



SNS COLLEGE OF TECHNOLOGY,
(An Autonomous Institution)
Coimbatore- 35



DEPARTMENT OF MECHATRONICS ENGINEERING
19MCT102 – ENGINEERING MATERIALS

Compositions

- Aluminium alloys (or aluminum alloys; see spelling differences) are alloys in which aluminium (Al) is the predominant metal. The typical alloying elements are copper, magnesium, manganese, silicon, tin and zinc.

Properties

- Aluminium can be severely deformed without failure. This allows aluminium to be formed by rolling, extruding, drawing, machining and other mechanical processes. It can also be cast to a high tolerance.
- Alloying, cold working and heat-treating can all be utilised to tailor the properties of aluminium.
- The tensile strength of pure aluminium is around 90 MPa but this can be increased to over 690 MPa for some heat-treatable alloys.

Aluminium



Uses

- Aluminium is used in a huge variety of products including cans, foils, kitchen utensils, window frames, beer kegs and aeroplane parts. This is because of its particular properties.



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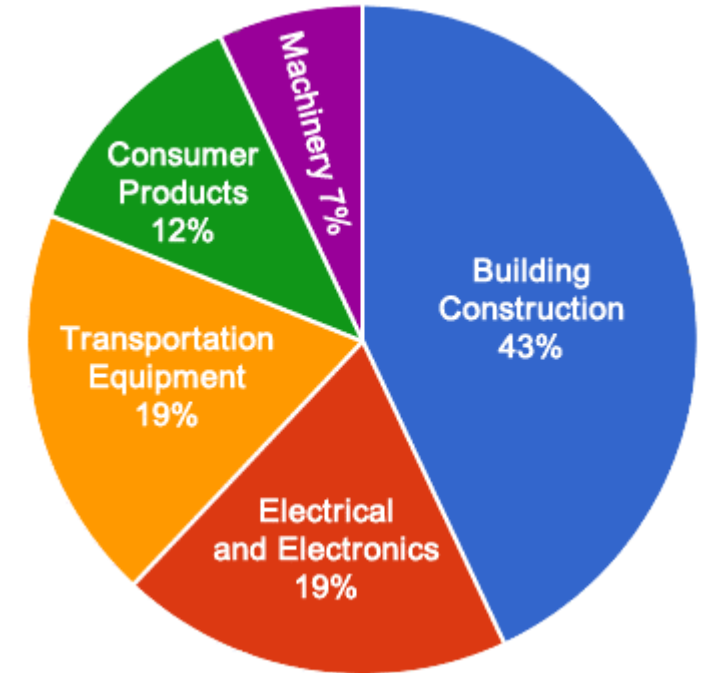
Compositions

- Copper occurs naturally but its greatest source is in minerals like chalcopyrite and bornite

Properties

It is a soft, malleable, and ductile metal with very high thermal and electrical conductivity. A freshly exposed surface of pure copper has a pinkish-orange color.

Copper



Uses