

# Dewpoint temperature

## Definition

"The dewpoint temperature is the temperature to which the air needs to be cooled to make the air saturated. The actual vapour pressure of the air is the saturation vapour pressure at the dewpoint temperature, The drier the air, the larger the difference between the air temperature and dewpoint temperature" (Allen et al. 1998).

## Formula

Dewpoint temperature  $T_{dew}$  [°C] can be calculated based on actual vapor pressure  $e_a$  [kPa] as follows (Allen et al. 1998):

$$T_{dew} = \frac{116.91 + 237.3 \cdot \ln(e_a)}{16.78 - \ln(e_a)}$$

## References

Allen et al. (1998)

---

The original document is available at <http://wiki.fire.wsl.ch/tiki-index.php?page=Dewpoint+temperature>