

SAFETY FIRST- SAFETY KNIVES

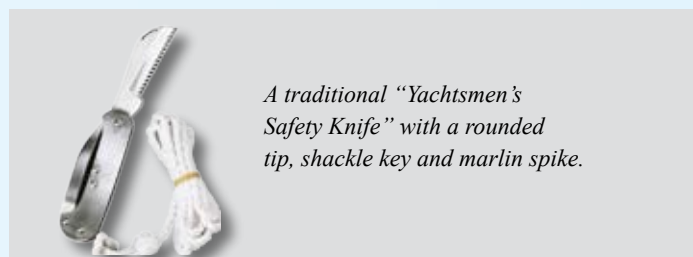
Kevin Lewis, ABC Dinghy Coordinator

Our series on safety continues with a look at a vital piece of safety kit, the Safety Knife

Having a knife whilst sailing is not only a vital piece of safety kit, but can also be just plain useful! However, there are a large number of knives available, what should we be looking for?

Blade Shape

There are a large number of blade shapes for different purposes, but for marine use, most “safety” knives should have a rounded or flat tip. This avoids puncturing equipment and guards against accidentally injuring yourself or another person. The obvious danger is when the knife is in use, the boat rolls and the knife can inflict accidental injury. Furthermore, in rescue situations it may be that a sailor is trapped; they may be tangled in some ropes or it may be necessary to cut their harness or even clothing to free them. In this case, the knife can safely be “pushed” close to the body without the risk of additional injury.



A traditional “Yachtsmen’s Safety Knife” with a rounded tip, shackle key and marlin spike.

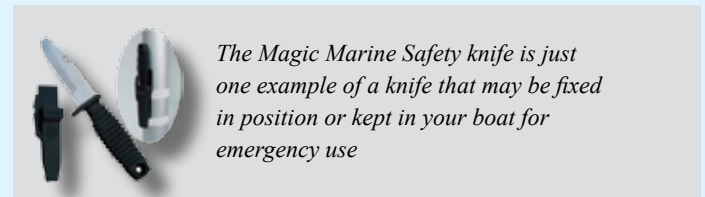


A simple “floating” knife (right) and the popular “Wishard” knife (left)

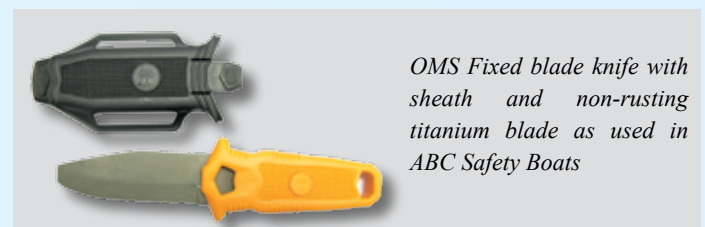
The Fixed-blade knife

This knife is usually kept in a sheath and often used by divers. This is very suitable to keep on your yacht or tender, but the key point is that it should be stored in a known place that is accessible in case of emergency. However, it should be kept well away from children, and of course kept in a dry location. A safety kit or toolbox is a good location. Some High Performance dinghy classes require in their class rules a safety knife to be permanently attached to the boat. For example, the 18 Foot Skiff class rules state:

“A knife has to be fixed at the port side of the transom next to the centerline so that it is accessible in normal as well as in capsized position. The knife has to be sharpened to cut ropes and belts from at least 6mm diameter within a max. of 2 seconds with using only one hand. It has to be fixed so that it can be taken off with only one hand and without additional tools”



The Magic Marine Safety knife is just one example of a knife that may be fixed in position or kept in your boat for emergency use

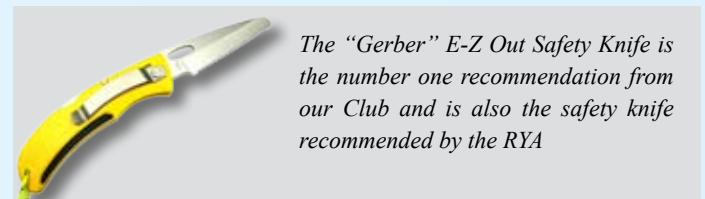


OMS Fixed blade knife with sheath and non-rusting titanium blade as used in ABC Safety Boats

The Royal Yachting Association in the UK now requires all Safety Boats at RYA Recognized Teaching Establishments to carry an onboard knife in addition to any safety equipment carried by Instructors themselves. ABC carries a Safety Knife on all three of our present safety boats.

