

Symbol	Description	Units
A	Frequency factor	s^{-1}
c_{peff}	Effective rock heat capacity	$\text{J kg}^{-1} \text{K}^{-1}$
c_{pf}	Fluid heat capacity	$\text{J kg}^{-1} \text{K}^{-1}$
c_{pr}	Rock heat capacity	$\text{J kg}^{-1} \text{K}^{-1}$
E	Activation energy	KJ mol^{-1}
f	Stoichiometric factor	
F	Reaction extent	
g	Gravitational acceleration	m s^{-2}
i	Reactive component	
L_{c}	Latent heat of crystallization	KJ kg^{-1}
m_{CO_2}	Carbon to CO_2 conversion factor	3.66
P_{atm}	Atmospheric pressure	10^5 Pa
$P_{\text{H}_2\text{O}}$	Hydrostatic pressure	Pa
R_{CO_2}	Rate of CO_2 generation	$\text{kg m}^{-3} \text{s}^{-1}$
R_{om}	Rate of organic matter degradation	$\text{kg m}^{-3} \text{s}^{-1}$
t	Time	s
T_{L}	Liquidus temperature	$^{\circ}\text{C}$
T_{S}	Solidus temperature	$^{\circ}\text{C}$
T	Temperature	$^{\circ}\text{C}$
$T_{\text{d}2} - T_{\text{d}1}$	Temperature range for dehydration reactions (Galushkin, 1997)	$350\text{--}650^{\circ}\text{C}$
w	Amount of reactive component	Fraction
Z	Depth	km
ϕ	Rock porosity	Fraction
κ_{eff}	Bulk thermal conductivity	$\text{W m}^{-1} \text{K}^{-1}$
κ_{r}	Rock thermal conductivity	$\text{W m}^{-1} \text{K}^{-1}$
κ_{f}	Fluid thermal conductivity	$\text{W m}^{-1} \text{K}^{-1}$
ρ_{f}	Fluid density	kg m^{-3}
ρ_{r}	Rock density	kg m^{-3}