

Table S2 *n*-heptanol oxidation sub-mechanism in the present model. Rate coefficients are given as $k =$ $AT^n \exp(-E_a/RT)$. Units are s^{-1} , mol^{-1} , cm^3 , cal.

No.	Reactions	A	n	E_a	Ref.
R1	<i>n</i> -heptanol $\Rightarrow$ H ₂ O+C ₇ H ₁₄ -1	2.00E+14	0.0	72000	<i>a</i>
R2	<i>n</i> -heptanol=H+FUEL1J	6.00E+15	0.0	95000	<i>b</i>
R3	<i>n</i> -heptanol=H+FUEL2J	6.00E+15	0.0	98706	<i>b</i>
R4	<i>n</i> -heptanol=H+FUEL3J	6.00E+15	0.0	98706	<i>b</i>
R5	<i>n</i> -heptanol=H+FUEL4J	6.00E+15	0.0	98706	<i>b</i>
R6	<i>n</i> -heptanol=H+FUEL5J	6.00E+15	0.0	98706	<i>b</i>
R7	<i>n</i> -heptanol=H+FUEL6J	6.00E+15	0.0	98706	<i>b</i>
R8	<i>n</i> -heptanol=H+FUEL7J	9.00E+15	0.0	100906	<i>b</i>
R9	<i>n</i> -heptanol=H+C ₇ H ₁₅ OJA	5.60E+13	0.0	103980	<i>a</i>
R10	<i>n</i> -heptanol=AC ₇ H ₁₅ +OH	4.20E+15	0.0	94164	<i>a</i>
R11	<i>n</i> -heptanol=AC ₆ H ₁₃ +CH ₂ OH	2.30E+16	0.0	86240	<i>a</i>
R12	<i>n</i> -heptanol=AC ₅ H ₁₁ +PC ₂ H ₄ OH	1.00E+17	0.0	87177	<i>a</i>
R13	<i>n</i> -heptanol=NC ₃ H ₇ +B1OL4J	2.60E+16	0.0	86539	<i>a</i>
R14	<i>n</i> -heptanol=PC ₄ H ₉ +CH ₂ CH ₂ CH ₂ OH	3.80E+16	0.0	85856	<i>a</i>
R15	<i>n</i> -heptanol=C ₂ H ₅ +PE1OL5J	4.90E+16	0.0	88409	<i>a</i>
R16	<i>n</i> -heptanol=CH ₃ +HXOL6J	5.73E+35	-5.7	96525	<i>b</i>
R17	<i>n</i> -heptanol+OH=H ₂ O+C ₇ H ₁₅ OJA	2.81E+02	3.0	-580	<i>a</i>
R18	<i>n</i> -heptanol+OH=H ₂ O+FUEL1J	1.31E+05	2.4	-1457	<i>a</i>
R19	<i>n</i> -heptanol+OH=H ₂ O+FUEL7J	5.25E+09	1.0	1590	<i>a</i>
R20	<i>n</i> -heptanol+OH=H ₂ O +FUEL6J	4.68E+07	1.6	-35	<i>a</i>
R21	<i>n</i> -heptanol+OH=H ₂ O+FUEL5J	4.68E+07	1.6	-35	<i>a</i>
R22	<i>n</i> -heptanol+OH=H ₂ O+FUEL4J	4.68E+07	1.6	-35	<i>a</i>
R23	<i>n</i> -heptanol+OH=H ₂ O+FUEL3J	4.68E+07	1.6	-35	<i>a</i>
R24	<i>n</i> -heptanol+OH=H ₂ O+FUEL2J	4.68E+07	1.6	-35	<i>a</i>
R25	<i>n</i> -heptanol+HO ₂ =H ₂ O ₂ +FUEL1J	4.00E+11	0.0	16000	<i>a</i>
R26	<i>n</i> -heptanol+HO ₂ =H ₂ O ₂ +C ₇ H ₁₅ OJA	2.50E+12	0.0	24000	<i>a</i>
R27	<i>n</i> -heptanol+HO ₂ =H ₂ O ₂ +FUEL7J	6.00E+11	0.0	17000	<i>a</i>
R28	<i>n</i> -heptanol+HO ₂ =H ₂ O ₂ +FUEL6J	4.00E+11	0.0	15500	<i>a</i>
R29	<i>n</i> -heptanol+HO ₂ =H ₂ O ₂ +FUEL5J	4.00E+11	0.0	15500	<i>a</i>
R30	<i>n</i> -heptanol+HO ₂ =H ₂ O ₂ +FUEL4J	4.00E+11	0.0	15500	<i>a</i>
R31	<i>n</i> -heptanol+HO ₂ =H ₂ O ₂ +FUEL3J	4.00E+11	0.0	15500	<i>a</i>
R32	<i>n</i> -heptanol+HO ₂ =H ₂ O ₂ +FUEL2J	4.00E+11	0.0	15500	<i>a</i>
R33	<i>n</i> -heptanol+O ₂ =HO ₂ +FUEL1J	1.40E+10	0.0	48098	<i>a</i>
R34	<i>n</i> -heptanol+O ₂ =HO ₂ +FUEL2J	1.40E+10	0.0	49098	<i>a</i>
R35	<i>n</i> -heptanol+O ₂ =HO ₂ +FUEL3J	1.40E+10	0.0	48098	<i>a</i>
R36	<i>n</i> -heptanol+O ₂ =HO ₂ +FUEL4J	1.40E+10	0.0	48098	<i>a</i>
R37	<i>n</i> -heptanol+O ₂ =HO ₂ +FUEL5J	1.40E+10	0.0	48098	<i>a</i>
R38	<i>n</i> -heptanol+O ₂ =HO ₂ +FUEL6J	1.40E+10	0.0	48098	<i>a</i>
R39	<i>n</i> -heptanol+O ₂ =HO ₂ +FUEL7J	2.10E+10	0.0	51297	<i>a</i>
R40	<i>n</i> -heptanol+O ₂ =HO ₂ +C ₇ H ₁₅ OJA	2.50E+12	0.0	55000	<i>a</i>
R41	<i>n</i> -heptanol+O=OH+FUEL1J	1.45E+05	2.5	877	<i>a</i>
R42	<i>n</i> -heptanol+O=OH+FUEL2J	2.60E+13	0.0	5200	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R43	n -heptanol+O=OH+FUEL3J	2.60E+13	0.0	5200	<i>a</i>
R44	n -heptanol+O=OH+FUEL4J	2.60E+13	0.0	5200	<i>a</i>
R45	n -heptanol+O=OH+FUEL5J	2.60E+13	0.0	5200	<i>a</i>
R46	n -heptanol+O=OH+FUEL6J	2.60E+13	0.0	5200	<i>a</i>
R47	n -heptanol+O=OH+FUEL7J	5.10E+13	0.0	7850	<i>a</i>
R48	n -heptanol+O=OH+C ₇ H ₁₅ OJA	1.46E-03	4.7	1727	<i>a</i>
R49	n -heptanol+H=H ₂ +FUEL1J	1.79E+05	2.5	3420	<i>a</i>
R50	n -heptanol+H=H ₂ +FUEL2J	9.00E+06	2.0	5000	<i>a</i>
R51	n -heptanol+H=H ₂ +FUEL3J	1.30E+06	2.4	4471	<i>a</i>
R52	n -heptanol+H=H ₂ +FUEL4J	1.30E+06	2.4	4471	<i>a</i>
R53	n -heptanol+H=H ₂ +FUEL5J	1.30E+06	2.4	4471	<i>a</i>
R54	n -heptanol+H=H ₂ +FUEL6J	1.30E+06	2.4	4471	<i>a</i>
R55	n -heptanol+H=H ₂ +FUEL7J	2.90E+07	2.0	7700	<i>a</i>
R56	n -heptanol+H=H ₂ +C ₇ H ₁₅ OJA	5.53E-23	10.6	-4459	<i>a</i>
R57	n -heptanol+CH ₃ =CH ₄ +FUEL1J	1.99E+01	3.4	7635	<i>a</i>
R58	n -heptanol+CH ₃ =CH ₄ +FUEL2J	2.00E+11	0.0	9600	<i>a</i>
R59	n -heptanol+CH ₃ =CH ₄ +FUEL3J	2.00E+11	0.0	9600	<i>a</i>
R60	n -heptanol+CH ₃ =CH ₄ +FUEL4J	2.00E+11	0.0	9600	<i>a</i>
R61	n -heptanol+CH ₃ =CH ₄ +FUEL5J	2.00E+11	0.0	9600	<i>a</i>
R62	n -heptanol+CH ₃ =CH ₄ +FUEL6J	2.00E+11	0.0	9600	<i>a</i>
R63	n -heptanol+CH ₃ =CH ₄ +FUEL7J	3.00E-01	4.0	8200	<i>a</i>
R64	n -heptanol+CH ₃ =CH ₄ +C ₇ H ₁₅ OJA	2.04E+00	3.6	7722	<i>a</i>
R65	n -heptanol+HCO=CH ₂ O+FUEL1J	1.00E+07	1.9	17000	<i>a</i>
R66	n -heptanol+HCO=CH ₂ O+FUEL2J	1.00E+07	1.9	17000	<i>a</i>
R67	n -heptanol+HCO=CH ₂ O+FUEL3J	1.00E+07	1.9	17000	<i>a</i>
R68	n -heptanol+HCO=CH ₂ O+FUEL4J	1.00E+07	1.9	17000	<i>a</i>
R69	n -heptanol+HCO=CH ₂ O+FUEL5J	1.00E+07	1.9	17000	<i>a</i>
R70	n -heptanol+HCO=CH ₂ O+FUEL6J	1.00E+07	1.9	17000	<i>a</i>
R71	n -heptanol+HCO=CH ₂ O+FUEL7J	1.00E+05	2.5	18500	<i>a</i>
R72	n -heptanol+HCO=CH ₂ O+C ₇ H ₁₅ OJA	3.40E+04	2.5	13500	<i>a</i>
R73	n -heptanol+CH ₂ OH=CH ₃ OH+FUEL1J	6.00E+01	3.0	12000	<i>a</i>
R74	n -heptanol+CH ₂ OH=CH ₃ OH+FUEL2J	6.00E+01	3.0	12000	<i>a</i>
R75	n -heptanol+CH ₂ OH=CH ₃ OH+FUEL3J	6.00E+01	3.0	12000	<i>a</i>
R76	n -heptanol+CH ₂ OH=CH ₃ OH+FUEL4J	6.00E+01	3.0	12000	<i>a</i>
R77	n -heptanol+CH ₂ OH=CH ₃ OH+FUEL5J	6.00E+01	3.0	12000	<i>a</i>
R78	n -heptanol+CH ₂ OH=CH ₃ OH+FUEL6J	6.00E+01	3.0	12000	<i>a</i>
R79	n -heptanol+CH ₂ OH=CH ₃ OH+FUEL7J	6.00E+01	3.0	14000	<i>a</i>
R80	n -heptanol+CH ₂ OH=CH ₃ OH+C ₇ H ₁₅ OJA	1.20E+02	2.8	10800	<i>a</i>
R81	n -heptanol+CH ₃ O=CH ₃ OH+FUEL1J	1.50E+11	0.0	4500	<i>a</i>
R82	n -heptanol+CH ₃ O=CH ₃ OH+FUEL2J	1.50E+11	0.0	4500	<i>a</i>
R83	n -heptanol+CH ₃ O=CH ₃ OH+FUEL3J	1.50E+11	0.0	4500	<i>a</i>
R84	n -heptanol+CH ₃ O=CH ₃ OH+FUEL4J	1.50E+11	0.0	4500	<i>a</i>
R85	n -heptanol+CH ₃ O=CH ₃ OH+FUEL5J	1.50E+11	0.0	4500	<i>a</i>
R86	n -heptanol+CH ₃ O=CH ₃ OH+FUEL6J	1.50E+11	0.0	4500	<i>a</i>
R87	n -heptanol+CH ₃ O=CH ₃ OH+FUEL7J	1.60E+11	0.0	7300	<i>a</i>
R88	n -heptanol+CH ₃ O=CH ₃ OH+C ₇ H ₁₅ OJA	2.30E+10	0.0	2900	<i>a</i>
R89	n -heptanol+CH ₃ O ₂ =CH ₃ O ₂ H+FUEL1J	3.00E+12	0.0	17500	<i>a</i>
