Dunite ANEOS in CTH:

Dunite is a rock composed of:
Primarily Olivine = $(Mg,Fe)_2\ SiO_4$
With a little bit of Pyroxene = $(Mg, Fe^{2+}, Ca, Na)(Mg,Fe^{2+},Al)Si_2O_6$
Commonly used as a proxy for "mantle" rock for Earth/Moon.

Number	Meaning/Symbol	Value (cgs ; temperature in eV)
V1	Number of elements	3
V2	Switch for type of EOS	4 solid-liquid-gas w/ionization
V3	Reference density (ρ_o)	3.32
V4	Reference temperature (T_o)	0.02567785 eV (298 K)
V5	Reference Pressure (P_o)	0
V6	Reference sound speed in linear shock-particle velocity relationship (S_o, or C)	$6.6x10^5$ cm/s = 6.6 km/s
V7	Gruneisen gamma (γ)	0.82
V8	Reference Debye temperature (θ)	0.057
V9	Constant in linear Hugoniot shock-particle velocity relation (S_1, or S)	0.86
V10	3x limiting value of Gruneisen γ for large compression	2/3
V11	Zero temperature separation energy	$2.11x10^{11}$ erg/gram
V12	Melting temperature	0.19 eV = 2204 K
V13		0
V14		0
V15	Thermal conductivity coefficient (if zero, thermal conduction is not included)	0
V16	Temperature dependence of thermal conduction coefficient	0
V17	Minimum density (ρ_{min})	0
V18	Solid-solid phase transition parameter D1	4.65
V19	" " D2	4.9
V20	" " D3	$0.83x10^{12}$
V21	" " D4	$3.5x10^{12}$
V22	" " D5	$1.3x10^{13}$
V23	Heat of fusion for melting (because = 0, melting is not included)	0.0
V24	Ratio of liquid to solid density at melting point. Because V24 and V23=0, V24=0.95	0.95