

## Files

A file is used to remove material on **metal** or **plastic**. Files come in all sorts of shapes and sizes, with different kinds of teeth for different purposes.

The size of **cut** or blade on a file is selected

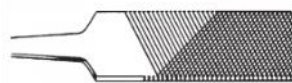
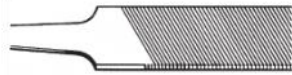
depending on what you want

to do. If you want to remove material quickly, then a **coarse** tooth is used. However, this leaves the metal with a **rougher** surface.

If you want to get a **smoother** finish, then a **fine** cut would be used.

One of the ways you get different cutting abilities is by the teeth layout.

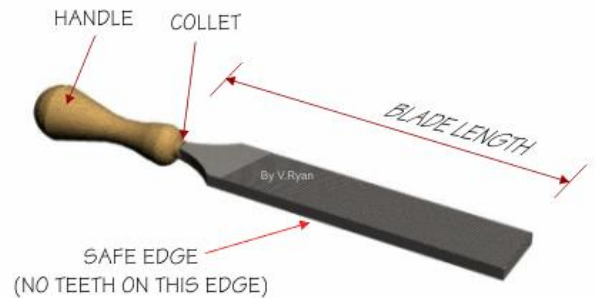
**Single cut** files are used for quicker and rougher cutting. **Double cut** files are used for smoother finishing.



Files come in different profiles. These are picked to suit the job you are planning to do with them. A flat file is used for flat work and for external fillets.

A **Half Round** file allows you to file out concave or **hollow** surfaces.

More intricate detail can be filed using **Round**, **Four Square**, or **Three Square** (triangle) files.



### Using a File

When using a file to shape material, the material should be securely held in a vice or clamped to a bench. Make sure that the file has a **Handle** on the **tang** for safety reasons. If it doesn't have one, then don't use it.

Hold the file handle with your dominant hand, and the end of the file blade with the other.

When filing, **lean heavily** when pushing **forward**, as that is the direction of cut.

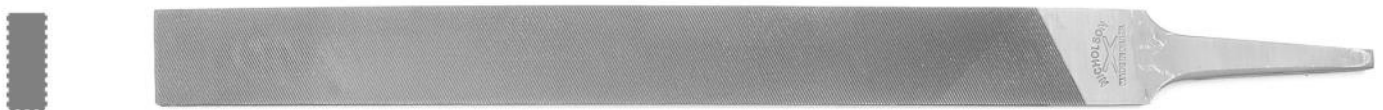
Once you are fully forward, **lift** the file off the material and bring it back to the start. This avoids damage to the teeth.

If you are **Draw Filing**, that is using a file sideways to get a smoother finish, then you can keep the blade on the material at all times.

The teeth in a file can get clogged up (especially if you use **Aluminium**). To clean the teeth use a **File Card** or wire brush. Brush the file in line with the teeth.

One way of helping to prevent clogging is to rub some chalk onto the file before use.

Files are used for shaping **Metals** (e.g. Aluminium, Steel, Copper, Brass) and **Plastics** (e.g. Acrylic, High Density Polyethylene). They are not design for smoothing timber.



The following YouTube videos demonstrate some important points regarding files:

<https://www.youtube.com/watch?v=32FUysj-Lu4>