R90	n -heptanol+CH ₃ O ₂ =CH ₃ O ₂ H+FUEL2J	3.00E+12	0.0	17500	<i>a</i>
R91	n -heptanol+CH ₃ O ₂ =CH ₃ O ₂ H+FUEL3J	3.00E+12	0.0	17500	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R92	n -heptanol+CH ₃ O ₂ =CH ₃ O ₂ H+FUEL4J	3.00E+12	0.0	17500	<i>a</i>
R93	n -heptanol+CH ₃ O ₂ =CH ₃ O ₂ H+FUEL5J	3.00E+12	0.0	17500	<i>a</i>
R94	n -heptanol+CH ₃ O ₂ =CH ₃ O ₂ H+FUEL6J	3.00E+12	0.0	17500	<i>a</i>
R95	n -heptanol+CH ₃ O ₂ =CH ₃ O ₂ H+FUEL7J	6.00E+12	0.0	20000	<i>a</i>
R96	n -heptanol+CH ₃ O ₂ =CH ₃ O ₂ H+C ₇ H ₁₅ OJA	1.50E+12	0.0	15000	<i>a</i>
R97	n -heptanol+C ₂ H ₅ =C ₂ H ₆ +FUEL1J	2.00E+11	0.0	11000	<i>a</i>
R98	n -heptanol+C ₂ H ₅ =C ₂ H ₆ +FUEL2J	2.00E+11	0.0	11000	<i>a</i>
R99	n -heptanol+C ₂ H ₅ =C ₂ H ₆ +FUEL3J	2.00E+11	0.0	11000	<i>a</i>
R100	n -heptanol+C ₂ H ₅ =C ₂ H ₆ +FUEL4J	2.00E+11	0.0	11000	<i>a</i>
R101	n -heptanol+C ₂ H ₅ =C ₂ H ₆ +FUEL5J	2.00E+11	0.0	11000	<i>a</i>
R102	n -heptanol+C ₂ H ₅ =C ₂ H ₆ +FUEL6J	2.00E+11	0.0	11000	<i>a</i>
R103	n -heptanol+C ₂ H ₅ =C ₂ H ₆ +FUEL7J	3.00E+11	0.0	13500	<i>a</i>
R104	n -heptanol+C ₂ H ₅ =C ₂ H ₆ +C ₇ H ₁₅ OJA	1.00E+11	0.0	9200	<i>a</i>
R105	FUEL1J=AC ₅ H ₁₁ +CH ₃ CHO	2.00E+13	0.0	28700	<i>a</i>
R106	FUEL7J=C ₂ H ₄ +PE1OL5J	2.00E+13	0.0	28700	<i>a</i>
R107	FUEL6J=C ₃ H ₆ +B1OL4J	2.00E+13	0.0	28700	<i>a</i>
R108	FUEL5J=CH ₂ CH ₂ CH ₂ OH+C ₄ H ₈	2.00E+13	0.0	28700	<i>a</i>
R109	FUEL5J=CH ₃ +HXOL5E	2.00E+13	0.0	31000	<i>a</i>
R110	FUEL4J=C ₂ H ₅ +PE1OL4E	2.00E+13	0.0	28700	<i>a</i>
R111	FUEL4J=PC ₂ H ₄ OH+C ₅ H ₁₀	2.00E+13	0.0	28700	<i>a</i>
R112	FUEL3J=NC ₃ H ₇ +B1OL3E	2.00E+13	0.0	28700	<i>a</i>
R113	FUEL3J=C ₆ H ₁₂ -1+CH ₂ OH	2.00E+13	0.0	27200	<i>a</i>
R114	FUEL2J=PC ₄ H ₉ +C ₂ H ₅ CH ₂ OH	2.00E+13	0.0	28700	<i>a</i>
R115	OH+C ₇ H ₁₄ -1=FUEL2J	9.93E+11	0.0	-960	<i>a</i>
R116	FUEL1J+M=C ₆ H ₁₃ HCO+H+M	1.00E+14	0.0	25000	<i>a</i>
R117	C ₇ H ₁₅ OJA+M=C ₆ H ₁₃ HCO+H+M	1.16E+35	-5.9	25274	<i>a</i>
R118	FUEL2J=C ₆ H ₁₃ HCO+H	1.20E+13	0.0	37412	<i>a</i>
R119	FUEL1E+H=FUEL1J	2.50E+11	0.5	2620	<i>b</i>
R120	FUEL2J=FUEL2E+H	1.20E+13	0.0	35602	<i>a</i>
R121	FUEL3J=FUEL3E+H	1.20E+13	0.0	34252	<i>a</i>
R122	FUEL3J=FUEL2E+H	1.20E+13	0.0	37412	<i>a</i>
R123	FUEL4J=FUEL4E+H	1.20E+13	0.0	34322	<i>a</i>
R124	FUEL4J=FUEL3E+H	1.20E+13	0.0	34252	<i>a</i>
R125	FUEL5J=FUEL4E+H	1.20E+13	0.0	34322	<i>a</i>
R126	FUEL5J=FUEL5E+H	1.80E+13	0.0	37082	<i>a</i>
R127	FUEL6J=FUEL5E+H	1.20E+13	0.0	34322	<i>a</i>
R128	FUEL6J=FUEL6E+H	1.80E+13	0.0	37082	<i>a</i>
R129	FUEL7J=FUEL6E+H	1.20E+13	0.0	34882	<i>a</i>
R130	FUEL6J=FUEL2J	7.93E+07	1.0	12897	<i>b</i>
R131	FUEL4J=FUEL1J	9.59E+08	1.4	39700	<i>b</i>
R132	FUEL5J=FUEL1J	1.39E+09	1.0	33760	<i>b</i>
R133	FUEL5J=FUEL2J	2.54E+09	0.4	19760	<i>b</i>
R134	C ₇ H ₁₅ OJA=FUEL3J	5.32E-10	6.2	6710	<i>b</i>
R135	C ₇ H ₁₅ OJA=FUEL4J	1.32E-01	3.6	2689	<i>b</i>
R136	C ₇ H ₁₅ OJA=FUEL5J	5.32E-10	6.2	6710	<i>b</i>
R137	FUEL1J+O ₂ =C ₆ H ₁₃ HCO+HO ₂	1.00E+13	0.0	5564	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R138	FUEL2J+O ₂ =C ₆ H ₁₃ HCO+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R139	C ₇ H ₁₅ OJA+O ₂ =C ₆ H ₁₃ HCO+HO ₂	4.00E+10	0.0	1100	<i>a</i>
R140	FUEL7J+O ₂ =FUEL6E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R141	FUEL6J+O ₂ =FUEL6E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R142	FUEL6J+O ₂ =FUEL5E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R143	FUEL5J+O ₂ =FUEL5E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R144	FUEL5J+O ₂ =FUEL4E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R145	FUEL4J+O ₂ =FUEL4E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R146	FUEL4J+O ₂ =FUEL3E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R147	FUEL3J+O ₂ =FUEL3E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R148	FUEL3J+O ₂ =FUEL2E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R149	FUEL2J+O ₂ =FUEL2E+HO ₂	1.80E+10	0.0	-2000	<i>a</i>
R150	FUEL1J+O ₂ =FUEL1O ₂	6.00E+18	-2.5	0	<i>a</i>
R151	C ₇ H ₁₅ OJA+CO=CO ₂ +AC ₇ H ₁₅	4.68E+02	3.2	5380	<i>a</i>
R152	C ₇ H ₁₅ OJA+H=CH ₂ OH+AC ₆ H ₁₃	3.00E+13	0.0	0	<i>a</i>
R153	C ₇ H ₁₅ OJA+OH=C ₆ H ₁₃ HCO+H ₂ O	1.00E+13	0.0	0	<i>a</i>
R154	FUEL1J+HO ₂ =C ₆ H ₁₃ HCO+H ₂ O ₂	4.00E+13	0.0	0	<i>a</i>
R155	FUEL1J+OH=C ₆ H ₁₃ HCO+H ₂ O	5.00E+12	0.0	0	<i>a</i>
R156	FUEL1J+O=C ₆ H ₁₃ HCO+OH	1.00E+14	0.0	0	<i>a</i>
R157	FUEL6E+OH=H ₂ O+FUEL5E7J	3.10E+06	2.0	-300	<i>a</i>
R158	FUEL6E+O=OH+FUEL5E7J	4.00E+13	0.0	4000	<i>a</i>
R160	FUEL6E+H=H ₂ +FUEL5E7J	6.55E+12	0.0	4445	<i>a</i>
R161	FUEL6E+CH ₃ =CH ₄ +FUEL5E7J	2.00E+11	0.0	6800	<i>a</i>
R162	FUEL6E+HO ₂ =H ₂ O ₂ +FUEL5E7J	1.00E+11	0.0	17060	<i>a</i>
R163	FUEL6E+OH=CH ₂ O+HXOL6J	1.00E+11	0.0	-4000	<i>a</i>
R164	FUEL6E+O=HCO+HXOL6J	1.00E+11	0.0	-1050	<i>a</i>
R165	FUEL6E=AC ₃ H ₅ +B1OL4J	8.00E+15	0.0	66425	<i>a</i>
R166	FUEL6E=DC ₄ H ₇ -1+CH ₂ CH ₂ CH ₂ OH	1.00E+17	0.0	86270	<i>a</i>
R167	FUEL6E=EC ₅ H ₉ -1+PC ₂ H ₄ OH	1.00E+17	0.0	84640	<i>a</i>
R168	FUEL6E=GC ₇ H ₁₃ -1+OH	2.37E+20	-1.2	94340	<i>c</i>
R169	FUEL6E=C ₂ H ₃ +PE1OL5J	6.64E+19	-1.1	74590	<i>c</i>
R170	FUEL6E+OH=FUEL6E1J+H ₂ O	1.31E+05	2.4	-1456	<i>a</i>
R171	FUEL6E+O=FUEL6E1J+OH	1.45E+05	2.5	876	<i>a</i>
R172	FUEL6E+H=FUEL6E1J+H ₂	1.79E+05	2.5	3420	<i>a</i>
R173	FUEL6E+CH ₃ =FUEL6E1J+CH ₄	1.99E+01	3.4	7634	<i>a</i>
R174	FUEL6E+HO ₂ =FUEL6E1J+H ₂ O ₂	8.20E+03	2.5	10750	<i>a</i>
R175	FUEL5E+OH=H ₂ O+FUEL5E7J	4.19E+06	2.0	-543	<i>a</i>
R176	FUEL5E+O=OH+FUEL5E7J	4.00E+13	0.0	4000	<i>a</i>
R177	FUEL5E+H=H ₂ +FUEL5E7J	6.55E+12	0.0	4445	<i>a</i>
R178	FUEL5E+CH ₃ =CH ₄ +FUEL5E7J	2.00E+11	0.0	6800	<i>a</i>
R179	FUEL5E+HO ₂ =H ₂ O ₂ +FUEL5E7J	1.00E+11	0.0	17060	<i>a</i>
R180	FUEL5E+OH=H ₂ O+FUEL4E6J	4.19E+06	2.0	-543	<i>a</i>
R181	FUEL5E+O=OH+FUEL4E6J	4.00E+13	0.0	4000	<i>a</i>
R182	FUEL5E+H=H ₂ +FUEL4E6J	6.55E+12	0.0	4445	<i>a</i>
R183	FUEL5E+CH ₃ =CH ₄ +FUEL4E6J	2.00E+11	0.0	6800	<i>a</i>
R184	FUEL5E+HO ₂ =H ₂ O ₂ +FUEL4E6J	1.00E+11	0.0	17060	<i>a</i>
R185	FUEL5E+OH=CH ₃ CHO+PE1OL5J	1.00E+11	0.0	-4000	<i>a</i>
R186	FUEL5E+O=CH ₂ HCO+PE1OL5J	1.00E+11	0.0	-1050	<i>a</i>
R187	FUEL5E+OH=C ₂ H ₅ +PE1*O5OL	1.00E+11	0.0	-4000	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R188	FUEL5E+O=C ₂ H ₅ +PE1J*O5OL	1.00E+11	0.0	-1050	<i>a</i>
