

PROPELLANT	HF	DENSITY	WEIGHT	MOLES	VOLUME
AP	-60.2100	1.9500	.6500	.0055	.3333
HTPB	1.2000	.9220	.1500	.0015	.1627
MG	.0000	1.7400	.2000	.0082	.1149

GRAM ATOMS/100 GRAMS

H	3.7634	O	2.2289	N	.5532	CL	.5532	C	1.0975	MG	.8226
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ENTHALPY = -33.13069

DENSITY =1.637

CSTAR = 5209.17

	CHAMBER	THR(SHIFT)	EXH(SHIFT)
PRESSURE (PSIA)	1000.000	574.412	14.700
EPSILON	.000	1.000	9.723
ISP	.000	104.612	261.683
ISP (VACUUM)	.000	197.615	284.824
TEMPERATURE(K)	3142.837	3070.875	1981.604
MOLECULAR WEIGHT	27.372	27.289	28.291
MOLES GAS/100G	3.653	3.665	3.535
CF	.000	.646	1.616
PEAE/M (SECONDS)	.000	93.003	23.141
GAMMA	1.194	1.201	1.202
HEAT CAP (CAL)	44.691	43.577	41.770
ENTROPY (CAL)	229.075	229.075	229.074
ENTHALPY (KCAL)	-33.131	-45.703	-111.797
DENSITY (G/CC)	7.22226E-03	4.23281E-03	1.74035E-04
ITERATIONS	14	3	10

GRAMS/100 GRAMS

H	.06163	.06606	.00311
H2	2.48101	2.46650	2.69611
HO	.14223	.14661	.00112
HO2	.00002	.00002	.00000
H2O	8.04169	8.09874	5.23250
H2O2	.00001	.00001	.00000
O	.00394	.00442	.00000
O2	.00124	.00141	.00000
HN	.00005	.00004	.00000
HNO	.00003	.00002	.00000
H2N	.00025	.00016	.00000
H3N	.00151	.00090	.00009
N	.00006	.00005	.00000
NO	.01389	.01367	.00003
N2	7.73578	7.73706	7.74540
CL2	.00053	.00048	.00003
CL	.26762	.29908	.02693
CLH	8.24412	8.50901	16.14489
CLHO	.00020	.00016	.00000
CLO	.00009	.00008	.00000
HCOOH	.00017	.00010	.00000
CCLO	.00085	.00058	.00001
CHN	.00143	.00080	.00004
CHNO	.00014	.00008	.00000
CHO	.00225	.00148	.00001
CH2O	.00039	.00022	.00001
CH3	.00001	.00000	.00000

CH4	.00001	.00000	.00000
CN	.00001	.00001	.00000
CO	28.19977	28.16060	28.19659
CO2	2.27429	2.34030	2.28639
MGN	.00187	.00146	.00000
MGO	.05968	.06001	.00000
MG2	.00075	.00061	.00000
CLMG	1.57583	1.57830	.01075
CL2MG	13.60397	13.22216	4.87960
CL4MG2	.02004	.01235	.00116
HMG	.16403	.14208	.00004
HMGO	.73355	.69001	.00067
H2MGO2	.32584	.26581	.00060
MG	1.30161	1.52182	.00413
MGO(C)	.00000	21.93700	30.04353
MGO(L)	22.01681	.00000	.00000