

SI Units

SI Units

- The system International or metric system is the modern scientific method of measuring all quantities and is generally devised around the convenience of the number ten.
- It is the world's most widely used system of units, measuring length, area, volume, mass, density, time & temperature et .
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- SI Prefixes: these are used to express large or small values of units.
- Kilo (K) placed before m, means a thousand metres ie. $1\text{Km} = 1000\text{m}$
- Milli (m) placed before m, means a thousandth of a metre a millimetre
ie. $1\text{mm} = 1\text{m} \div 100$
- Milli : one thousandth of a unit 0.001
- Centi : one hundredth of a unit 0.01
- Deci : one tenth of a unit 0.1
- Deca : ten times the unit 10
- Hecto : one hundred times the unit 100
- Kilo : one thousand times the unit 1000

- Derived SI units are formed when quantities are combined
- Quantity Derived SI unit Symbol
- Area $\text{m} \times \text{m} =$ square metre m^2
- Volume $\text{m} \times \text{m} \times \text{m} =$ cubic metre m^3
- Density $\text{kg} \div \text{m}^3$ kilos per cubic metre kg/m^3

- Length
- $10\text{mm} = 1$ centimetre $10\text{ mm} = 1\text{ cm}$
- $1000\text{mm} = 1$ metre $1000\text{mm} = 1\text{ m}$
- $100\text{cm} = 1$ metre $100\text{cm} = 1\text{ m}$
- $250\text{mm} = 0.250\text{m}$
- $25\text{mm} = 0.025\text{m}$
- $2.5\text{mm} = 0.0025\text{m}$
- $32\text{cm} = 0.32\text{m}$
- $3\text{cm} = 0.03\text{m}$

- Length : metre m
- Area : square metre m^2
- Volume : cubic metre m^3