R189	FUEL5E=AC ₃ H ₅ +B1OL4J	8.00E+15	0.0	70550	<i>a</i>
R190	FUEL5E=CH ₂ CH ₂ CH ₂ OH+CC ₄ H ₇ -1	8.00E+15	0.0	66425	<i>a</i>
R191	FUEL5E=EC ₃ H ₉ -2+PC ₂ H ₄ OH	1.00E+17	0.0	86270	<i>a</i>
R192	FUEL5E+OH=FUEL5E1J+H ₂ O	1.31E+05	2.4	-1456	<i>a</i>
R193	FUEL5E+O=FUEL5E1J+OH	1.45E+05	2.5	876	<i>a</i>
R194	FUEL5E+H=FUEL5E1J+H ₂	1.79E+05	2.5	3420	<i>a</i>
R195	FUEL5E+CH ₃ =FUEL5E1J+CH ₄	1.99E+01	3.4	7634	<i>a</i>
R196	FUEL5E+HO ₂ =FUEL5E1J+H ₂ O ₂	8.20E+03	2.5	10750	<i>a</i>
R197	FUEL4E+OH=FUEL4E6J+H ₂ O	4.19E+06	2.0	-543	<i>a</i>
R198	FUEL4E+O=FUEL4E6J+OH	4.00E+13	0.0	4000	<i>a</i>
R199	FUEL4E+H=FUEL4E6J+H ₂	6.55E+12	0.0	4445	<i>a</i>
R200	FUEL4E+CH ₃ =FUEL4E6J+CH ₄	2.00E+11	0.0	6800	<i>a</i>
R201	FUEL4E+HO ₂ =FUEL4E6J+H ₂ O ₂	1.00E+11	0.0	17060	<i>a</i>
R202	FUEL4E+OH=FUEL3E5J+H ₂ O	4.19E+06	2.0	-543	<i>a</i>
R203	FUEL4E+O=FUEL3E5J+OH	4.00E+13	0.0	4000	<i>a</i>
R204	FUEL4E+H=FUEL3E5J+H ₂	6.55E+12	0.0	4445	<i>a</i>
R205	FUEL4E+CH ₃ =FUEL3E5J+CH ₄	2.00E+11	0.0	6800	<i>a</i>
R206	FUEL4E+HO ₂ =FUEL3E5J+H ₂ O ₂	1.00E+11	0.0	17060	<i>a</i>
R207	FUEL4E+OH=ETHCO+B1OL4J	1.00E+11	0.0	-4000	<i>a</i>
R208	FUEL4E+O=CH ₂ CH ₂ HCO+B1OL4J	1.00E+11	0.0	-1050	<i>a</i>
R209	FUEL4E+OH=NC ₃ H ₇ +B1*O4OL	1.00E+11	0.0	-4000	<i>a</i>
R210	FUEL4E+O=NC ₃ H ₇ +B1J*O4OL	1.00E+11	0.0	-1050	<i>a</i>
R211	FUEL4E=CC ₃ H ₉ -1+PC ₂ H ₄ OH	8.00E+15	0.0	70550	<i>a</i>
R212	FUEL4E=AC ₆ H ₁₁ -3+CH ₂ OH	1.00E+17	0.0	84570	<i>a</i>
R213	FUEL4E+OH=FUEL4E1J+H ₂ O	1.31E+05	2.4	-1456	<i>a</i>
R214	FUEL4E+O=FUEL4E1J+OH	1.45E+05	2.5	876	<i>a</i>
R215	FUEL4E+H=FUEL4E1J+H ₂	1.79E+05	2.5	3420	<i>a</i>
R216	FUEL4E+CH ₃ =FUEL4E1J+CH ₄	1.99E+01	3.4	7634	<i>a</i>
R217	FUEL4E+HO ₂ =FUEL4E1J+H ₂ O ₂	8.20E+03	2.5	10750	<i>a</i>
R218	FUEL3E+OH=FUEL2E4J+H ₂ O	4.19E+06	2.0	-543	<i>a</i>
R219	FUEL3E+O=FUEL2E4J+OH	4.00E+13	0.0	4000	<i>a</i>
R220	FUEL3E+H=FUEL2E4J+H ₂	6.55E+12	0.0	4445	<i>a</i>
R221	FUEL3E+CH ₃ =FUEL2E4J+CH ₄	2.00E+11	0.0	6800	<i>a</i>
R222	FUEL3E+HO ₂ =FUEL2E4J+H ₂ O ₂	1.00E+11	0.0	17060	<i>a</i>
R223	FUEL3E+OH=FUEL3E5J+H ₂ O	4.19E+06	2.0	-543	<i>a</i>
R224	FUEL3E+O=FUEL3E5J+OH	4.00E+13	0.0	4000	<i>a</i>
R225	FUEL3E+H=FUEL3E5J+H ₂	6.55E+12	0.0	4445	<i>a</i>
R226	FUEL3E+CH ₃ =FUEL3E5J+CH ₄	2.00E+11	0.0	6800	<i>a</i>
R227	FUEL3E+HO ₂ =FUEL3E5J+H ₂ O ₂	1.00E+11	0.0	17060	<i>a</i>
R228	FUEL3E+OH=CH ₂ CH ₂ CH ₂ OH+NC ₃ H ₇ HCO	1.00E+11	0.0	-4000	<i>a</i>
R229	FUEL3E+O=CH ₂ CH ₂ CH ₂ OH+C ₃ H ₇ CO	1.00E+11	0.0	-1050	<i>a</i>
R230	FUEL3E+OH=PC ₄ H ₉ +HOC ₂ H ₄ HCO	1.00E+11	0.0	-4000	<i>a</i>
R231	FUEL3E+O=PC ₄ H ₉ +HOC ₂ H ₄ CO	1.00E+11	0.0	-1050	<i>a</i>
R232	FUEL3E=CC ₆ H ₁₁ -1+CH ₂ OH	8.00E+15	0.0	71400	<i>a</i>
R233	FUEL3E+OH=FUEL3E1J+H ₂ O	1.31E+05	2.4	-1456	<i>a</i>
R234	FUEL3E+O=FUEL3E1J+OH	1.45E+05	2.5	876	<i>a</i>
R235	FUEL3E+H=FUEL3E1J+H ₂	1.79E+05	2.5	3420	<i>a</i>
R236	FUEL3E+CH ₃ =FUEL3E1J+CH ₄	1.99E+01	3.4	7634	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R237	FUEL3E+HO ₂ =FUEL3E1J+H ₂ O ₂	8.20E+03	2.5	10750	<i>a</i>
R238	FUEL2E+OH=FUEL2E4J+H ₂ O	4.19E+06	2.0	-543	<i>a</i>
R239	FUEL2E+O=FUEL2E4J+OH	4.00E+13	0.0	4000	<i>a</i>
R240	FUEL2E+H=FUEL2E4J+H ₂	6.55E+12	0.0	4445	<i>a</i>
R241	FUEL2E+CH ₃ =FUEL2E4J+CH ₄	2.00E+11	0.0	6800	<i>a</i>
R242	FUEL2E+HO ₂ =FUEL2E4J+H ₂ O ₂	1.00E+11	0.0	17060	<i>a</i>
R243	FUEL2E+OH=FUEL2E1J+H ₂ O	1.31E+05	2.4	-1456	<i>a</i>
R244	FUEL2E+O=FUEL2E1J+OH	1.45E+05	2.5	876	<i>a</i>
R245	FUEL2E+H=FUEL2E1J+H ₂	1.79E+05	2.5	3420	<i>a</i>
R246	FUEL2E+CH ₃ =FUEL2E1J+CH ₄	1.99E+01	3.4	7634	<i>a</i>
R247	FUEL2E+HO ₂ =FUEL2E1J+H ₂ O ₂	8.20E+03	2.5	10750	<i>a</i>
R248	FUEL2E+OH=PC ₂ H ₄ OH+NC ₄ H ₉ HCO	1.00E+11	0.0	-4000	<i>a</i>
R249	FUEL2E+O=PC ₂ H ₄ OH+NC ₄ H ₉ CO	1.00E+11	0.0	-1050	<i>a</i>
R250	FUEL2E+OH=AC ₃ H ₁₁ +HOCH ₂ HCO	1.00E+11	0.0	-4000	<i>a</i>
R251	FUEL2E+O=AC ₃ H ₁₁ +HOCH ₂ CO	1.00E+11	0.0	-1050	<i>a</i>
R252	FUEL2E=NC ₃ H ₇ +B1OL2E4J	8.00E+15	0.0	67850	<i>a</i>
R253	FUEL2E=OH+CC ₇ H ₁₃ -1	8.00E+15	0.0	78850	<i>a</i>
R254	FUEL6E1J=EC ₅ H ₉ -1+CH ₃ CHO	2.00E+13	0.0	28750	<i>a</i>
R255	FUEL6E1J+M=C ₆ H ₁₁ HCO-1+H+M	1.00E+14	0.0	25000	<i>a</i>
R256	FUEL6E1J+O ₂ =C ₆ H ₁₁ HCO-1+HO ₂	1.00E+13	0.0	5564	<i>a</i>
R257	FUEL6E1J+O=C ₆ H ₁₁ HCO-1+OH	1.00E+14	0.0	0	<i>a</i>
R258	FUEL6E1J+HO ₂ =C ₆ H ₁₁ HCO-1+2OH	4.00E+13	0.0	0	<i>a</i>
R259	FUEL6E1J+OH=C ₆ H ₁₁ HCO-1+H ₂ O	5.00E+12	0.0	0	<i>a</i>
R260	FUEL5E1J=CH ₃ CHO+EC ₅ H ₉ -2	2.00E+13	0.0	13030	<i>a</i>
R261	FUEL5E1J+M=C ₆ H ₁₁ HCO-2+H+M	1.00E+14	0.0	25000	<i>a</i>
R262	FUEL5E1J+O ₂ =C ₆ H ₁₁ HCO-2+HO ₂	1.00E+13	0.0	5564	<i>a</i>
R263	FUEL5E1J+O=C ₆ H ₁₁ HCO-2+OH	1.00E+14	0.0	0	<i>a</i>
R264	FUEL5E1J+HO ₂ =C ₆ H ₁₁ HCO-2+2OH	4.00E+13	0.0	0	<i>a</i>
R265	FUEL5E1J+OH=C ₆ H ₁₁ HCO-2+H ₂ O	5.00E+12	0.0	0	<i>a</i>
R266	FUEL4E1J=CH ₃ CHO+CC ₅ H ₉ -1	2.00E+13	0.0	13030	<i>a</i>
R267	FUEL4E1J+M=C ₆ H ₁₁ HCO-3+H+M	1.00E+14	0.0	25000	<i>a</i>
R268	FUEL4E1J+O ₂ =C ₆ H ₁₁ HCO-3+HO ₂	1.00E+13	0.0	5564	<i>a</i>
R269	FUEL4E1J+O=C ₆ H ₁₁ HCO-3+OH	1.00E+14	0.0	0	<i>a</i>
R270	FUEL4E1J+HO ₂ =C ₆ H ₁₁ HCO-3+2OH	4.00E+13	0.0	0	<i>a</i>
R271	FUEL4E1J+OH=C ₆ H ₁₁ HCO-3+H ₂ O	5.00E+12	0.0	0	<i>a</i>
R272	FUEL5E7J=C ₄ H ₆ +CH ₂ CH ₂ CH ₂ OH	2.00E+13	0.0	36400	<i>a</i>
R273	FUEL4E6J=C ₅ H ₈ -13+PC ₂ H ₄ OH	2.00E+13	0.0	36400	<i>a</i>
R274	FUEL3E5J=C ₆ H ₁₀ -13+CH ₂ OH	2.00E+13	0.0	29160	<i>a</i>
R275	C ₇ H ₁₂ -13+OH=FUEL2E4J	9.93E+11	0.0	-960	<i>a</i>
R276	FUEL2E4J=C ₂ H ₅ +PE1OL2E4E	2.00E+13	0.0	39090	<i>a</i>
R277	FUEL3E1J=CH ₃ CHO+AC ₅ H ₉ -1	2.00E+13	0.0	41590	<i>a</i>
R278	FUEL3E1J+M=C ₆ H ₁₁ HCO-4+H+M	1.00E+14	0.0	25000	<i>a</i>
R279	FUEL3E1J+O ₂ =C ₆ H ₁₁ HCO-4+HO ₂	1.00E+13	0.0	5564	<i>a</i>
R280	FUEL3E1J+O=C ₆ H ₁₁ HCO-4+OH	1.00E+14	0.0	0	<i>a</i>
R281	FUEL3E1J+HO ₂ =C ₆ H ₁₁ HCO-4+2OH	4.00E+13	0.0	0	<i>a</i>
R282	FUEL3E1J+OH=C ₆ H ₁₁ HCO-4+H ₂ O	5.00E+12	0.0	0	<i>a</i>
R283	C ₆ H ₁₁ HCO-4+OH=H ₂ O+C ₆ H ₁₁ CO-4	2.69E+10	0.8	-340	<i>a</i>
R284	C ₆ H ₁₁ HCO-4+H=H ₂ +C ₆ H ₁₁ CO-4	4.00E+13	0.0	4200	<i>a</i>
R285	C ₆ H ₁₁ HCO-4+O=OH+C ₆ H ₁₁ CO-4	5.00E+12	0.0	1790	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R286	$C_6H_{11}HCO-4+CH_3=CH_4+C_6H_{11}CO-4$	1.70E+12	0.0	8440	<i>a</i>
R287	$C_6H_{11}HCO-4+HO_2=H_2O_2+C_6H_{11}CO-4$	2.80E+12	0.0	13600	<i>a</i>
