

PROPELLANT	HF	DENSITY	WEIGHT	MOLES	VOLUME
GAP	33.0000	1.3000	1.0000	.0101	.7692

GRAM ATOMS/100 GRAMS  
H 5.0458 O 1.0092 N 3.0275 C 3.0275

ENTHALPY = 33.30212 DENSITY =1.300  
CSTAR = 4079.52

	CHAMBER	THR(SHIFT)	EXH(SHIFT)
PRESSURE (PSIA)	300.000	168.026	14.700
EPSILON	.000	1.000	3.731
ISP	.000	86.911	179.237
ISP (VACUUM)	.000	157.929	202.419
TEMPERATURE(K)	1590.342	1433.770	1007.947
MOLECULAR WEIGHT	20.022	20.083	20.973
MOLES GAS/100G	4.994	4.979	4.768
CF	.000	.685	1.414
PEAE/M (SECONDS)	.000	71.018	23.182
GAMMA	1.232	1.237	1.244
HEAT CAP (CAL)	52.638	51.655	48.373
ENTROPY (CAL)	253.947	253.947	253.947
ENTHALPY (KCAL)	33.302	24.625	-3.604
DENSITY (G/CC)	3.13206E-03	1.95171E-03	2.53647E-04
ITERATIONS	22	3	6

GRAMS/100 GRAMS

H	.00004	.00001	.00000
H2	4.86125	4.82198	4.42580
H2O	.15879	.26727	2.12569
H3N	.01595	.01405	.00811
N2	42.32016	42.35571	42.37775
CHN	.09902	.03314	.00029
CHNO	.00006	.00003	.00000
CH2O	.00022	.00014	.00001
CH3	.00023	.00005	.00000
CH4	.63536	.75403	1.47379
CO	26.92495	26.67162	20.62172
CO2	.05584	.12036	2.58740
C2H2	.00181	.00029	.00000
C2H4	.00212	.00087	.00002
C(GRAPHITE)	23.82316	23.86072	25.33679

PROPELLANT	HF	DENSITY	WEIGHT	MOLES	VOLUME
GAP	33.0000	1.3000	1.0000	.0101	.7692

GRAM ATOMS/100 GRAMS  
H 5.0458 O 1.0092 N 3.0275 C 3.0275

ENTHALPY = 33.30212 DENSITY =1.300  
CSTAR = 4089.09

	CHAMBER	THR(SHIFT)	EXH(SHIFT)
PRESSURE (PSIA)	500.000	280.203	14.700
EPSILON	.000	1.000	5.507
ISP	.000	86.997	191.023
ISP (VACUUM)	.000	158.222	211.601
TEMPERATURE(K)	1602.538	1448.527	975.955
MOLECULAR WEIGHT	20.131	20.211	21.466
MOLES GAS/100G	4.967	4.948	4.659
CF	.000	.685	1.503
PEAE/M (SECONDS)	.000	71.225	20.577
GAMMA	1.230	1.235	1.239
HEAT CAP (CAL)	52.710	51.750	48.061
ENTROPY (CAL)	248.891	248.891	248.891
ENTHALPY (KCAL)	33.302	24.608	-8.617
DENSITY (G/CC)	5.20850E-03	3.24205E-03	2.68117E-04
ITERATIONS	4	3	6

GRAMS/100 GRAMS

H	.00003	.00001	.00000
H2	4.76593	4.71529	4.20544
H2O	.23993	.38701	3.01654
H3N	.02512	.02174	.00954
N2	42.30905	42.34760	42.37662
CHN	.10576	.03668	.00017
CHNO	.00010	.00005	.00000
CHO	.00001	.00000	.00000
CH2O	.00036	.00022	.00001
CH3	.00030	.00008	.00000
CH4	.97018	1.11819	1.93503
CO	26.76021	26.41665	17.68651
CO2	.08410	.17195	3.79814
C2H2	.00153	.00034	.00000
C2H4	.00348	.00144	.00001
C(GRAPHITE)	23.63330	23.68441	25.95770

PROPELLANT	HF	DENSITY	WEIGHT	MOLES	VOLUME
GAP	33.0000	1.3000	1.0000	.0101	.7692

GRAM ATOMS/100 GRAMS  
H 5.0458 O 1.0092 N 3.0275 C 3.0275

ENTHALPY = 33.30212 DENSITY =1.300  
CSTAR = 4104.72

	CHAMBER	THR(SHIFT)	EXH(SHIFT)
PRESSURE (PSIA)	1000.000	561.992	14.700
EPSILON	.000	1.000	9.506
ISP	.000	87.027	205.339
ISP (VACUUM)	.000	158.727	223.167
TEMPERATURE(K)	1626.428	1476.114	939.696
MOLECULAR WEIGHT	20.349	20.452	22.193
MOLES GAS/100G	4.914	4.889	4.506
CF	.000	.682	1.610
PEAE/M (SECONDS)	.000	71.700	17.828
GAMMA	1.227	1.230	1.231
HEAT CAP (CAL)	52.851	51.928	47.636
ENTROPY (CAL)	242.082	242.081	242.082
ENTHALPY (KCAL)	33.302	24.602	-15.135
DENSITY (G/CC)	1.03752E-02	6.45715E-03	2.87893E-04
ITERATIONS	6	3	8

GRAMS/100 GRAMS

H	.00003	.00001	.00000
H2	4.57708	4.51563	3.88724
H2O	.39683	.59953	4.27350
H3N	.04493	.03790	.01137
N2	42.28548	42.33045	42.37514
HCOOH	.00001	.00001	.00000
CHN	.11983	.04407	.00008
CHNO	.00019	.00010	.00000
CHO	.00001	.00000	.00000
CH2O	.00069	.00041	.00001
CH3	.00047	.00013	.00000
CH4	1.63332	1.80325	2.61503
CH3OH	.00001	.00001	.00000
CO	26.44227	25.96715	13.74396
CO2	.13857	.26077	5.34782
C2H2	.00235	.00046	.00000
C2H4	.00674	.00284	.00001
C(GRAPHITE)	23.25192	23.34083	26.76745