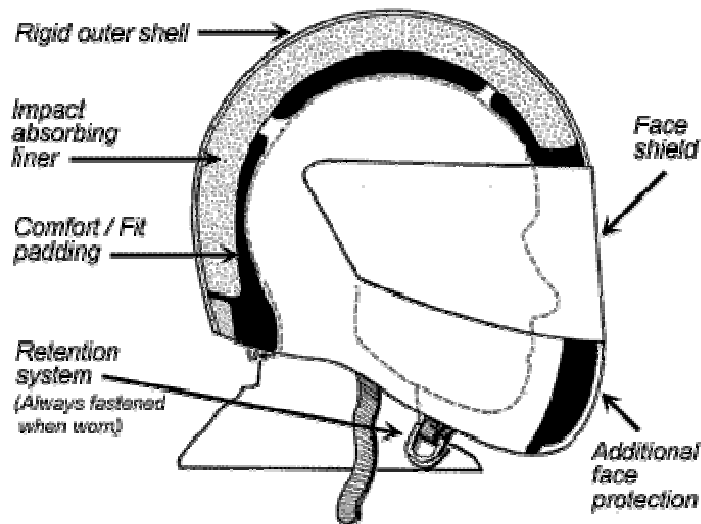


## Safety Helmet



A safety helmet is one of the most important items of personal protective equipment used by motorcycle riders primarily to protect the head against impact. Helmets won't prevent accidents, but they clearly will cut down on deaths and injuries when collisions occur.

### Components of the Helmet and Their Roles



Typically, a helmet has the following components:

**The Shell:** the shell of a helmet is an injection molded thermoplastic or a pressure molded thermo set that is reinforced with glass fibers or made of fiber glass.

- **It absorbs energy in an impact:** the shell bends when the helmet is impacted and the underlying foam deforms. At moderate speeds the shell can take one-third of the impact energy.
- **It distributes local forces from an impact:** rigid objects like stone or a

projecting beam can cause a skull fracture at low forces, the shell acts to distribute the force of such impact eliminating the risk of penetration.

- **It allows sliding on road surfaces:** the shell being rigid and having a convex shape allows the helmet to slide along a road surface without there being an excessive force.
- **It protects the face and temples:** full-face helmet is beneficial in protecting the face and jaw. The chin bar of such helmets contain rigid foam to absorb energy for direct blows on the chin, prevent facial bone fractures and prevent the lower part of the forehead and temple being struck.

**The Protective Padding:** this is a molding of polystyrene beads or polyurethane foam. It provides a stopping distance for the head. The foam can compress by 90% during an impact, although it recovers partially afterwards. But this helps increase the stopping distance thus reducing the peak deceleration of the head. It also protects as much as possible of the head. In addition to this there is a layer of comfort padding to provide comfort to the wearer.

**Proper Strapping System:** It is essential to wear a well-fitting helmet for the effective working of chinstrap system. To test if the helmet fits your head properly, tightly fasten the chinstrap and then pull helmet off forward by gripping the rear and then pulling. The strap must be threaded correctly so that the buckle locks the strap when it is pulled from the chin side. The strap must be pulled as tight as is bearable under the chin.

## What Does the Law Say?

### Section 129 Motor Vehicles Act '88

**Wearing of Protective Headgear:** Every person driving or riding otherwise than in a side car, on a motor cycle of any class or description, shall, while in a public place, wear protective headgear conforming to the standards of Bureau of Indian Standards: Provided that the provisions of this section shall not apply to a person who is a sikh, if he is, while driving or riding on the motorcycle, in a public place, wearing a turban: Provided further that the state government may, by such rules, provide for such exceptions as it may think fit.

**Explanation:** 'protective headgear' means a helmet which-

- a. By virtue of its shape, material and construction, could reasonably be expected to afford to the person driving or riding on a motorcycle a degree of protection from injury in the event of an accident; and
- b. Is securely fastened to the head of the wearer by means of straps or other fastenings provided on the headgear.