R288	$C_6H_{11}HCO-3+OH=H_2O+C_6H_{11}CO-3$	2.69E+10	0.8	-340	<i>a</i>
R289	$C_6H_{11}HCO-3+H=H_2+C_6H_{11}CO-3$	4.00E+13	0.0	4200	<i>a</i>
R290	$C_6H_{11}HCO-3+O=OH+C_6H_{11}CO-3$	5.00E+12	0.0	1790	<i>a</i>
R291	$C_6H_{11}HCO-3+CH_3=CH_4+C_6H_{11}CO-3$	1.70E+12	0.0	8440	<i>a</i>
R292	$C_6H_{11}HCO-3+HO_2=H_2O_2+C_6H_{11}CO-3$	2.80E+12	0.0	13600	<i>a</i>
R293	$C_6H_{11}HCO-2+OH=H_2O+C_6H_{11}CO-2$	2.69E+10	0.8	-340	<i>a</i>
R294	$C_6H_{11}HCO-2+H=H_2+C_6H_{11}CO-2$	4.00E+13	0.0	4200	<i>a</i>
R295	$C_6H_{11}HCO-2+O=OH+C_6H_{11}CO-2$	5.00E+12	0.0	1790	<i>a</i>
R296	$C_6H_{11}HCO-2+CH_3=CH_4+C_6H_{11}CO-2$	1.70E+12	0.0	8440	<i>a</i>
R297	$C_6H_{11}HCO-2+HO_2=H_2O_2+C_6H_{11}CO-2$	2.80E+12	0.0	13600	<i>a</i>
R298	$C_6H_{11}HCO-1+OH=H_2O+C_6H_{11}CO-1$	2.69E+10	0.8	-340	<i>a</i>
R299	$C_6H_{11}HCO-1+H=H_2+C_6H_{11}CO-1$	4.00E+13	0.0	4200	<i>a</i>
R300	$C_6H_{11}HCO-1+O=OH+C_6H_{11}CO-1$	5.00E+12	0.0	1790	<i>a</i>
R301	$C_6H_{11}HCO-1+CH_3=CH_4+C_6H_{11}CO-1$	1.70E+12	0.0	8440	<i>a</i>
R302	$C_6H_{11}HCO-1+HO_2=H_2O_2+C_6H_{11}CO-1$	2.80E+12	0.0	13600	<i>a</i>
R303	$C_6H_{11}CO-1=CO+FC_6H_{11}-1$	8.64E+15	0.0	14400	<i>a</i>
R304	$C_6H_{11}CO-2=CO+FC_6H_{11}-2$	8.64E+15	0.0	14400	<i>a</i>
R305	$C_6H_{11}CO-3=CO+AC_6H_{11}-3$	8.64E+15	0.0	14400	<i>a</i>
R306	$C_6H_{11}CO-4=CO+CC_6H_{11}-1$	8.64E+15	0.0	14400	<i>a</i>
R307	$FC_6H_{11}-2=C_2H_4+CC_4H_7-1$	4.00E+13	0.0	35060	<i>a</i>
R308	$FC_6H_{11}-2+O_2=C_6H_{10}-14+HO_2$	5.90E+05	0.0	0	<i>a</i>
R309	$FC_6H_{11}-2=C_6H_{10}-14+H$	1.20E+13	0.0	31600	<i>a</i>
R310	$C_6H_{10}-14+O=>EC_5H_9-2+HCO$	2.00E+11	0.0	-1050	<i>c</i>
R311	$C_6H_{10}-14+OH=>EC_5H_9-2+CH_2O$	1.00E+12	0.0	0	<i>c</i>
R312	$C_6H_{10}-14+OH=>C_2H_3+C_4H_6+H_2O$	2.76E+04	2.6	-1919	<i>c</i>
R313	$C_6H_{10}-14+HO_2=>C_2H_3+C_4H_6+H_2O_2$	4.82E+03	2.6	10530	<i>c</i>
R314	$C_6H_{10}-14+H=>C_2H_3+C_4H_6+H_2$	3.38E+05	2.4	207	<i>c</i>
R315	$FUEL1J+O_2=FUEL1O_2$	6.00E+18	-2.5	0	<i>a</i>
R316	$FUEL2J+O_2=FUEL2O_2$	1.80E+19	-2.5	0	<i>a</i>
R317	$FUEL3J+O_2=FUEL3O_2$	1.80E+19	-2.5	0	<i>a</i>
R318	$FUEL4J+O_2=FUEL4O_2$	1.80E+19	-2.5	0	<i>a</i>
R319	$FUEL5J+O_2=FUEL5O_2$	1.80E+19	-2.5	0	<i>a</i>
R320	$FUEL6J+O_2=FUEL6O_2$	1.70E+19	-2.5	0	<i>a</i>
R321	$FUEL7J+O_2=FUEL7O_2$	9.00E+18	-2.5	0	<i>a</i>
R322	$FUEL1O_2+HO_2=FUEL1O_2H+O_2$	1.75E+10	0.0	-3275	<i>a</i>
R323	$FUEL2O_2+HO_2=FUEL2O_2H+O_2$	1.75E+10	0.0	-3275	<i>a</i>
R324	$FUEL3O_2+HO_2=FUEL3O_2H+O_2$	1.75E+10	0.0	-3275	<i>a</i>
R325	$FUEL4O_2+HO_2=FUEL4O_2H+O_2$	1.75E+10	0.0	-3275	<i>a</i>
R326	$FUEL5O_2+HO_2=FUEL5O_2H+O_2$	1.75E+10	0.0	-3275	<i>a</i>
R327	$FUEL6O_2+HO_2=FUEL6O_2H+O_2$	1.75E+10	0.0	-3275	<i>a</i>
R328	$FUEL7O_2+HO_2=FUEL7O_2H+O_2$	1.75E+10	0.0	-3275	<i>a</i>
R329	$FUEL1O_2+H_2O_2=FUEL1O_2H+HO_2$	2.40E+12	0.0	10000	<i>a</i>
R330	$FUEL2O_2+H_2O_2=FUEL2O_2H+HO_2$	2.40E+12	0.0	10000	<i>a</i>
R331	$FUEL3O_2+H_2O_2=FUEL3O_2H+HO_2$	2.40E+12	0.0	10000	<i>a</i>
R332	$FUEL4O_2+H_2O_2=FUEL4O_2H+HO_2$	2.40E+12	0.0	10000	<i>a</i>
R333	$FUEL5O_2+H_2O_2=FUEL5O_2H+HO_2$	2.40E+12	0.0	10000	<i>a</i>
R334	$FUEL6O_2+H_2O_2=FUEL6O_2H+HO_2$	2.40E+12	0.0	10000	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R335	FUEL7O ₂ +H ₂ O ₂ =FUEL7O ₂ H+HO ₂	2.40E+12	0.0	10000	<i>a</i>
R336	FUEL1O ₂ +FUEL1O ₂ =>FUEL1O+FUEL1O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R337	FUEL1O ₂ +FUEL2O ₂ =>FUEL1O+FUEL2O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R338	FUEL1O ₂ +FUEL3O ₂ =>FUEL1O+FUEL3O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R339	FUEL1O ₂ +FUEL4O ₂ =>FUEL1O+FUEL4O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R340	FUEL1O ₂ +FUEL5O ₂ =>FUEL1O+FUEL5O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R341	FUEL1O ₂ +FUEL6O ₂ =>FUEL1O+FUEL6O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R342	FUEL1O ₂ +FUEL7O ₂ =>FUEL1O+FUEL7O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R343	FUEL2O ₂ +FUEL2O ₂ =>FUEL2O+FUEL2O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R344	FUEL2O ₂ +FUEL3O ₂ =>FUEL2O+FUEL3O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R345	FUEL2O ₂ +FUEL4O ₂ =>FUEL2O+FUEL4O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R346	FUEL2O ₂ +FUEL5O ₂ =>FUEL2O+FUEL5O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R347	FUEL2O ₂ +FUEL6O ₂ =>FUEL2O+FUEL6O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R348	FUEL2O ₂ +FUEL7O ₂ =>FUEL2O+FUEL7O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R349	FUEL3O ₂ +FUEL3O ₂ =>FUEL3O+FUEL3O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R350	FUEL3O ₂ +FUEL4O ₂ =>FUEL3O+FUEL4O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R351	FUEL3O ₂ +FUEL5O ₂ =>FUEL3O+FUEL5O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R352	FUEL3O ₂ +FUEL6O ₂ =>FUEL3O+FUEL6O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R353	FUEL3O ₂ +FUEL7O ₂ =>FUEL3O+FUEL7O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R354	FUEL4O ₂ +FUEL4O ₂ =>FUEL4O+FUEL4O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R355	FUEL4O ₂ +FUEL5O ₂ =>FUEL4O+FUEL5O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R356	FUEL4O ₂ +FUEL6O ₂ =>FUEL4O+FUEL6O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R357	FUEL4O ₂ +FUEL7O ₂ =>FUEL4O+FUEL7O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R358	FUEL5O ₂ +FUEL5O ₂ =>FUEL5O+FUEL5O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R359	FUEL5O ₂ +FUEL6O ₂ =>FUEL5O+FUEL6O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R360	FUEL5O ₂ +FUEL7O ₂ =>FUEL5O+FUEL7O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R361	FUEL6O ₂ +FUEL6O ₂ =>FUEL6O+FUEL6O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R362	FUEL6O ₂ +FUEL7O ₂ =>FUEL6O+FUEL7O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R363	FUEL7O ₂ +FUEL7O ₂ =>FUEL7O+FUEL7O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R364	FUEL1O ₂ +CH ₃ O ₂ =FUEL1O+CH ₃ O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R365	FUEL2O ₂ +CH ₃ O ₂ =FUEL2O+CH ₃ O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R366	FUEL3O ₂ +CH ₃ O ₂ =FUEL3O+CH ₃ O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R367	