The folding “personal” knife

Anyone involved in water sports, be it dinghy sailing, windsurfing, kayaking or any other activity should seriously consider having a “personal” safety knife that they always keep on their person. Even yacht sailors should consider such a knife; they may find themselves or a crew member trapped by a sheet or other rigging; there are instances where people have fallen overboard and the safety knife was in their boat. One recent European incident involved a capsized RIB; the safety kit was in a locker inaccessible once that boat was upside down. A crew member became trapped after their lifejacket auto-inflated and they were caught under the upturned boat. Luckily, on this occasion, another crew member had a safety knife on his person, and was able to use it to free the trapped crew member.



The “Gerber” E-Z Out Safety Knife is the number one recommendation from our Club and is also the safety knife recommended by the RYA



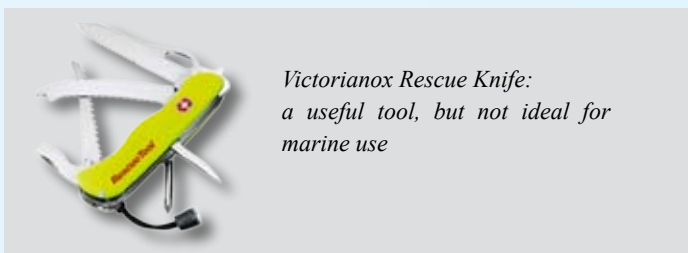
The Spyderco H-1 Atlantic Salt is highly recommended and the blade is made from high quality non-rusting H-1 Steel

There is obviously a particular risk associated with more High Performance Dinghies; often crew members will be wearing a harness with a “hook”. Also, such boats generally tend to have more ropes and more complex rigging; and capsizes are often faster and potentially more serious. ABC recommends that ANYONE sailing with a trapeze should ALWAYS carry a safety knife with them. Instructors and parents should also ALWAYS carry a personal safety knife, but we would not encourage younger children to have their own knife for obvious reasons.

The design of a knife that you keep with you is important. It should be very firmly closed so that under no circumstances can the blade be accidentally exposed. At the same time, it must be easy to open and ideally should have some mechanism that locks or holds the blade open while in use, again to avoid any risk of personal injury. Any personal knife needs a lanyard so its not easy to loose. Ideally the knife should be attached to your lifejacket; buoyancy aids with pockets are ideal, especially if you can make some method of attachment. Of course some larger yacht sailors may choose not to wear a lifejacket at all times; a knife with a cord and clip may in this case be kept in your pocket and clipped to your belt. One inexpensive knife is even designed to float.

Multi-blade Knives

Knives come in many designs and multi-blade models can provide a number of extra useful functions. Of particular use to sailors will be a shackle key and a marlin spike. However, the over-riding consideration with a multi-blade knife must be ease of use and maintenance. Generally speaking a “Swiss Army” type multi-blade knife is not suited to the marine environment. Too many blades may be difficult to maintain and not easy to operate in difficult conditions.



Victorianox Rescue Knife: a useful tool, but not ideal for marine use

Blade materials

Steel is a combination of iron and a small amount of carbon. For knives, an alloy is produced that includes

various percentages of other materials that add certain properties to the knife blade. Quality blade manufacturers may blend over a dozen materials to provide specific qualities in their knives. “Stainless Steel” contains a higher percentage of chromium that makes it more resistant to corrosion; the chromium oxide creates a barrier to oxygen and moisture, helping to reduce rust formation.



The GRK Safety Knife with Teflon Coated Blade

“Marine-Grade” stainless steel has the highest chromium content, but is also the most expensive. Titanium is a lightweight metal that contains very little or no iron and as such it is almost completely resistant to salt water corrosion, but depending on the knife it may not be as sharp as a traditional steel blade. Very recently a new type of “H-1” Steel is being used by some manufacturers that includes Nitrogen instead of carbon and is also very highly resistant to corrosion. “Teflon” is sometimes used as a blade coating and is effective in reducing corrosion but can be scratched off in use.

Knife Care

Any safety knife, of whatever design or material, needs care to prevent corrosion or deterioration. The golden rule must be to wash your knife in fresh water and completely dry it after it has become wet; salt-water will attack even the highest quality blade. Knives kept aboard or in lifejacket pockets need to be checked and cleaned regularly. Lubricating and protective oil such as 3 in 1 or similar is very helpful, (best to apply a small amount on a cloth) and even WD40 can be used, although this can be messy. The best option are newer “dry-film” lubricants that bond to the knife blade surface, many of these can be bought quite cheaply as wipe-on cloths.

Find out more!

The following web sites contain more information and are highly recommended:

www.gerbergear.com Produce very high quality knives, no.1 recommended EZ-Out Rescue Knife

www.spyderco.com Quality knives, lots of information and suppliers of the non-rusting H-1 Atlantic Salt Knife

www.sentrysolutions.com supply specialist dry lubricants for your knife

www.supremeco.com.hk Mongkok based specialists stocking a wide range of knives and safety equipment

www.prodiver.com.hk Wanchai based dive shop stocking knives and safety equipment