

- 2** At temperatures close to 0 K, the specific heat capacity  $c$  of a particular solid is given by  $c = bT^3$ , where  $T$  is the temperature and  $b$  is a constant, characteristic of the solid.  
The SI unit of specific heat capacity is  $\text{J kg}^{-1} \text{K}^{-1}$ .

What is the unit of constant  $b$ , expressed in SI base units?

- A**  $\text{m}^2 \text{s}^{-2} \text{K}^{-3}$
- B**  $\text{m}^2 \text{s}^{-2} \text{K}^{-4}$
- C**  $\text{kg m}^2 \text{s}^{-2} \text{K}^{-3}$
- D**  $\text{kg m}^2 \text{s}^{-2} \text{K}^{-4}$