

Section-4

Q-2 * Mechanical properties :

- 1) Strength : They have low tensile strength. Tensile strength of thermoplasts generally range between 15 to 90 MPa.
- 2) High temperature suitability : They have low melting point, therefore are unsuitable for high temperature usage, generally above 100°C .
- 3) Dimensional stability : At higher temperature, this is poorer due to softening in them.
- 4) Weather effect : They are susceptible to weather condition.
- 5) Impact strength : It is low which further decreases at higher temperature due to softening.
- 6) Thermal and Electrical conductivity

* Physical properties :

- 1) Colour : Some plastics are completely transparent.
- 2) Durability : Plastic offers great resistance to moisture and chemicals and hence are more durable.
- 3) Fire Resistance : The phenol-formaldehyde and urea-formaldehyde plastics resist fire to a great extent.
- 4) Specific gravity : The specific gravity of plastic is very low and hence convenient to handle.

5) Durability:

5) Ductility: The plastics are not ductile and hence they fail without giving warning.

6) Fixing: Plastics can be bolted, glued, clamped or simple push fitted in position.

7) Light weight: The density of plastic is usually b/w $0.8 - 2.2 \text{ g/cm}^3$.

* Use in Construction Industries:

- 1) Corrugated and plain sheets for roofing.
- 2) for making jointless flooring.
- 3) Flooring tiles, and overhead water tanks.
- 4) Bath and sink units, cistern and hall float.
- 5) Decorative laminates and mouldings.
- 6) windows and door frames & shutter for bathrooms doors.
- 7) lighting fixtures, electrical fixtures, conduits, electrical insulator.
- 8) Pipes to carry cold water.

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