Modern technology has enabled manufacturers to produce hats which are very strong, lightweight and extremely comfortable to wear. All hats and skulls must be fitted with an integral adjustable nylon harness, must bear the CE mark showing compliance with the basic health and safety requirements shown in the PPE Directive. This compliance is usually shown by meeting one of a range of standard, having passed the required test. To protect properly the hat must be fitted correctly, ideally by someone who has attended a BETA hat fitting course.

If that hat suffers a severe impact – which can include dropping it on a hard surface from height, it should be thrown away and a new one purchased. It is easy to replace a hat, but impossible to replace a head!

**Standards to avoid:**
BS3686; BS6473:1984; BS4472:1988
All these standards preceded the first European standard and were all withdrawn in 1997.

**Standards due to change:**
**EN1384 1996 / BSEN 1384 1997/ BSEN1384 2012  (with or without Kitemark mark)**
The presumption of conformity has been withdrawn from this range of standards so whilst it can still be worn for hacking and hunting, most of the disciplines and riding bodies within the UK are phasing acceptance of this out. Manufacturers have now stopped producing to this standard although there may be stock on the market.

## Current Standards
European standards are put together by a technical committee comprising representatives of every EU state. These are reviewed every five years or following a complaint about its efficacy and although a review does not necessarily lead to a new standard, history has shown that a new standard emerges every ten years or so.  PAS standards are managed by the BSI and are reviewed every two years.

**PrEN1384 2016**
This revision of the above standard is currently going through voting but is not expected to be available to the market until 2016/17. No hats are being made to this draft specification.

**VG1 (with or without Kitemark or IC Mark)**
Developed by Vertical Group 1, comprising the notified bodies who test and certify hats around Europe, this testing specification is based on the EN1384 with additions to the requirements and testing procedures to bring it up to a level similar to PAS015.  As this is an interim specification it is not expected to exist longer than the time it takes to prepare the new EU standard

**PAS015: 1998/ PAS015: 2011 (with or without Kitemark mark or IC Mark)**
This stands for Product Approval Specification and was developed by the British Standards Institute (BSI) in response to concerns about the time it was taking to develop what would become the EN1384.  The first version was formulated by looking at drafts for the European standard and taking the highest option in each case.
The 1998 revision of the PAS015 addressed new areas of protection such as crush resistance and protection against injury when landing on an edged surface.  As the test line is lower at the front it tends to lead to slightly bulkier helmets.  A stability test is also included to limit excessive movement during wearing or a fall. This has been revised in 2011 with an increased drop height and several other amendments affecting the performance of hats. The 1998 version is no longer manufactured.

**ASTM F1163: 2004a/ 2015 (with SEI mark)**
This is the American standard for riding hats and is similar to PAS015:1998 although it does not include a lateral rigidity (crushing) test nor a penetration test, meaning these hats often have quite large ventilation holes or slots. There is much debate about the ventilation holes and whether they do help to cool the head or put the rider at more risk of penetration type injuries.  There are many helmets on the market however with ventilation holes that do pass the PAS and EN1384 penetration tests as well as the ASTM standard.

**Snell E2001**

This standard was developed in America by the Snell Institute. It is a higher performance standard which includes all aspects of ASTM and PAS 015 but with a sharper horseshoe anvil (to replicate a horse kick or impact with a sharp surface), higher impacts and an additional hemispherical anvil to represent an uneven but not sharp surface such as a tree, fence or cobbled surface.

**AS/NZS 3838: 2006 (with SAI global mark)**

This Australasian standard is comparable to the EN1384 but testing includes the hazard anvil from PAS 015 but does not include a penetration test.

## Quality Symbols

**The Kitemark**

The Kitemark is the registered trademark of the British Standards Institute and can only be affixed to products certified by them. As well as complying with the requirements of the relevant standard, e.g PAS 015, the mark indicates that the company complies with a rigorous system of regulation and testing. Companies are required to provide the BSI with unrestricted access to their offices and factories and allow regular testing of randomly chosen samples through batch and audit testing. Hats are only released for sale once batch testing is completed, thus avoiding product recall.

PAS 2011 (purple)          PAS 1998 (green)

VG1
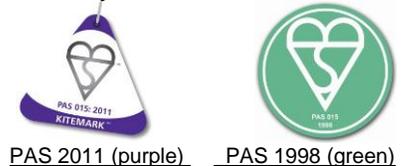
Kitemark certification is voluntary and can be withdrawn at any time.

**IC Mark**

A quality mark operated by Inspec and applied to PAS015 and VG1 compliant helmets.

**SEI – Safety Equipment Institute**

The SEI quality mark is the American equivalent of the Kitemark for ASTM standard hats. The SEI is an organization similar to the BSI, set up to test the claims of manufacturers that their product meets the claimed standard. Its system of regulation includes design approval and audit testing of product. Hats must be tested a minimum of annually, however the company must also show an internal auditing and quality control system of regular testing that may include batch testing.

**SAI Global**

The "five ticks" Standards Mark for the Quality Assurance Scheme of Australia shows certification to their version of the Kitemark, requiring batch testing and company auditing.

**CE Mark**

The CE Mark is neither a quality mark nor a standard in itself but is a mandatory declaration under EU law by a manufacturer to show compliance with essential requirements of all relevant EU Directives. Under the Personal Protective Equipment Directive all safety equipment must bear the CE mark showing compliance with the appropriate European safety standard.

**Which is the safest hat?**

Firstly it is important to understand that no hat can prevent serious injury in certain circumstances. You should choose your hat based on the level of risk involved, aiming at standards offering higher levels of protection where higher risks are involved.

**Who will allow Which hat?**

Riders competing under the rules of a Discipline or the Pony Club or Riding Clubs should refer the respective rule books as to the standards allowed under such rules.

**To find your local BETA retail member who attended a hat and body protector fitting course please see www.beta-uk.org or email laurac@beta-int.com or call 01937 587062**