

# Kinetic Energy

kinetic energy of the object, measured in joules  
symbol "J"

velocity of the object, measured in metres per second  
symbol "m/s"

$$KE = E_k = \frac{1}{2} mv^2$$

mass of the object, measured in kilograms  
symbol "kg"

What is the energy of a 3000 kg car traveling at 100 km / h (27.8 m/s)?

$$E_k = \frac{1}{2}mv^2$$

$$E_k = \frac{1}{2} 3000 \text{ kg} \times (27.8 \text{ m/s})^2$$

$$E_k = 1.16 \times 10^6 \text{ J}$$