

Supplementary Table S2 Pressure-dependent rate constants for the unimolecular decomposition reactions of UDMH. Units: s⁻¹.

No.	Reactions	<i>A</i>	<i>n</i>	<i>E_a</i> (cal/mol)
R1	UDMH = NH ₂ NCH ₃ + CH ₃			
	0.01 atm	5.1941E+55	-13.643	37033
	0.04 atm	1.7949E+57	-13.779	74873
	0.1 atm	5.0949E+57	-13.706	75670
	0.2 atm	1.0575E+57	-13.355	75908
	1 atm	3.5531E+54	-12.299	76170
	10 atm	1.8568E+48	-10.058	75287
	100 atm	3.7754E+39	-7.2046	73057
∞	3.6859E+18	-0.64844	66088	
R2	UDMH = N(CH ₃) ₂ + NH ₂			
	0.01 atm	6.6840E+57	-13.579	65787
	0.04 atm	3.5325E+55	-12.725	65624
	0.1 atm	6.3083E+53	-12.092	65416
	0.2 atm	2.3764E+52	-11.590	65194
	1 atm	4.1566E+48	-10.302	64468
	10 atm	2.9057E+42	-8.2692	62950
	100 atm	2.1783E+35	-5.9971	60825
∞	9.8558E+20	-1.5496	55932	
R3	UDMH = NHN(CH ₃) ₂ + H			
	0.01 atm	1.6305E+33	-8.4593	89648
	0.04 atm	3.2295E+36	-9.1969	86981
	0.1 atm	1.3610E+41	-10.358	86784
	0.2 atm	1.2060E+44	-11.043	87027
	1 atm	5.1710E+50	-12.508	89185
	10 atm	2.6011E+52	-12.327	91548
	100 atm	2.3683E+45	-9.7230	90797
∞	3.6342E+15	-0.28912	81472	
R4	UDMH = NH ₂ N(CH ₃)CH ₂ + H			
	0.01 atm	-	-	-
	0.04 atm	-	-	-
	0.1 atm	2.1935E+32	-8.0633	108570
	0.2 atm	7.6254E+27	-6.6626	103010
	1 atm	1.2712E+36	-8.6962	100280
	10 atm	4.7343E+49	-11.875	103280
	100 atm	3.6626E+50	-11.331	105570
∞	3.8395E+15	0.0032458	95567	
R5	UDMH = N(CH ₃)CH ₂ + NH ₃			
	0.01 atm	3.6063E+43	-11.563	76647
	0.04 atm	1.5253E+48	-12.592	77988
	0.1 atm	6.9947E+52	-13.137	79259
	0.2 atm	2.4292E+51	-13.112	79852
	1 atm	2.7974E+51	-12.718	81130

	10 atm	4.4570E+46	-10.801	81176
	100 atm	1.6789E+37	-7.6380	79036
	∞	1.5216E+10	0.83588	70230
R6	UDMH = NN(CH ₃) ₂ + H ₂			
	0.01 atm	1.5599E+35	-9.0944	70094
	0.04 atm	3.0041E+42	-10.851	73872
	0.1 atm	3.6789E+50	-12.935	78640
	0.2 atm	6.2658E+51	-13.099	79792
	1 atm	7.4331E+47	-11.559	78789
	10 atm	2.5269E+43	-9.7249	79079
	100 atm	7.9164E+33	-6.5259	76966
	∞	2.1760E+06	2.1163	68019
R7	UDMH = HNNCH ₃ + CH ₄			
	0.01 atm	1.4778E-68	18.757	48462
	0.04 atm	5.6725E-32	7.8796	61531
	0.1 atm	4.3979E-35	8.6899	59255
	0.2 atm	1.3140E-36	9.3133	58989
	1 atm	2.1146E-31	8.4942	63526
	10 atm	2.0519E-10	3.5486	76749
	100 atm	6.5427E+01	1.3485	86071
	∞	5.1839E-38	14.471	76941
