**N5 PHYSICS DATA SHEET**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Speed of light in materials* | | |  | *Speed of sound in materials* | | | | |
| *Material* | | *Speed* in m s−1 |  | *Material* | | *Speed* in m s−1 | | |
| Air | | 3·0 × 108 |  | Aluminium | | 5200 | | |
| Carbon dioxide | | 3·0 × 108 |  | Air | | 340 | | |
| Diamond | | 1·2 × 108 |  | Bone | | 4100 | | |
| Glass | | 2·0 × 108 |  | Carbon dioxide | | 270 | | |
| Glycerol | | 2·1 × 108 |  | Glycerol | | 1900 | | |
| Water | | 2·3 × 108 |  | Muscle | | 1600 | | |
|  | |  |  | Steel | | 5200 | | |
| *Gravitational field strengths* | | |  | Tissue | | 1500 | | |
|  | *Gravitational field strength*  *on the surface* in N kg−1 | |  | Water | | 1500 | | |
|  | |
| Earth | 9·8 | |  | *Specific heat capacity of materials* | | | | |
| Jupiter | 23 | |  | *Material* | | *Specific heat capacity* in J kg−1 oC−1 | | |
| Mars | 3·7 | |
| Mercury | 3·7 | |  | Alcohol | | 2350 | | |
| Moon | 1·6 | |  | Aluminium | | 902 | | |
| Neptune | 11 | |  | Copper | | 386 | | |
| Saturn | 9·0 | |  | Glass | | 500 | | |
| Sun | 270 | |  | Ice | | 2100 | | |
| Uranus | 8·7 | |  | Iron | | 480 | | |
| Venus | 8·9 | |  | Lead | | 128 | | |
|  |  | |  | Oil | | 2130 | | |
| *Specific latent heat of fusion of materials* | | |  | Water | | 4180 | | |
| *Material* | | *Specific latent heat*  *of fusion* in J kg−1 |  |  | | | | |
| *Melting and boiling points of materials* | | | | |
| Alcohol | | 0·99 × 105 |  | *Material* | *Melting point* in oC | | | *Boiling point* in oC |
| Aluminium | | 3·95 × 105 |
| Carbon dioxide | | 1·80 × 105 | Alcohol | −98 | | | 65 |
| Copper | | 2·05 × 105 |  | Aluminium | 660 | | | 2470 |
| Iron | | 2·67 × 105 |  | Copper | 1077 | | | 2567 |
| Lead | | 0·25 × 105 |  | Glycerol | 18 | | | 290 |
| Water | | 3·34 × 105 |  | Lead | 328 | | | 1737 |
|  | |  |  | Iron | 1537 | | | 2737 |
| *Specific latent heat of vaporisation of materials* | | |  |  | | | | |
| *Material* | | *Specific latent heat of vaporisation* in J kg−1 |  | *Radiation weighting factors* | | | | |
| *Type of radiation* | | | *Radiation weighting factor* | |
| Alcohol | | 11·2 × 105 |
| Carbon dioxide | | 3·77 × 105 | alpha | | | 20 | |
| Glycerol | | 8·30 × 105 | beta | | | 1 | |
| Turpentine | | 2·90 × 105 |  | fast neutrons | | | 10 | |
| Water | | 22·6 × 105 | gamma | | | 1 | |
|  | |  |  | slow neutrons | | | 3 | |
|  | |  |  | X-rays | | | 1 | |