

Humid air data

<p>This worksheet shows how <b>Thermo Utilities, MS Excel Add-ins</b> can be used for calculation of humid air data.                  Determine the vapor pressure, moisture content, percentage saturation, relative humidity, specific enthalpy, specific heat capacity, specific entropy and density for air with the following conditions:</p> <p>dry-bulb temperature                    22 degC                  wet-bulb temperature (sling)        14 degC                  atmospheric pressure                    1.013 bar</p>			
<b>Inputs</b>		<b>Units</b>	<b>Error ?</b>
Dry-bulb temperature	22.0	C	
Wet-bulb temperature	14.0	C	
Atmospheric pressure	1.013	bar	
<b>Outputs</b>			
Moisture content	0.0066		
Percentage saturation	0.3982		
Relative humidity	0.4003		
Gas Constant	0.2882	kJ/(kg.K)	
Specific heat capacity	1.0102	kJ/(kg.K)	
Specific enthalpy	38.7042	kJ/kg	
Specific entropy	0.0782	kJ/(kg.K)	
Density	0.0168	kg/m3	
Molecular mass	28.8525	kg/kmol	
Vapor pressure= $Patm * mc / (mc + 0.622)$	0.0106	bar	
<p>Taftan Data                  Email: support@taftan.com</p> <p>If you wish to know more about "Taftan Data" or other software developed by this company please visit our website:</p> <p><a href="http://www.taftan.com">http://www.taftan.com</a></p>			