FUEL4O ₂ +CH ₃ O ₂ =FUEL4O+CH ₃ O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R368	FUEL5O ₂ +CH ₃ O ₂ =FUEL5O+CH ₃ O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R369	FUEL6O ₂ +CH ₃ O ₂ =FUEL6O+CH ₃ O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R370	FUEL7O ₂ +CH ₃ O ₂ =FUEL7O+CH ₃ O+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R371	FUEL1O ₂ +HO ₂ =FUEL1O+OH+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R372	FUEL2O ₂ +HO ₂ =FUEL2O+OH+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R373	FUEL3O ₂ +HO ₂ =FUEL3O+OH+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R374	FUEL4O ₂ +HO ₂ =FUEL4O+OH+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R375	FUEL5O ₂ +HO ₂ =FUEL5O+OH+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R376	FUEL6O ₂ +HO ₂ =FUEL6O+OH+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R377	FUEL7O ₂ +HO ₂ =FUEL7O+OH+O ₂	1.40E+16	-1.6	1860	<i>a</i>
R378	FUEL7O ₂ H=OH+FUEL7O	9.50E+15	0.0	41600	<i>a</i>
R379	FUEL6O ₂ H=OH+FUEL6O	9.45E+15	0.0	41600	<i>a</i>
R380	FUEL5O ₂ H=OH+FUEL5O	9.45E+15	0.0	41600	<i>a</i>
R381	FUEL4O ₂ H=OH+FUEL4O	9.45E+15	0.0	41600	<i>a</i>
R382	FUEL3O ₂ H=OH+FUEL3O	9.45E+15	0.0	41600	<i>a</i>
R383	FUEL2O ₂ H=OH+FUEL2O	9.45E+15	0.0	41600	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R384	FUEL1O ₂ H=OH+FUEL1O	9.50E+15	0.0	41600	<i>a</i>
R385	FUEL2O ₂ =C ₅ H ₁₁ HCO+CH ₂ O+OH	1.25E+10	0.0	18900	<i>a</i>
R386	AC ₆ H ₁₃ +HOCHO=FUEL1O	2.60E+12	0.0	-614	<i>a</i>
R387	CH ₂ OH+C ₅ H ₁₁ HCO=FUEL2O	1.50E+11	0.0	11900	<i>a</i>
R388	AC ₅ H ₁₁ +HOCH ₂ HCO=FUEL2O	1.50E+11	0.0	11900	<i>a</i>
R389	NC ₄ H ₉ HCO+PC ₂ H ₄ OH=FUEL3O	1.50E+11	0.0	11900	<i>a</i>
R390	PC ₄ H ₉ +HOC ₂ H ₄ HCO=FUEL3O	1.50E+11	0.0	11900	<i>a</i>
R391	NC ₃ H ₇ HCO+CH ₂ CH ₂ CH ₂ OH=FUEL4O	1.50E+11	0.0	11900	<i>a</i>
R392	NC ₃ H ₇ +B1*O4OL=FUEL4O	1.50E+11	0.0	11900	<i>a</i>
R393	ETHCO+B1OL4J=FUEL5O	1.50E+11	0.0	11900	<i>a</i>
R394	C ₂ H ₅ +PE1*O5OL=FUEL5O	1.50E+11	0.0	11900	<i>a</i>
R395	CH ₃ CHO+PE1OL5J=FUEL6O	1.50E+11	0.0	11900	<i>a</i>
R396	CH ₂ O+HXOL6J=FUEL7O	1.50E+11	0.0	11900	<i>a</i>
R397	FUEL1O ₂ =FUEL2J1O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R398	FUEL1O ₂ =FUEL3J1O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R399	FUEL1O ₂ =FUEL4J1O ₂ H	1.70E+07	1.0	22000	<i>a</i>
R400	FUEL1O ₂ =FUEL5J1O ₂ H	3.90E+08	0.0	21650	<i>c</i>
R401	FUEL2O ₂ =FUEL1J2O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R402	FUEL2O ₂ =FUEL3J2O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R403	FUEL2O ₂ =FUEL4J2O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R404	FUEL2O ₂ =FUEL5J2O ₂ H	1.70E+07	1.0	22000	<i>c</i>
R405	FUEL3O ₂ =FUEL1J3O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R406	FUEL3O ₂ =FUEL2J3O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R407	FUEL3O ₂ =FUEL4J3O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R408	FUEL3O ₂ =FUEL5J3O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R409	FUEL3O ₂ =FUEL6J3O ₂ H	1.70E+07	1.0	22000	<i>a</i>
R410	FUEL4O ₂ =FUEL1J4O ₂ H	1.70E+07	1.0	22000	<i>a</i>
R411	FUEL4O ₂ =FUEL2J4O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R412	FUEL4O ₂ =FUEL3J4O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R413	FUEL4O ₂ =FUEL5J4O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R414	FUEL4O ₂ =FUEL6J4O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R415	FUEL4O ₂ =FUEL7J4O ₂ H	2.53E+07	1.0	25000	<i>a</i>
R416	FUEL5O ₂ =FUEL2J5O ₂ H	1.70E+07	1.0	22000	<i>a</i>
R417	FUEL5O ₂ =FUEL3J5O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R418	FUEL5O ₂ =FUEL4J5O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R419	FUEL5O ₂ =FUEL6J5O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R420	FUEL5O ₂ =FUEL7J5O ₂ H	1.48E+08	1.0	28000	<i>a</i>
R421	FUEL6O ₂ =FUEL3J6O ₂ H	1.70E+07	1.0	22000	<i>a</i>
R422	FUEL6O ₂ =FUEL4J6O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R423	FUEL6O ₂ =FUEL5J6O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R424	FUEL6O ₂ =FUEL7J6O ₂ H	8.65E+8	1.0	35500	<i>a</i>
R425	FUEL7O ₂ =FUEL4J7O ₂ H	1.70E+07	1.0	22000	<i>a</i>
R426	FUEL7O ₂ =FUEL5J7O ₂ H	9.90E+07	1.0	25000	<i>a</i>
R427	FUEL7O ₂ =FUEL6J7O ₂ H	5.70E+08	1.0	32500	<i>a</i>
R428	FUEL2J1O ₂ H=OH+FUEL2CY2O1	1.38E+12	0.0	15900	<i>a</i>
R429	FUEL3J1O ₂ H=OH+FUEL3CY3O1	2.04E+11	0.0	19500	<i>a</i>
R430	FUEL4J1O ₂ H=OH+FUEL4CY4O1	3.63E+10	0.0	13000	<i>a</i>
R431	FUEL5J1O ₂ H=OH+FUEL5CY5O1	1.17E+09	0.0	18000	<i>c</i>
R432	FUEL1J2O ₂ H=OH+FUEL2CY2O1	1.38E+12	0.0	15900	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R433	FUEL3J2O ₂ H=OH+FUELCY3O2	1.38E+12	0.0	15900	<i>a</i>
R434	FUEL4J2O ₂ H=OH+FUELCY4O2	2.04E+11	0.0	19500	<i>a</i>
R435	FUEL5J2O ₂ H=OH+FUELCY5O2	3.63E+10	0.0	13000	<i>a</i>
R436	FUEL1J3O ₂ H=OH+FUELCY3O1	2.04E+11	0.0	19500	<i>a</i>
R437	FUEL2J3O ₂ H=OH+FUELCY3O2	1.38E+12	0.0	15900	<i>a</i>
R438	FUEL4J3O ₂ H=OH+FUELCY4O3	1.38E+12	0.0	15900	<i>a</i>
R439	FUEL5J3O ₂ H=OH+FUELCY5O3	2.04E+11	0.0	19500	<i>a</i>
R440	FUEL6J3O ₂ H=OH+FUELCY6O3	3.63E+10	0.0	13000	<i>a</i>
R441	FUEL1J4O ₂ H=OH+FUELCY4O1	3.63E+10	0.0	13000	<i>a</i>
R442	FUEL2J4O ₂ H=OH+FUELCY4O2	2.04E+11	0.0	19500	<i>a</i>
R443	FUEL3J4O ₂ H=OH+FUELCY4O3	1.38E+12	0.0	15900	<i>a</i>
R444	FUEL5J4O ₂ H=OH+FUELCY5O4	1.38E+12	0.0	15900	<i>a</i>
R445	FUEL6J4O ₂ H=OH+FUELCY6O4	2.04E+11	0.0	19500	<i>a</i>
R446	FUEL7J4O ₂ H=OH+FUELCY7O4	3.63E+10	0.0	13000	<i>a</i>
R447	FUEL2J5O ₂ H=OH+FUELCY5O2	3.63E+10	0.0	13000	<i>a</i>
R448	FUEL3J5O ₂ H=OH+FUELCY5O3	2.04E+11	0.0	19500	<i>a</i>
R449	FUEL4J5O ₂ H=OH+FUELCY5O4	1.38E+12	0.0	15900	<i>a</i>
R450	FUEL6J5O ₂ H=OH+FUELCY6O5	1.38E+12	0.0	15900	<i>a</i>
R451	FUEL7J5O ₂ H=OH+FUELCY7O5	2.04E+11	0.0	19500	<i>a</i>
R452	FUEL3J6O ₂ H=OH+FUELCY6O3	3.63E+10	0.0	13000	<i>a</i>
R453	FUEL4J6O ₂ H=OH+FUELCY6O4	2.04E+11	0.0	19500	<i>a</i>
R454	FUEL5J6O ₂ H=OH+FUELCY6O5	1.38E+12	0.0	15900	<i>a</i>
R455	FUEL7J6O ₂ H=OH+FUELCY7O6	1.38E+12	0.0	15900	<i>a</i>
R456	FUEL4J7O ₂ H=OH+FUELCY7O4	3.63E+10	0.0	13000	<i>a</i>
R457	FUEL5J7O ₂ H=OH+FUELCY7O5	2.04E+11	0.0	19500	<i>a</i>
R458	FUEL6J7O ₂ H=OH+FUELCY7O6	1.38E+12	0.0	15900	<i>a</i>
