**N5 PHYSICS DATA SHEET**

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| --- | --- | --- |
| *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 |