



Food



Product Design



Graphics



Electronics



Materials



Manufacturing



Textiles



Software

Materials



Timber

Hardwoods

Softwoods

Manufactured boards

The timber tree poster

Material finishes

Paints

Wood finishes

Other finishes

Adhesives

Paper and board

Paper and board types

Plastics

Thermosetting plastics

Thermoplastics

Metals

Ferrous metals

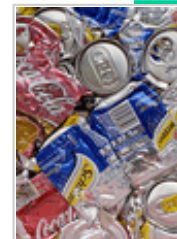
Non-ferrous metals

Non-ferrous metals



Non-ferrous metals

Non-ferrous metals are metals that do not have any iron in them at all. This means that Non-ferrous metals are not attracted to a magnet and they also do not rust in the same way when exposed to moisture. Typical Non-ferrous metals include copper, aluminium (coke cans), tin and zinc.







Aluminium cans

Metal Alloys

Alloys are substances that contain two or more different metals and occasionally other elements. The metals are carefully chosen and mixed to achieve specific properties these include reducing the melting point making the alloy light weight, etc.



Alloy Key Ring

Metal type	Metal uses	Melting point	Example product
Aluminium - tends to be light in colour although it can be polished to a mirror like appearance. It is very light in weight. Learn more >>	Used for saucepans, cooking foil, window frames, ladders, expensive bicycles.	660°C	
Copper - is a ductile and malleable metal. It is often red / brown in colour. It is a very good conductor of heat and electricity. Learn more >>	Used for plumbing, electric components, cookware and roof coverings.	1084°C	
Tin - Is very ductile and very malleable. It is resistant to corrosion from moisture. It is bright silver in appearance. Tinplate is steel with a tin coating. Learn more >>	Used as a coating on food cans, beer cans. Used as whistles, tin foil and soldering.	231°C	
Zinc - is very resistant to corrosion from moisture. However zinc is a very weak material. Learn more >>	Used as a coating on screws, steel buckets, American cents. It is also used to galvanise steel.	419°C	

Useful web links



Wikipedia

Read a Wikipedia article about metallic materials.

[View the Wikipedia metal page >>](#)

BBC Bitesize

Revise more about metals at the BBC bitesize site.

[View the bitesize timbers page >>](#)

Technology student

Ferrous and non ferrous metals explained

by technology student..

[View the tec student metal page >>](#)

Brass – Is often cast and machined then plated. It is yellow in colour and is a mixture of 65% copper and 35% zinc. [Learn more >>](#)

It is used for decorative metal work such as door handles, candle sticks, musical instruments, ornaments.

900–940 °C depending on composition



Casting alloy – This looks like aluminium and is used for casting. It is aluminium with 3% copper and 5% silicon. [Learn more >>](#)

Used for sand casting, die casting, engine parts, casting in schools.

660°C



Quiz time!

Mr DT says 'Read the text above and then answer these questions below'. Write your answers on a sheet of paper, dont forget to write your name on the sheet!:-

- 1.) What are the properties of a non-ferrous metal?
- 2.) What is a metal alloy?
- 3.) What is the main properties of aluminium?
- 4.) What is copper used for?
- 5.) Why is it good to make food cans out of tin?
- 6.) What is the melting point of zinc?
- 7.) What is brass used for?
- 8.) What is casting alloy used for?



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