

A look around our surroundings will depict that most of the objects are made of plastics. If a list is written down then it will be observed that seventy to eighty percent things around us are either directly obtained from plastics or have plastic components in them. For example, plastic chairs, tables, plates, umbrella, hangers, boxes etc. Polythene (poly + ethene) is an example of plastic and is commonly used for making polythene bags. Plastic is a polymer which has different types of arrangement of the monomer unit. They can have a linear structure, branched or a cross-linked structure



can have a linear structure, branched or a cross-linked structure. There are many plastic articles which are easily bent whereas some of the articles break on forced bending. These bottles get deformed if hot water is kept in them. Such plastics which get deformed on heating are known as thermoplastics. For example polythene and PVC (poly vinyl chloride). They are largely used for making toys, combs and various types of containers. On the other hand plastics which once molded do not change

their dimensions on heating are known as thermosetting plastics. Bakelite and melamine are two examples in this case. Bakelite is a poor conductor of electricity and therefore it is used for making electrical switches, handles of various utensils etc. Melamine is a versatile material and can resist fire. Therefore it is used for making kitchen wares and fabrics that need fire resistance.

### Plastic – The material of choice

The following properties of plastic make it the material of choice for making many articles:

1. **Plastics are non-reactive:** Most of the metals get corroded by air and water. But plastics do not react with air or water. So they cannot be corroded easily. Therefore it is used for making many utensils and storing various chemicals.
2. **Plastics are light, strong and durable:** The articles made up of plastics are very light. Plastic being light, strong and durable can be molded into many shapes and sizes as required by the user. They are cheaper than metals and hence widely used in making various household products.
3. **Plastic is a poor conductor:** They are poor conductors of heat and electricity and therefore plastics are used for coating electric wires and switches. The handles of frying pans are also made up of plastic due to this property.