-Xylene (1,2-dimethylbenzene	C_8H_{10}	106.17	3.67	144	1.96	4.5	1,046	32	530	[7]1.1	[7]6.4
m-Xylene	C_8H_{10}	106.17	3.67	139	1.96	4.1	1,046	29	465	[7]1.1	[7]6.4
p-Xylene	C_8H_{10}	106.17	3.67	138	1.96	4.3	1,046	27	530	[7]1.1	[7]6.6
Cumene (isopropylbenzene)	C_9H_{12}	120.20	4.15	152	1.72	.94	1,194	44	425	[7].88	[7]6.5
p-Cymene	$C_{10}H_{14}$	134.22	4.63	177	1.53	−6.9	1,342	47	435	[7].85	[7]6.5
n-Butylbenzene	$C_{10}H_{14}$	134.22	4.6	183	1.53	−3.3	1,342	71	410	[7].82	[7]5.8
sec-Butylbenzene	$C_{10}H_{14}$	134.22	4.6	173	1.53	−4.2	1,341	52	420	[7].77	[7]5.8
tert-Butylbenzene	$C_{10}H_{14}$	134.22	4.6	169	1.53	−5.4	1,340	60	450	[7].77	[7]5.8
Isobutylbenzene	$C_{10}H_{14}$	134.22	4.6	173	1.53	−5.2	1,340	55	430	[7].82	[9]6.0
p-Diethylbenzene	$C_{10}H_{14}$	134.22	4.6	183	1.53	−5.3	1,340	57	430	[7].80	NA
Styrene (vinylbenzene)	C_8H_8	104.16	3.6	145	2.05	35.2	1,019	32	490	[8]1.1	[6]6.1
Methylstyrene	C_9H_{10}	118.18	4.1	163	1.79	28.3	1,164	57 oc	495	[6].7	NA
AROMATIC HYDROCARBONS (POLYNUCLEAR)											
Naphthalene	$C_{10}H_8$	128.19	4.4	218	1.71	36.1	1,208	79	526	[5]0.88	[8]5.9
1-Methylnaphthalene	$C_{11}H_{10}$	142.20	NA	245	1.53	27.9	1,351	NA	530	[2].80	NA
Tetralin (tetrahydronaphthalene)	$C_{10}H_{12}$	132.21	4.6	208	1.58	6.6	1,294	71	385	[7].84	[10]5.0
Decalin (decahydronaphthalene)	$C_{10}H_{18}$	138.25	4.8	196	1.42	−40.4	1,420	57	250	[7].71	[7]4.9
Dimethyl decalin	$C_{12}H_{22}$	166.30	NA	232	1.18	NA	NA	84	235	[7].67	5.4
Diphenyl (biphenyl)	$C_{12}H_{10}$	154.20	5.31	255	1.42	43.5	1,461	113	540	[7].60	[10]5.8
Diphenylmethane (ditane)	$C_{13}H_{12}$	168.24	5.82	264	1.29	21.3(l)	1,591	130	485	[2].70	NA
2-Isopropylbiphenyl	$C_{15}H_{16}$	196.28	NA	269	1.09	11.8(l)	1,883	140	435	[9].53	[11]3.2
Anthracene	$C_{14}H_{10}$	178.24	6.15	340	1.25	55.2	1,661	121	540	[2].65	NA
p-Terphenyl (diphenylbenzene)	$C_{18}H_{14}$	230.31	NA	376	.97	NA	NA	207 oc	535	[2].96	NA
ALCOHOLS (ALKANOLS AND CYCLOALKANOLS)											
Methanol	CH_3OH	32.04	1.11	65	12.25	−48.1	159	11	385	6.7	[3]36
Ethanol	C_2H_5OH	46.07	1.59	79	6.53	−56.1	306	13	365	3.3	[3]19
n-Propanol	C_3H_7OH	60.11	2.07	97	4.45	−61.6	448	25	440	[4]2.2	[7]14
Isopropanol (2-propanol)	C_3H_7OH	60.11	2.1	82	4.45	−61.6	448	12	399	2.2	[7]12
n-Butanol	C_4H_9OH	74.12	2.56	117	3.37	−65.6	596	29	365	[7]1.7	[7]12
sec-Butanol	C_4H_9OH	74.12	2.6	100	3.37	−69.9	595	24	405	[7]1.7	[7]9.8
tert-Butanol	C_4H_9OH	74.12	2.6	82	3.37	−74.7	591	11	480	[7]1.9	[7]9
Isobutanol (2-methyl-1-propanol)	C_4H_9OH	74.12	2.6	108	3.37	−79.7(l)	586	28	427	[7]1.7	[7]11
n-Pentanol (amyl alcohol)	$C_5H_{11}OH$	88.15	3.04	137	2.72	−72.3	742	38	300	[7]1.4	[7]10
tert-Pentanol	$C_5H_{11}OH$	88.15	3.0	102	2.72	−78.7	738	41	435	[2]1.4	NA
Isopentanol (3-methyl-1-butanol)	$C_5H_{11}OH$	88.15	3.0	129	2.72	−85.2(l)	732	43	350	[7]1.4	[7]9
n-Hexanol	$C_6H_{13}OH$	102.18	3.53	158	2.27	−76.4	892	63	300	[7]1.2	NA
Methyl isobutyl carbinol	$C_6H_{13}OH$	102.18	NA	133	2.27	−103.8(l)	865	41	NA	[6]1.0	[6]5.5
Diisobutyl carbinol	$C_9H_{19}OH$	144.26	5.0	176	1.53	NA	NA	74	NA	[7].82	[7]6.1
Cyclohexanol	$C_6H_{11}OH$	100.16	3.5	161	2.40	−70.4	935	68	300	[5]1.2	NA
1-Methyl cyclohexanol	$C_7H_{13}OH$	114.19	3.9	155	2.05	−88.2(l)	975	65	295	[5]1.0	NA
ALCOHOLS (GLYCOLS)											
Ethylene glycol (1,2-ethanediol)	$C_2H_4(OH)_2$	62.07	2.14	198	7.73	−93.1	268	111	400	[2]3.5	NA
Propylene glycol	$C_3H_6(OH)_2$	76.11	2.52	189	4.97	−119.3(l)	394	99	410	[5]2.6	[6]12.5
Trimethylene glycol	$C_3H_6(OH)_2$	76.11	2.6	214	4.97	NA	NA	NA	400	[2]1.7	NA
Tetramethylene glycol	$C_4H_8(OH)_2$	90.12	NA	235	3.67	NA	NA	NA	390	NA	NA
βButylene glycol	$C_4H_8(OH)_2$	90.12	3.1	204	3.67	−122.9(l)	542	121	395	[2]1.9	NA
Pentamethylene glycol	$C_5H_{10}(OH)_2$	104.15	NA	260	2.90	−105.1(l)	712	129	335	NA	NA

Kuchta, J. M. (1985). **Investigation of fire and explosion accidents in the chemical, mining, and fuel-related industries-a manual.** Bulletin 680, U.S. Bureau of Mines.