

Estimate the enthalpy and entropy departures for Propylene  
at 398.15 K and 100 bar.

The ideal gas reference pressure for entropy is 1 bar.

**Solution:**

Fluid Name	Propylene	
Fluid index	416	
Molecular mass	42.081	
Pc	46.2 bar	
Tc	91.85 K	365 K
Acentric fac.	0.148	
P	100 bar	
T	398.15 K	
R	8.314 kJ/(kg.K)	
Pr	2.16	
Tr	1.09	
P0	1.00 bar	

H0-H	240.80 kJ/kg
(H0-H) experimental	244.58 kJ/kg
Error	-1.5%

S0-S	1.3838 kJ/(kg.K)
(S0-S) experimental	1.4172 kJ/(kg.K)
Error	-2.4%

Temperature range for Lee-Kesler method		Pressure range for Lee-Kesler method	
Tmin	109.5 K	Pmin	0.462 bar
Tmax	1460 K	Pmax	462 bar

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