

Property	Definition
Isochoric heat capacity $c_v$	$= T \left( \frac{\partial s}{\partial T} \right)_v = \left( \frac{\partial u}{\partial T} \right)_v$
Isothermal compressibility $\kappa$	$= -\frac{1}{v} \left( \frac{\partial v}{\partial p} \right)_T = \frac{1}{\varrho} \left( \frac{\partial \varrho}{\partial p} \right)_T$
Isothermal throttling coeff. $\delta_T$	$= \left( \frac{\partial h}{\partial p} \right)_T$
Volume expansivity $\beta$	$= \frac{1}{v} \left( \frac{\partial v}{\partial T} \right)_p = -\frac{1}{\varrho} \left( \frac{\partial \varrho}{\partial T} \right)_p$
Isobaric heat capacity $c_p$	$= T \left( \frac{\partial s}{\partial T} \right)_p = \left( \frac{\partial h}{\partial T} \right)_p$
Speed of sound $w$	$= \sqrt{\left( \frac{\partial p}{\partial \varrho} \right)_s}$
Joule-Thomson coefficient $\mu$	$= \left( \frac{\partial T}{\partial p} \right)_h$