

The energy required to melt a material is called the latent heat of fusion.

The energy required to change a material from a liquid to a vapor is called the latent heat of vaporization.

To convert 2 kg of ice at -10 degrees Celsius to steam at 110 degrees Celsius

Ice has a heat capacity of about 2100 j/kg/degree

Ice has a latent heat of fusion of about 333,000 j/kg

Water has a heat capacity of about 4200 j/kg/degree

Water has a latent heat of vaporization of about 2,300,000 j/kg

Steam has a heat capacity of about 2000 j/kg/degree