

SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution) Coimbatore – 35



Teflon (Poly tetra fluoro ethylene):

It is obtained by polymerization of water emulsion of tetra fluoro ethylene under pressure in the presence of benzoyl peroxide

$$\begin{array}{ccc} & & Polymerization \\ nCF_2 = CF_2 & \rightarrow & -(CF_{2-}\,CF_2)_n - \\ & & Benzoyl\ peroxide \end{array}$$
 Tetra fluoro ethylene
$$\begin{array}{ccc} & Polymerization \\ & Polytetra\ fluoro\ ethylene \end{array}$$

Properties:

- Teflon is extremely tough, flexible and the softening temperature is about 350 C.
- It has high chemical resistance towards all chemicals except hot alkali metal and hot fluorine.
- It has good electrical and mechanical properties. It shows good thermal stability.

Uses:

- A good insulating material (for motors, transformers, cables, wires, fittings etc)
- It is also used for making gaskets, packagings, pump parts, tank linings etc.



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Nylon 6,6:

It is prepared by the condensation polymerization of adipic acid and hexamethylene diamine in the absence of air.

Properties:

- Nylon 6,6 can be converted into nylon fibre.
- It acts as a good plastic material when properly moulded.
- Both as a fibre and as a plastic Nylon 6,6 has high strength, elasticity, toughness, abrasion resistance and good mechanical properties.
- Its softening temperature is 260 C

Uses:

- It is used in textile industry for making carpets, under garments
- It is used in engineering field for making bearings, gears etc.,