R459	FUEL2J1O ₂ H=HO ₂ +C ₆ H ₁₃ HCO	8.50E+12	0.0	26000	<i>a</i>
R460	FUEL1J2O ₂ H=HO ₂ +C ₆ H ₁₃ HCO	8.50E+12	0.0	26000	<i>a</i>
R461	FUEL2J1O ₂ H=FUEL1E+HO ₂	5.63E+09	1.0	15000	<i>d</i>
R462	FUEL1J2O ₂ H=FUEL1E+HO ₂	1.78E+12	0.2	15700	<i>d</i>
R463	FUEL3J2O ₂ H=HO ₂ +FUEL2E	8.50E+12	0.0	26000	<i>a</i>
R464	FUEL2J3O ₂ H=HO ₂ +FUEL2E	8.50E+12	0.0	26000	<i>a</i>
R465	FUEL4J3O ₂ H=HO ₂ +FUEL3E	8.50E+12	0.0	26000	<i>a</i>
R466	FUEL3J4O ₂ H=HO ₂ +FUEL3E	8.50E+12	0.0	26000	<i>a</i>
R467	FUEL5J4O ₂ H=HO ₂ +FUEL4E	8.50E+12	0.0	26000	<i>a</i>
R468	FUEL4J5O ₂ H=HO ₂ +FUEL4E	8.50E+12	0.0	26000	<i>a</i>
R469	FUEL6J5O ₂ H=HO ₂ +FUEL5E	8.50E+12	0.0	26000	<i>a</i>
R470	FUEL5J6O ₂ H=HO ₂ +FUEL5E	8.50E+12	0.0	26000	<i>a</i>
R471	FUEL7J6O ₂ H=HO ₂ +FUEL6E	8.50E+12	0.0	26000	<i>a</i>
R472	FUEL6J7O ₂ H=HO ₂ +FUEL6E	8.50E+12	0.0	26000	<i>a</i>
R473	FUEL3J1O ₂ H=C ₆ H ₁₂ -1+OH+HOCHO	5.00E+13	0.0	25500	<i>a</i>
R474	FUEL4J2O ₂ H=C ₃ H ₁₀ +OH+HOCH ₂ HCO	5.00E+13	0.0	25500	<i>a</i>
R475	FUEL1J3O ₂ H=NC ₄ H ₉ HCO+OH+CH ₃ CHO	5.00E+13	0.0	25500	<i>a</i>
R476	FUEL5J3O ₂ H=C ₄ H ₈ +OH+HOC ₂ H ₄ HCO	5.00E+13	0.0	25500	<i>a</i>
R477	FUEL2J4O ₂ H=NC ₃ H ₇ HCO+C ₂ H ₅ CH ₂ OH+OH	5.00E+13	0.0	25500	<i>a</i>
R478	FUEL6J4O ₂ H=C ₃ H ₆ +OH+B1*O4OL	5.00E+13	0.0	25500	<i>a</i>
R479	FUEL3J5O ₂ H=OH+ETHCO+B1OL3E	5.00E+13	0.0	25500	<i>a</i>
R480	FUEL7J5O ₂ H=C ₂ H ₄ +OH+PE1*O5OL	5.00E+13	0.0	25500	<i>a</i>
R481	FUEL4J6O ₂ H=PE1OL4E+OH+CH ₃ CHO	5.00E+13	0.0	25500	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R482	FUEL5J7O ₂ H=CH ₂ O+HXOL5E+OH	5.00E+13	0.0	25500	<i>a</i>
R483	FUEL1J3O ₂ H=NC ₄ H ₉ HCO+H ₂ O+CH ₂ HCO	5.00E+13	0.0	25500	<i>a</i>
R484	FUEL2J1O ₂ H+O ₂ =FUEL1O ₂ H2O ₂	1.05E+19	-2.5	0	<i>a</i>
R485	FUEL3J1O ₂ H+O ₂ =FUEL1O ₂ H3O ₂	1.80E+19	-2.5	0	<i>a</i>
R486	FUEL4J1O ₂ H+O ₂ =FUEL1O ₂ H4O ₂	1.80E+19	-2.5	0	<i>a</i>
R487	FUEL1J2O ₂ H+O ₂ =FUEL2O ₂ H1O ₂	9.00E+18	-2.5	0	<i>a</i>
R488	FUEL3J2O ₂ H+O ₂ =FUEL2O ₂ H3O ₂	1.80E+19	-2.5	0	<i>a</i>
R489	FUEL4J2O ₂ H+O ₂ =FUEL2O ₂ H4O ₂	1.80E+19	-2.5	0	<i>a</i>
R490	FUEL5J2O ₂ H+O ₂ =FUEL2O ₂ H5O ₂	1.80E+19	-2.5	0	<i>a</i>
R491	FUEL1J3O ₂ H+O ₂ =FUEL3O ₂ H1O ₂	9.00E+18	-2.5	0	<i>a</i>
R492	FUEL2J3O ₂ H+O ₂ =FUEL3O ₂ H2O ₂	1.80E+19	-2.5	0	<i>a</i>
R493	FUEL4J3O ₂ H+O ₂ =FUEL3O ₂ H4O ₂	1.80E+19	-2.5	0	<i>a</i>
R494	FUEL5J3O ₂ H+O ₂ =FUEL3O ₂ H5O ₂	1.80E+19	-2.5	0	<i>a</i>
R495	FUEL6J3O ₂ H+O ₂ =FUEL3O ₂ H6O ₂	1.80E+19	-2.5	0	<i>a</i>
R496	FUEL1J4O ₂ H+O ₂ =FUEL4O ₂ H1O ₂	9.00E+18	-2.5	0	<i>a</i>
R497	FUEL2J4O ₂ H+O ₂ =FUEL4O ₂ H2O ₂	1.80E+19	-2.5	0	<i>a</i>
R498	FUEL3J4O ₂ H+O ₂ =FUEL4O ₂ H3O ₂	1.80E+19	-2.5	0	<i>a</i>
R499	FUEL5J4O ₂ H+O ₂ =FUEL4O ₂ H5O ₂	1.80E+19	-2.5	0	<i>a</i>
R500	FUEL6J4O ₂ H+O ₂ =FUEL4O ₂ H6O ₂	1.70E+19	-2.5	0	<i>a</i>
R501	FUEL7J4O ₂ H+O ₂ =FUEL4O ₂ H7O ₂	9.00E+18	-2.5	0	<i>a</i>
R502	FUEL1J5O ₂ H+O ₂ =FUEL5O ₂ H1O ₂	1.00E+12	-2.5	0	<i>a</i>
R503	FUEL2J5O ₂ H+O ₂ =FUEL5O ₂ H2O ₂	1.80E+19	-2.5	0	<i>a</i>
R504	FUEL3J5O ₂ H+O ₂ =FUEL5O ₂ H3O ₂	1.80E+19	-2.5	0	<i>a</i>
R505	FUEL4J5O ₂ H+O ₂ =FUEL5O ₂ H4O ₂	1.80E+19	-2.5	0	<i>a</i>
R506	FUEL6J5O ₂ H+O ₂ =FUEL5O ₂ H6O ₂	1.70E+19	-2.5	0	<i>a</i>
R507	FUEL7J5O ₂ H+O ₂ =FUEL5O ₂ H7O ₂	9.00E+18	-2.5	0	<i>a</i>
R508	FUEL3J6O ₂ H+O ₂ =FUEL6O ₂ H3O ₂	1.80E+19	-2.5	0	<i>a</i>
R509	FUEL4J6O ₂ H+O ₂ =FUEL6O ₂ H4O ₂	1.80E+19	-2.5	0	<i>a</i>
R510	FUEL5J6O ₂ H+O ₂ =FUEL6O ₂ H5O ₂	1.80E+19	-2.5	0	<i>a</i>
R511	FUEL7J6O ₂ H+O ₂ =FUEL6O ₂ H7O ₂	9.00E+18	-2.5	0	<i>a</i>
R512	FUEL4J7O ₂ H+O ₂ =FUEL7O ₂ H4O ₂	1.80E+19	-2.5	0	<i>a</i>
R513	FUEL5J7O ₂ H+O ₂ =FUEL7O ₂ H5O ₂	1.80E+19	-2.5	0	<i>a</i>
R514	FUEL6J7O ₂ H+O ₂ =FUEL7O ₂ H6O ₂	1.70E+19	-2.5	0	<i>a</i>
R515	FUEL1O ₂ H2O ₂ =OH+FUEL1*O2O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R516	FUEL1O ₂ H3O ₂ =OH+FUEL1*O3O ₂ H	2.87E+08	1.0	25000	<i>a</i>
R517	FUEL1O ₂ H4O ₂ =OH+FUEL1*O4O ₂ H	4.94E+07	1.0	22000	<i>a</i>
R518	FUEL2O ₂ H1O ₂ =OH+FUEL2*O1O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R519	FUEL2O ₂ H3O ₂ =OH+FUEL2*O3O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R520	FUEL2O ₂ H4O ₂ =OH+FUEL2*O4O ₂ H	2.87E+08	1.0	24000	<i>a</i>
R521	FUEL2O ₂ H5O ₂ =OH+FUEL2*O5O ₂ H	4.94E+7	1.0	22000	<i>a</i>
R522	FUEL3O ₂ H1O ₂ =OH+FUEL3*O1O ₂ H	2.87E+08	1.0	25000	<i>a</i>
R523	FUEL3O ₂ H2O ₂ =OH+FUEL3*O2O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R524	FUEL3O ₂ H4O ₂ =OH+FUEL3*O4O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R525	FUEL3O ₂ H5O ₂ =OH+FUEL3*O5O ₂ H	2.87E+08	1.0	25000	<i>a</i>
R526	FUEL3O ₂ H6O ₂ =OH+FUEL3*O6O ₂ H	4.94E+07	1.0	22000	<i>a</i>
R527	FUEL4O ₂ H1O ₂ =OH+FUEL4*O1O ₂ H	4.94E+07	1.0	22000	<i>a</i>
R528	FUEL4O ₂ H2O ₂ =OH+FUEL4*O2O ₂ H	2.87E+08	1.0	25000	<i>a</i>
R529	FUEL4O ₂ H3O ₂ =OH+FUEL4*O3O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R530	FUEL4O ₂ H5O ₂ =OH+FUEL4*O5O ₂ H	1.67E+09	1.0	32500	<i>a</i>

No.	Reactions	<i>A</i>	<i>n</i>	<i>E_a</i>	<i>Ref.</i>
R531	FUEL4O ₂ H6O ₂ =OH+FUEL4*O6O ₂ H	2.87E+08	1.0	25000	<i>a</i>
R532	FUEL4O ₂ H7O ₂ =OH+FUEL4*O7O ₂ H	4.94E+07	1.0	22000	<i>a</i>
R533	FUEL5O ₂ H2O ₂ =OH+FUEL5*O2O ₂ H	4.94E+07	1.0	22000	<i>a</i>
R534	FUEL5O ₂ H3O ₂ =OH+FUEL5*O3O ₂ H	2.87E+08	1.0	25000	<i>a</i>
R535	FUEL5O ₂ H4O ₂ =OH+FUEL5*O4O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R536	FUEL5O ₂ H6O ₂ =OH+FUEL5*O6O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R537	FUEL5O ₂ H7O ₂ =OH+FUEL5*O7O ₂ H	2.87E+08	1.0	25000	<i>a</i>
R538	FUEL6O ₂ H3O ₂ =OH+FUEL6*O3O ₂ H	4.94E+07	1.0	22000	<i>a</i>
R539	FUEL6O ₂ H4O ₂ =OH+FUEL6*O4O ₂ H	2.87E+08	1.0	25000	<i>a</i>
R540	FUEL6O ₂ H5O ₂ =OH+FUEL6*O5O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R541	FUEL6O ₂ H7O ₂ =OH+FUEL6*O7O ₂ H	1.67E+09	1.0	32500	<i>a</i>
R542	FUEL7O ₂ H4O ₂ =OH+FUEL7*O4O ₂ H	9.89E+07	1.0	25000	<i>a</i>
R543	FUEL7O ₂ H5O ₂ =OH+FUEL7*O5O ₂ H	5.75E+08	1.0	28000	<i>a</i>
R544	FUEL7O ₂ H6O ₂ =OH+FUEL7*O6O ₂ H	3.35E+09	1.0	35500	<i>a</i>
R545	FUEL1*O2O ₂ H=OH+C ₅ H ₁₁ HCO+HOCO	1.00E+16	0.0	43000	<i>a</i>
R546	FUEL1*O3O ₂ H=OH+NC ₄ H ₉ HCO+CH ₂ COOH	1.00E+16	0.0	43000	<i>a</i>
R547	FUEL1*O4O ₂ H=OH+NC ₃ H ₇ HCO+CH ₂ CH ₂ COOH	1.00E+16	0.0	43000	<i>a</i>
R548	FUEL2*O1O ₂ H=OH+C ₅ H ₁₁ CO+HOCHO	1.00E+16	0.0	43000	<i>a</i>