### Explanatory Notes:

**The BIS & the ISI mark:** The provisions of section 129 MVA'88 require the protective headgear to conform to the standards of Bureau of Indian Standards. The law thus requires that all protective helmets for motorcycle riders should meet or exceed the minimum performance requirements specified in the corresponding Indian Standard (IS: 4151 in case of protective helmets). These requirements include minimum impact and

penetration capabilities; chin strap retention qualities, and a prescribed minimum field of view. To certify that their helmets meet all the requirements of IS: 4151, the manufacturers place the standard mark on the back of each helmet. This mark is often referred to as the "**ISI mark**". The standard mark comprises the single coloured symbol of the type shown below having a width-to-height ratio of 4:3.



The number of the corresponding Indian Standard with part/section, if any, which is unique for each product, is written on top. This number in case of protective helmets for motorcycle riders is: **4151**. The standard mark for all protective helmets would thus appear as follows-



The license number (a seven digit number, represented as cm/l-\_\_\_\_\_) is also given with the standard mark. This helps in identifying the particular manufacturer/licensee, which has manufactured the product. E.g., Studds Accessories Ltd. one of the licensees for manufacturing protective helmets has been allotted the license no. Cm/l-9169691. This number is displayed along with the standard mark on all helmets manufactured by it. Thus a Studds helmet would bear the mark-



The Bureau of Indian Standards has hosted the complete BIS directory of licensees on its website [www.bis.org.in](http://www.bis.org.in) from which any consumer can directly download the list of licensees for the manufacture of protective helmets for motorcycle riders.

**Chin Strap:** The clause (b) of the explanation to section 129 MVA'88 stipulates that the protective headgear should be securely fastened to the head of the wearer by means of straps or other fastenings provided on the headgear. The wearer of an improperly fastened helmet can be punished for driving/pillion-riding without helmet. This provision of law can be used by enforcement agencies to check the practice of drivers of two-wheelers (especially teenaged ones) to leave their helmets unstrapped or loosely strapped.



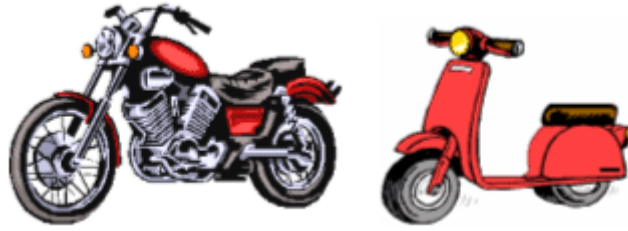
**Turban:** The proviso to section 129 MVA'88 stipulates that the requirement for wearing protective headgear shall not apply to a person who is a sikh, if he is, while driving or riding on the motorcycle, in a public place, wearing a turban. Thus sikh drivers/riders (male) are exempted from wearing safety helmets only when wearing a proper turban and not when wearing parna, patka etc.



**Pillion rider:** section 129 MVA'88 stipulate that the driver as well as the pillion rider shall wear protective helmets while driving/riding a motorcycle.



**Motor cycle:** sub-section 2 of section 27, MVA'88a defines 'motor-cycle' as a two-wheeled motor vehicle, inclusive of any detachable sidecar having an extra wheel, attached to the motor vehicle.



**Penal Provisions:** The violation of any of the provisions of section 129 MVA'88/ Rule 193 Chandigarh Motor Vehicle Rules '90 would constitute an offence punishable under s.177 MVA'88.

### **Section 177, Motor Vehicles Act '88**

**General Provision For Punishment Of Offences** - whoever contravenes any provision of this act (i.e. MVA'88) or of any rule, regulation or notification made there under shall, if no penalty is provided for the offence be punishable for the first offence, with fine which may extend to one hundred rupees and any second or subsequent offence with fine which may extend to three hundred rupees.