



At Davey & Company we specialise in the production of traditional fittings using traditional materials. This means that we try to avoid the use of stainless steel and aluminium, which are widely used on modern craft, and favour instead the bronzes, brass, copper and galvanised iron. Apart from being more pleasing to the eye, these materials offer different qualities than their modern counterparts and are perhaps these days less well understood. To help answer some of the more frequently asked questions and to support our product descriptions, the following notes are offered as guidance.

## METALS

### **Gunmetal**

The first and most important thing to say here is that **gunmetal is bronze**, or to be more accurate, it is one of the bronzes and is a nice warm 'browny-gold' colour. Its designation is LG2 (LG stands for leaded gunmetal) and consists of copper (85%), lead (5%), tin (5%) and zinc (5%). Gunmetal is a favoured material to use for traditional boat fittings because it takes casting, machining and polishing very well, is relatively strong and very resistant to salt water, so it does its job for a very long time. All Davey products made from gunmetal include the letters GM in the part number.

Incidentally, 'polishing', in foundry terms, just means that after the item is knocked from the sand mould with its very rough surface, it is sanded down using progressively finer abrasive and polishing belts until it has a mirror smooth and shiny finish. This surface will, on contact with sea air, slowly patinate to a pleasing darker brown colour with tinges of green, but this does not effect its strength, performance or life expectancy and is, in fact, its natural state. If a gleaming polished finish is preferred then any good metal polish can be used to keep it 'as new' and perhaps a smear of petroleum jelly will keep the polished finish longer where the function of the fitting allows.

### **Aluminium Bronze**

For fittings which need a higher strength as well as excellent seawater resistance we use aluminium bronze, designation AB2, which is an alloy consisting of copper (83%), aluminium (10%), nickel (5%) and iron (3%). This is a paler yellow/gold colour and having more than twice the strength of gunmetal is ideal for manufacturing our 'Grabit' boathook and reefing claws. For this material our part numbers include the letters AB.

### **Brass**

There are many alloys in use in the world today called brass, with some being better than others. As we are primarily listing brass items made in England, where the controls are quite stringent, the quality of the brass used is of a high standard. However, it should be noted that brass is best used for interior fittings and should never be used in a submerged position. Brass items contain the letters BR in the number.

### **Chrome Plate**

Many items in this catalogue are produced and listed with a chrome plated finish (usually on top of brass), and carry the letters CP in the number. Many others that we list only in gunmetal or brass can also be chrome plated to order, and we would be pleased to quote for this service. It should be noted, however, that gravity sand cast items (which is how many of our products are made) can sometimes have small pits on the surface which all but disappear when they are finally polished in the foundry. It is possible when chrome plating these items that these blemishes can sometimes re-appear.



## Metals & Fastenings Guide

### Galvanised Iron

For working boats and certain designs of leisure craft, galvanised fittings offer a very strong and resilient alternative to bronze. Initially cast in iron, these fittings are then put into the annealing ovens for 3-6 days to make them malleable (less brittle) and much stronger. They are then galvanised, normally using the 'hot dip' process, which gives many years of protection against corrosion and is far superior to electro-plating or sherardizing. Our part number designation for these items is GA.

## FASTENINGS

### Galvanic Corrosion Avoidance

It is very important that the correct fastenings are used to attach each fitting to the boat. It is not enough that the fastenings themselves are of marine quality, they must also be close in the Galvanic Series to the metal the fitting is made from. If they are too dissimilar, the less noble one will corrode.

The following table shows those combinations that are suitable and those that are not. A selection of our traditional marine fastenings can be found towards to end of this catalogue.

Fitting Material	Fastenings	
	Suitable	Not Suitable
Gunmetal	Silicon Bronze or Stainless Steel	Brass
Brass	Brass or Silicon Bronze	Stainless Steel
Galvanised Iron	Galvanised or Stainless Steel	Silicon Bronze

### Silicon Bronze

This is an excellent material for the production of marine fastenings. It is high in strength and corrosion resistance and can be formed and machined into most kinds of fastenings including wood screws, machine screws, coach bolts, coach screws and nails. It is more expensive than most other materials, but this is paid back through its high strength and long life.

### Fastening Type

For some of our items in this catalogue we have stated a fastening type or size as a guide in relation to normal use and method of fixing. It is recommended, however, that fittings that could take a heavy prolonged or snatch load should be bolted rather than screwed, with reinforcing pads underneath, if required, to spread the load.