R549	FUEL2*O3O ₂ H=OH+NC ₄ H ₉ HCO+HOCH ₂ CO	1.00E+16	0.0	43000	<i>a</i>
R550	FUEL2*O4O ₂ H=OH+NC ₃ H ₇ HCO+CH ₂ CO+CH ₂ OH	1.00E+16	0.0	43000	<i>a</i>
R551	FUEL2*O5O ₂ H=OH+ETHCO+C ₂ H ₄ +HOCH ₂ CO	1.00E+16	0.0	43000	<i>a</i>
R552	FUEL3*O1O ₂ H=OH+C ₄ H ₉ COCH ₂ +HOCHO	1.00E+16	0.0	43000	<i>a</i>
R553	FUEL3*O2O ₂ H=OH+HOCH ₂ HCO+NC ₄ H ₉ CO	1.00E+16	0.0	43000	<i>a</i>
R554	FUEL3*O4O ₂ H=OH+NC ₃ H ₇ HCO+HOC ₂ H ₄ CO	1.00E+16	0.0	43000	<i>a</i>
R555	FUEL3*O5O ₂ H=OH+ETHCO+CH ₂ CO+PC ₂ H ₄ OH	1.00E+16	0.0	43000	<i>a</i>
R556	FUEL3*O6O ₂ H=OH+CH ₃ CHO+C ₂ H ₄ +HOC ₂ H ₄ CO	1.00E+16	0.0	43000	<i>a</i>
R557	FUEL4*O1O ₂ H=OH+C ₃ H ₇ COC ₂ H ₄ P+HOCHO	1.00E+16	0.0	43000	<i>a</i>
R558	FUEL4*O2O ₂ H=OH+NC ₃ H ₇ COCH ₂ +HOCH ₂ HCO	1.00E+16	0.0	43000	<i>a</i>
R559	FUEL4*O3O ₂ H=OH+C ₃ H ₇ CO+HOC ₂ H ₄ HCO	1.00E+16	0.0	43000	<i>a</i>
R560	FUEL4*O5O ₂ H=OH+ETHCO+B1J*O4OL	1.00E+16	0.0	43000	<i>a</i>
R561	FUEL4*O6O ₂ H=OH+CH ₃ CHO+CH ₂ CO+CH ₂ CH ₂ CH ₂ OH	1.00E+16	0.0	43000	<i>a</i>
R562	FUEL4*O7O ₂ H=OH+CH ₂ O+C ₂ H ₄ +B1J*O4OL	1.00E+16	0.0	43000	<i>a</i>
R563	FUEL5*O2O ₂ H=OH+C ₂ H ₅ COC ₂ H ₄ P+HOCH ₂ HCO	1.00E+16	0.0	43000	<i>a</i>
R564	FUEL5*O3O ₂ H=OH+C ₂ H ₅ COCH ₂ +HOC ₂ H ₄ HCO	1.00E+16	0.0	43000	<i>a</i>
R565	FUEL5*O4O ₂ H=OH+C ₂ H ₅ CO+B1*O4OL	1.00E+16	0.0	43000	<i>a</i>
R566	FUEL5*O6O ₂ H=OH+CH ₃ CHO+PE1J*O5OL	1.00E+16	0.0	43000	<i>a</i>
R567	FUEL5*O7O ₂ H=OH+B1OL4J+CH ₂ O+CH ₂ CO	1.00E+16	0.0	43000	<i>a</i>
R568	FUEL6*O3O ₂ H=OH+CH ₃ COC ₂ H ₄ P+HOC ₂ H ₄ HCO	1.00E+16	0.0	43000	<i>a</i>
R569	FUEL6*O4O ₂ H=OH+CH ₂ COCH ₃ +B1*O4OL	1.00E+16	0.0	43000	<i>a</i>
R570	FUEL6*O5O ₂ H=OH+CH ₃ CO+PE1*O5OL	1.00E+16	0.0	43000	<i>a</i>
R571	FUEL6*O7O ₂ H=OH+CH ₂ O+HOC ₅ H ₁₀ CO	1.00E+16	0.0	43000	<i>c</i>
R572	FUEL7*O4O ₂ H=OH+CH ₂ CH ₂ HCO+B1*O4OL	1.00E+16	0.0	43000	<i>c</i>
R573	FUEL7*O5O ₂ H=OH+CH ₂ HCO+PE1*O5OL	1.00E+16	0.0	43000	<i>c</i>
R574	FUEL7*O6O ₂ H=OH+HCO+HOC ₅ H ₁₀ CHO	1.00E+16	0.0	43000	<i>c</i>
R575	FUELCY2O1+OH=>H ₂ O+H+C ₅ H ₁₁ COHCO	1.20E+06	2.0	-1192	<i>a</i>
R576	FUELCY2O1+OH=>H ₂ O+PC ₄ H ₉ +C ₂ H ₃ COOH	1.40E+05	2.4	-1257	<i>a</i>
R577	FUELCY3O1+OH=>H ₂ O+NC ₄ H ₉ CO+CH ₃ CHO	1.20E+06	2.0	-1192	<i>a</i>
R578	FUELCY3O1+OH=>H ₂ O+C ₆ H ₁₂ -1+HOCO	1.40E+05	2.4	-1257	<i>a</i>
R579	FUELCY4O1+OH=>H ₂ O+NC ₃ H ₇ COCH ₂ +CH ₃ CHO	1.20E+06	2.0	-1192	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R580	FUELCY4O1+OH=>H ₂ O+C ₅ H ₁₀ +CH ₂ COOH	1.40E+05	2.4	-1257	<i>a</i>
R581	FUELCY3O2+OH=>H ₂ O+NC ₃ H ₇ +C ₂ H ₃ COCH ₂ OH	1.20E+06	2.0	-1192	<i>a</i>
R582	FUELCY3O2+OH=>H ₂ O+C ₄ H ₉ COC ₂ H ₃ +OH	1.20E+06	2.0	-1192	<i>a</i>
R583	FUELCY4O2+OH=>H ₂ O+C ₃ H ₇ CO+C ₂ H ₃ CH ₂ OH	1.20E+06	2.0	-1192	<i>a</i>
R584	FUELCY4O2+OH=>H ₂ O+C ₅ H ₁₀ +HOCH ₂ CO	1.20E+06	2.0	-1192	<i>a</i>
R585	FUELCY5O2+OH=>H ₂ O+C ₂ H ₅ COCH ₂ +C ₂ H ₃ CH ₂ OH	1.20E+06	2.0	-1192	<i>a</i>
R586	FUELCY5O2+OH=>H ₂ O+C ₄ H ₈ +CH ₂ CO+CH ₂ OH	1.20E+06	2.0	-1192	<i>a</i>
R587	FUELCY4O3+OH=>H ₂ O+CH ₂ OH+C ₃ H ₇ COC ₂ H ₃	1.20E+06	2.0	-1192	<i>a</i>
R588	FUELCY4O3+OH=>H ₂ O+C ₂ H ₅ +PE1OL3*O4E	1.20E+06	2.0	-1192	<i>a</i>
R589	FUELCY5O3+OH=>H ₂ O+C ₂ H ₅ CO+B1OL3E	1.20E+06	2.0	-1192	<i>a</i>
R590	FUELCY5O3+OH=>H ₂ O+C ₄ H ₈ +HOC ₂ H ₄ CO	1.20E+06	2.0	-1192	<i>a</i>
R591	FUELCY6O3+OH=>H ₂ O+C ₃ H ₆ +CH ₂ CO+PC ₂ H ₄ OH	1.20E+06	2.0	-1192	<i>a</i>
R592	FUELCY6O3+OH=>H ₂ O+CH ₂ COCH ₃ +C ₄ H ₇ OH	1.20E+06	2.0	-1192	<i>a</i>
R593	FUELCY5O4+OH=>H ₂ O+PC ₂ H ₄ OH+C ₂ H ₅ COC ₂ H ₃	1.20E+06	2.0	-1192	<i>a</i>
R594	FUELCY5O4+OH=>H ₂ O+C ₂ H ₅ CHCO+CH ₂ CH ₂ CH ₂ OH	1.20E+06	2.0	-1192	<i>a</i>
R595	FUELCY6O4+OH=>H ₂ O+CH ₃ CO+PE1OL4E	1.20E+06	2.0	-1192	<i>a</i>
R596	FUELCY6O4+OH=>H ₂ O+C ₃ H ₆ +B1J*O4OL	1.20E+06	2.0	-1192	<i>a</i>
R597	FUELCY7O4+OH=>H ₂ O+C ₂ H ₄ +CH ₂ CO+CH ₂ CH ₂ CH ₂ OH	1.20E+06	2.0	-1192	<i>a</i>
R598	FUELCY7O4+OH=>H ₂ O+C ₄ H ₇ HCO-1+PC ₂ H ₄ OH	2.40E+08	2.0	-1192	<i>a</i>
R599	FUELCY6O5+OH=>H ₂ O+CH ₃ CHCO+B1OL4J	1.20E+06	2.0	-1192	<i>a</i>
R600	FUELCY6O5+OH=>H ₂ O+MVK+CH ₂ CH ₂ CH ₂ OH	1.20E+06	2.0	-1192	<i>a</i>
R601	FUELCY7O5+OH=>H ₂ O+HCO+HXOL5E	2.40E+08	2.0	-1192	<i>a</i>
R602	FUELCY7O5+OH=>H ₂ O+C ₂ H ₄ +PE1J*O5OL	1.20E+06	2.0	-1192	<i>a</i>
R603	FUELCY7O6+OH=>H ₂ O+CH ₂ CO+PE1OL5J	1.20E+06	2.0	-1192	<i>a</i>
R604	FUELCY7O6+OH=>H ₂ O+ACROL+B1OL4J	2.40E+08	2.0	-1192	<i>a</i>
R605	FUELCY2O1+H=>H ₂ +H+C ₅ H ₁₁ COHCO	2.40E+08	1.5	2005	<i>a</i>
R606	FUELCY2O1+H=>H ₂ +PC ₄ H ₉ +C ₂ H ₃ COOH	8.80E+04	2.5	-564	<i>a</i>
R607	FUELCY3O1+H=>H ₂ +NC ₄ H ₉ CO+CH ₃ CHO	2.40E+08	1.5	2005	<i>a</i>
R608	FUELCY3O1+H=>H ₂ +C ₆ H ₁₂ -1+HOCO	8.80E+04	2.5	-564	<i>a</i>
R609	FUELCY4O1+H=>H ₂ +NC ₃ H ₇ COCH ₂ +CH ₃ CHO	2.40E+08	1.5	2005	<i>a</i>
R610	FUELCY4O1+H=>H ₂ +C ₅ H ₁₀ +CH ₂ COOH	8.80E+04	2.5	-564	<i>a</i>
R611	FUELCY3O2+H=>H ₂ +NC ₃ H ₇ +C ₂ H ₃ COCH ₂ OH	2.40E+08	1.5	2005	<i>a</i>
R612	FUELCY3O2+H=>H ₂ +OH+C ₄ H ₉ COC ₂ H ₃	2.40E+08	1.5	2005	<i>a</i>
R613	FUELCY4O2+H=>H ₂ +C ₃ H ₇ CO+C ₂ H ₃ CH ₂ OH	2.40E+08	1.5	2005	<i>a</i>
R614	FUELCY4O2+H=>H ₂ +C ₅ H ₁₀ +HOCH ₂ CO	2.40E+08	1.5	2005	<i>a</i>
R615	FUELCY5O2+H=>H ₂ +C ₂ H ₅ COCH ₂ +C ₂ H ₃ CH ₂ OH	2.40E+08	1.5	2005	<i>a</i>
R616	FUELCY5O2+H=>H ₂ +C ₄ H ₈ +CH ₂ CO+CH ₂ OH	2.40E+08	1.5	2005	<i>a</i>
R617	FUELCY4O3+H=>H ₂ +CH ₂ OH+C ₃ H ₇ COC ₂ H ₃	2.40E+08	1.5	2005	<i>a</i>
R618	FUELCY4O3+H=>H ₂ +C ₂ H ₅ +PE1OL3*O4E	2.40E+08	1.5	2005	<i>a</i>
R619	FUELCY5O3+H=>H ₂ +C ₂ H ₅ CO+B1OL3E	2.40E+08	1.5	2005	<i>a</i>
R620	FUELCY5O3+H=>H ₂ +C ₄ H ₈ +HOC ₂ H ₄ CO	2.40E+08	1.5	2005	<i>a</i>
R621	FUELCY6O3+H=>H ₂ +C ₃ H ₆ +CH ₂ CO+PC ₂ H ₄ OH	2.40E+08	1.5	2005	<i>a</i>
R622	FUELCY6O3+H=>H ₂ +CH ₂ COCH ₃ +C ₄ H ₇ OH	2.40E+08	1.5	2005	<i>a</i>
R623	FUELCY5O4+H=>H ₂ +PC ₂ H ₄ OH+C ₂ H ₅ COC ₂ H ₃	2.40E+08	1.5	2005	<i>a</i>
R624	FUELCY5O4+H=>H ₂ +C ₂ H ₅ CHCO+CH ₂ CH ₂ CH ₂ OH	2.40E+08	1.5	2005	<i>a</i>
R625	FUELCY6O4+H=>H ₂ +CH ₃ CO+PE1OL4E	2.40E+08	1.5	2005	<i>a</i>
R626	FUELCY6O4+H=>H ₂ +C ₃ H ₆ +B1J*O4OL	2.40E+08	1.5	2005	<i>a</i>
R627	FUELCY7O4+H=>H ₂ +C ₂ H ₄ +CH ₂ CO+CH ₂ CH ₂ CH ₂ OH	2.40E+08	1.5	2005	<i>a</i>
R628	FUELCY7O4+H=>H ₂ +C ₄ H ₇ HCO-1+PC ₂ H ₄ OH	4.80E+08	1.5	2785	<i>a</i>

No.	Reactions	<i>A</i>	<i>n</i>	<i>E_a</i>	<i>Ref.</i>
R629	FUELCY6O5+H=>H ₂ +CH ₃ CHCO+B1OL4J	2.40E+08	1.5	2005	<i>a</i>
R630	FUELCY6O5+H=>H ₂ +MVK+CH ₂ CH ₂ CH ₂ OH	2.40E+08	1.5	2005	<i>a</i>
R631	FUELCY7O5+H=>H ₂ +HCO+HXOL5E	4.80E+08	1.5	2785	<i>a</i>
R632	FUELCY7O5+H=>H ₂ +C ₂ H ₄ +PE1J*O5OL	2.40E+08	1.5	2005	<i>a</i>
R633	FUELCY7O6+H=>H ₂ +CH ₂ CO+PE1OL5J	2.40E+08	1.5	2005	<i>a</i>
R634	FUELCY7O6+H=>H ₂ +ACROL+B1OL4J	4.80E+08	1.5	2785	<i>a</i>
R635	FUELCY2O1+HO ₂ =>H ₂ O ₂ +H+C ₅ H ₁₁ COHCO	2.00E+12	0.0	13260	<i>a</i>
R636	FUELCY2O1+HO ₂ =>H ₂ O ₂ +PC ₄ H ₉ +C ₂ H ₃ COOH	1.25E+13	0.0	21760	<i>a</i>
R637	FUELCY3O1+HO ₂ =>H ₂ O ₂ +NC ₄ H ₉ CO+CH ₃ CHO	2.00E+12	0.0	13260	<i>a</i>
R638	FUELCY3O1+HO ₂ =>H ₂ O ₂ +C ₆ H ₁₂ -1+HOCO	1.25E+13	0.0	21760	<i>a</i>
R639	FUELCY4O1+HO ₂ =>H ₂ O ₂ +NC ₃ H ₇ COCH ₂ +CH ₃ CHO	2.00E+12	0.0	13260	<i>a</i>
R640	FUELCY4O1+HO ₂ =>H ₂ O ₂ +C ₅ H ₁₀ +CH ₂ COOH	1.25E+13	0.0	21760	<i>a</i>
R641	FUELCY3O2+HO ₂ =>H ₂ O ₂ +NC ₃ H ₇ +C ₂ H ₃ COCH ₂ OH	2.00E+12	0.0	13260	<i>a</i>
R642	FUELCY3O2+HO ₂ =>H ₂ O ₂ +OH+C ₄ H ₉ COC ₂ H ₃	2.00E+12	0.0	13260	<i>a</i>
R643	FUELCY4O2+HO ₂ =>H ₂ O ₂ +C ₃ H ₇ CO+C ₂ H ₃ CH ₂ OH	2.00E+12	0.0	13260	<i>a</i>
R644	FUELCY4O2+HO ₂ =>H ₂ O ₂ +C ₅ H ₁₀ +HOCH ₂ CO	2.00E+12	0.0	13260	<i>a</i>
R645	FUELCY5O2+HO ₂ =>H ₂ O ₂ +C ₂ H ₃ COCH ₂ +C ₂ H ₃ CH ₂ OH	2.00E+12	0.0	13260	<i>a</i>
R646	FUELCY5O2+HO ₂ =>H ₂ O ₂ +C ₄ H ₈ +CH ₂ CO+CH ₂ OH	2.00E+12	0.0	13260	<i>a</i>
R647	FUELCY4O3+HO ₂ =>H ₂ O ₂ +CH ₂ OH+C ₃ H ₇ COC ₂ H ₃	2.00E+12	0.0	13260	<i>a</i>
R648	FUELCY4O3+HO ₂ =>H ₂ O ₂ +C ₂ H ₅ +PE1OL3*O4E	2.00E+12	0.0	13260	<i>a</i>
R649	FUELCY5O3+HO ₂ =>H ₂ O ₂ +C ₂ H ₃ CO+B1OL3E	2.00E+12	0.0	13260	<i>a</i>
R650	FUELCY5O3+HO ₂ =>H ₂ O ₂ +C ₄ H ₈ +HOC ₂ H ₄ CO	2.00E+12	0.0	13260	<i>a</i>
R651	FUELCY6O3+HO ₂ =>H ₂ O ₂ +C ₃ H ₆ +CH ₂ CO+PC ₂ H ₄ OH	2.00E+12	0.0	13260	<i>a</i>
R652	FUELCY6O3+HO ₂ =>H ₂ O ₂ +CH ₂ COCH ₃ +C ₄ H ₇ OH	2.00E+12	0.0	13260	<i>a</i>
R653	FUELCY5O4+HO ₂ =>H ₂ O ₂ +PC ₂ H ₄ OH+C ₂ H ₃ COC ₂ H ₃	2.00E+12	0.0	13260	<i>a</i>
R654	FUELCY5O4+HO ₂ =>H ₂ O ₂ +C ₂ H ₃ CHCO+CH ₂ CH ₂ CH ₂ OH	2.00E+12	0.0	13260	<i>a</i>
R655	FUELCY6O4+HO ₂ =>H ₂ O ₂ +CH ₃ CO+PE1OL4E	2.00E+12	0.0	13260	<i>a</i>
R656	FUELCY6O4+HO ₂ =>H ₂ O ₂ +C ₃ H ₆ +B1J*O4OL	2.00E+12	0.0	13260	<i>a</i>
R657	FUELCY7O4+HO ₂ =>H ₂ O ₂ +C ₂ H ₄ +CH ₂ CO+CH ₂ CH ₂ CH ₂ OH	2.00E+12	0.0	13260	<i>a</i>
R658	HOC ₅ H ₁₀ CHO+O ₂ =HOC ₅ H ₁₀ CO+HO ₂	2.00E+13	0.5	42200	<i>c</i>
R659	HOC ₅ H ₁₀ CHO+OH=HOC ₅ H ₁₀ CO+H ₂ O	2.69E+10	0.8	-340	<i>c</i>
R660	HOC ₅ H ₁₀ CHO+H=HOC ₅ H ₁₀ CO+H ₂	4.00E+13	0.0	4200	<i>c</i>
R661	HOC ₅ H ₁₀ CHO+O=HOC ₅ H ₁₀ CO+OH	5.00E+12	0.0	1790	<i>c</i>
R662	HOC ₅ H ₁₀ CHO+HO ₂ =HOC ₅ H ₁₀ CO+H ₂ O ₂	2.80E+12	0.0	13600	<i>c</i>
R663	HOC ₅ H ₁₀ CHO+CH ₃ =HOC ₅ H ₁₀ CO+CH ₄	1.70E+12	0.0	8440	<i>c</i>
R664	HOC ₅ H ₁₀ CHO+CH ₃ O=HOC ₅ H ₁₀ CO+CH ₃ OH	1.15E+11	0.0	1280	<i>c</i>
R665	HOC ₅ H ₁₀ CHO+CH ₃ O ₂ =HOC ₅ H ₁₀ CO+CH ₃ O ₂ H	1.00E+12	0.0	9500	<i>c</i>
R666	HOC ₅ H ₁₀ CO=PE1OL5J+CO	1.00E+11	0.0	9600	<i>c</i>
R667	C ₄ H ₉ COC ₂ H ₃ +OH=C ₄ H ₈ COC ₂ H ₃ -1+H ₂ O	2.06E+07	1.7	753	<i>a</i>
R668	C ₄ H ₉ COC ₂ H ₃ +HO ₂ =C ₄ H ₈ COC ₂ H ₃ -1+H ₂ O ₂	2.38E+04	2.5	16490	<i>a</i>
R669	C ₄ H ₉ COC ₂ H ₃ +O=C ₄ H ₈ COC ₂ H ₃ -1+OH	2.25E+13	0.0	7700	<i>a</i>
R670	C ₄ H ₉ COC ₂ H ₃ +H=C ₄ H ₈ COC ₂ H ₃ -1+H ₂	9.16E+06	2.0	7700	<i>a</i>
R671	C ₄ H ₉ COC ₂ H ₃ +O ₂ =C ₄ H ₈ COC ₂ H ₃ -1+HO ₂	2.05E+13	0.0	51310	<i>a</i>
R672	C ₄ H ₉ COC ₂ H ₃ +CH ₃ =C ₄ H ₈ COC ₂ H ₃ -1+CH ₄	3.19E+01	3.2	7172	<i>a</i>
R673	C ₄ H ₉ COC ₂ H ₃ +OH=C ₄ H ₈ COC ₂ H ₃ -2+H ₂ O	3.61E+07	1.6	-247	<i>a</i>
R674	C ₄ H ₉ COC ₂ H ₃ +HO ₂ =C ₄ H ₈ COC ₂ H ₃ -2+H ₂ O ₂	5.60E+12	0.0	17700	<i>a</i>
R675	C ₄ H ₉ COC ₂ H ₃ +OH=C ₄ H ₈ COC ₂ H ₃ -3+H ₂ O	8.45E+11	0.0	-228	<i>a</i>
R676	C ₄ H ₉ COC ₂ H ₃ +HO ₂ =C ₄ H ₈ COC ₂ H ₃ -3+H ₂ O ₂	2.00E+11	0.0	8698	<i>a</i>
R677	C ₄ H ₉ COC ₂ H ₃ +O=C ₄ H ₈ COC ₂ H ₃ -3+OH	3.07E+13	0.0	3400	<i>a</i>

No.	Reactions	A	n	E_a	Ref.
R678	$C_4H_9COC_2H_3+H=C_4H_8COC_2H_3-3+H_2$	4.46E+06	2.0	3200	<i>a</i>
R679	$C_4H_9COC_2H_3+O_2=C_4H_8COC_2H_3-3+HO_2$	1.55E+13	0.0	41970	<i>a</i>
R680	$C_4H_9COC_2H_3+CH_3=C_4H_8COC_2H_3-3+CH_4$	1.74E+00	3.5	3680	<i>a</i>
R681	$C_4H_9COC_2H_3+OH=C_4H_8COC_2H_3-4+H_2O$	3.61E+07	1.6	-247	<i>a</i>
R682	$C_4H_9COC_2H_3+HO_2=C_4H_8COC_2H_3-4+H_2O_2$	5.60E+12	0.0	17700	<i>a</i>
R683	$C_2H_4+C_2H_3COC_2H_4P=C_4H_8COC_2H_3-1$	1.00E+11	0.0	8600	<i>a</i>
R684	$C_3H_6+CH_2COC_2H_3=C_4H_8COC_2H_3-2$	1.00E+11	0.0	7800	<i>a</i>
R685	$C_2H_3CO+C_4H_8=C_4H_8COC_2H_3-3$	1.00E+11	0.0	7800	<i>a</i>
R686	$DIVINKET+C_2H_5=C_4H_8COC_2H_3-4$	1.00E+11	0.0	7800	<i>a</i>
R687	$C_2H_3COC_2H_4P=C_2H_3CO+C_2H_4$	5.26E+14	0.4	21460	<i>a</i>
R688	$CH_2CO+PC_4H_9=C_4H_9COCH_2$	1.76E+04	2.5	6130	<i>d</i>
R689	$C_2H_5COC_3H_6P=C_2H_5COCH_2+C_2H_4$	2.34E+17	-1.1	31176	<i>d</i>
R690	$C_3H_7COC_2H_4P=C_3H_7CO+C_2H_4$	1.00E+14	0.0	18000	<i>d</i>
R691	$C_2H_5CHCO+OH=NC_3H_7+CO_2$	3.73E+12	0.0	-1010	<i>d</i>
R692	$C_2H_5CHCO+H<=>NC_3H_7+CO$	4.40E+12	0.0	1459	<i>d</i>
R693	$C_2H_5CHCO+O<=>C_3H_6+CO_2$	3.20E+12	0.0	-437	<i>d</i>
R694	$C_5H_{11}COHCO+OH=H_2O+C_5H_{11}COCO$	2.69E+10	0.8	-340	<i>a</i>
R695	$C_5H_{11}COHCO+H=H_2+C_5H_{11}COCO$	4.00E+13	0.0	4200	<i>a</i>
R696	$C_5H_{11}COHCO+O=OH+C_5H_{11}COCO$	5.00E+12	0.0	1790	<i>a</i>
R697	$C_5H_{11}COHCO+CH_3=CH_4+C_5H_{11}COCO$	1.70E+12	0.0	8440	<i>a</i>
R698	$C_5H_{11}COHCO+HO_2=H_2O_2+C_5H_{11}COCO$	2.80E+12	0.0	13600	<i>a</i>
R699	$C_5H_{11}COHCO+O_2=HO_2+C_5H_{11}COCO$	2.00E+13	0.5	42200	<i>a</i>
R700	$C_5H_{11}COCO=>CO+C_5H_{11}CO$	2.00E+13	0.0	28700	<i>a</i>
R701	$C_5H_{11}COCO+HO_2=>OH+CO_2+C_5H_{11}CO$	2.00E+13	0.0	0	<i>a</i>

Note: The rate constant is expressed as $k=AT^n \exp(-E_a/RT)$, which A , n , E_a are given in s^{-1} , cm^3 , $cal/mole$ units; (a) Analogy to the rate constants for the corresponding reactions with *n*-hexanol [2], (b) Analogy to the rate constants for the corresponding reactions with *n*-heptanol [3], (c) Analogy to the rate constants for the corresponding reactions with *n*-octanol [4]; (d) Analogy to the rate constants for the corresponding reactions with heptane [5].

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