

### Crash Helmets

**87.** Crash helmets bearing an MSA approval sticker must be worn at all times during training, practice and competition. It is strongly recommended that a flame resistant balaclava, helmet bib or face mask is also worn.

**88.** It is Permitted to incorporate an FIA-approved Hans Device fitted in accordance with FIA regulations.

**89.** Every user must ensure that their helmet is:

- Manufactured to the correct technical Standard
- Correctly and securely fitted
- In a serviceable condition.

### Helmet Standards

**90.** Helmets bearing one of the following standards may be approved by the MSA (subject to other criteria also being met).

**91.** All MSA and International Events

- FIA 8860-2004
- SNELL SA2005
- SNELL SA2000
- SFI Foundation 31.1A, 31.2A
- BS 6658 Type A/FR

**92.** All MSA Events

- BS 6658 – 85 Type A (Type 'B' is not acceptable)

**93.** International and MSA National Kart Racing Events

- SNELL K98 and K2005.

**94.** Snell standards can be verified by either a self-adhesive or cloth label. The self-adhesive label has a silvered background and the cloth label will approximate to this colour (see drawing 94).

**95.** MSA approval stickers (£1.30 each) must be affixed to the outside of the helmet, in the approximate location of the Driver's right ear. This can only be carried out by selected Scrutineers, by the MSA at Motor Sports House, only after the helmet has been checked for conformity with the standard required and is considered to be in a satisfactory condition.

**96.** MSA approval stickers are printed on foil and once affixed cannot be reapplied. Helmet standards are regularly updated and hence an element of 'lifing' will always remain. Helmets approved for use in all disciplines require a blue MSA sticker. Helmets used in Kart racing only require a green MSA sticker, available from issuing Scrutineers (see drawing 96).

### Helmet Fit and Security

**97.** In selecting a helmet, take the following precautions:

- Ensure it is the correct size by measuring the crown of your head
- Helmets should be comfortable but fit snugly. Check there is no side-to-side movement
- Tighten straps securely. The chin strap must be under tension at all times. Chin cups are prohibited
- With head leant forward, attempt to pull up the

back of the helmet, as shown in the accompanying diagram, to ensure the helmet cannot be removed in this way

- Ensure you can see clearly over each shoulder
- Ensure nothing impedes your breathing in the helmet and never cover your nose or mouth other than with a flame resistant balaclava or face mask. Helmets with life-support attachments must only be worn if they are connected to a life-support system
- Ensure that the visor can be opened with one gloved hand
- Ensure the back of the helmet provides protection for your neck
- Never wear a scarf, tie or other loose clothing which could come loose and possibly cause an accident
- Do not buy mail order unless you can carry out the above checks; return a helmet unused if it does not fit.

### Helmet Condition and Care

**98.** Total protection can never be given by any headgear, and the best of crash helmets may not entirely prevent head injury or death in a severe accident. Helmet users must understand that helmets are deliberately constructed so that the energy of a severe blow will be absorbed by the helmet and thereby partially destroy it. The damage may not be readily apparent; it is essential therefore that any helmet receiving a blow in an accident is either replaced or returned to the manufacturer for competent inspection – this of necessity must be the responsibility of the helmet user, who will have been aware of the circumstances under which the helmet was struck. It is not possible nor indeed reasonable to expect the scrutineer, in every case, to observe significant damage. Where there is any doubt about the helmet's fitness for its intended purpose then the Chief Scrutineer is empowered to remove the MSA Approval Sticker and impound the helmet for the duration of the meeting. This should be a rare occurrence since competitors must appreciate that, once a helmet has served its purpose, it is not only sensible but necessary to replace it. It is the competitor himself who must ensure that the helmet which he uses is fully fit for its purpose; it is clear that this is a small insurance to pay for one's life. The competitor also might consider that, should he survive an accident, but receive head injuries having knowingly used a previously damaged helmet, he could be placing an enormous burden of care upon his family.

**99.** It is in everyone's interest for the Competitor to buy the best helmet possible (which is not necessarily the most expensive) and to look after it. The following pointers regarding helmet care should be followed:

- There must be no alteration to the structure of a helmet. Where a radio intercom is fitted, this should only be in accordance with the helmet manufacturer's instructions
- Use a weak solution of soft soap and water to clean the interior and exterior of the helmet; do not get the interior too wet
- Some moulded plastic helmets, although meeting approved standards, can be seriously damaged by substances such as petrol, paint, adhesives, cleaning agents and stickers (not the MSA Stickers). Though

## Competitors: Safety [C(c)]

this damage may not always be apparent, crazing or obvious dulling of the surface finish could indicate serious structural weakening and is likely to result in the Scrutineer impounding the helmet

- The helmet should be stored, in a helmet bag, in a cool dry place away from sunlight when not in use.
- Do not strap the helmet to the roll cage or allow other unrestrained movement which could cause it to be damaged.

### Impounding of Helmets

**100.** Where there is any doubt a helmet's fitness for purpose, the Chief Scrutineer is empowered to remove the MSA approval sticker and impound the helmet for the duration of the meeting.

Pre-Event	If the helmet does not conform to required Standards, or is in a poor or dangerous condition, the Chief Scrutineer will impound it for the duration of the meeting and remove the MSA sticker. At the close of the meeting the helmet will be returned to the Competitor as received, but without the MSA sticker
Accident During Event	If a Competitor is injured during an event and the helmet is damaged, the Chief Scrutineer will impound the helmet, remove the MSA sticker and seek advice as to further action from the Steward
Accident During Event and Competitor Evacuated to Hospital with Head Injuries	The Chief Scrutineer will ensure the helmet has been seen by the Chief Medical Officer, then impound it and remove the MSA sticker. Unless the Chief Medical Officer wishes to retain the helmet, it must be sent to the MSA Technical Department, who will dispose of it after six weeks unless it is specifically called for by the Competitor

### Goggles and Visors

**101.** Either goggles or a visor (made of clear or neutral density filters) must be worn at all times during training, practice and competing, unless in a closed vehicle. The recommended minimum visor standard is BS4110Z.

### Front-Engined Cars

**102.** With front engine cars a propeller shaft restraint should be fitted. Either safety hooks or a rigidly fixed steel panel of not less than 18swg.

### Head Restraints

**103.** Head restraints, where fitted, must be capable of restraining a 17kg mass decelerating at 5g. They must be minimum 10cms x 10cms and should be within 5cm of the Driver's/Passenger's helmet when they are normally seated.

**104.** A head restraint should be located to ensure the Driver's/Passenger's head/helmet cannot move past it under rearward forces, or be trapped between the rollbar and the head restraint itself.

### General Safety Recommendations

**105.** Given the widely varying nature of Competitions and vehicles, the MSA takes the view it would not be practicable or useful to cover all aspects of safety precautions with mandatory regulations. As a general principal, Competitors are advised to replace any safety item, helmet, safety harness, seat etc, that has been involved in a serious accident. The attention of all Competitors is also drawn to the following general safety points:

#### Electrical

**106.** Batteries – precautions should be taken to reduce the possibility of acid burns from batteries in case of accident. Batteries should be secured within a non-conductive leak-proof compartment

**107.** Electrical System – all wiring should be secured and well protected to reduce the risk of fire from electrical short circuits.

#### Fuel

**108.** Tanks and Pipes – every effort should be made to isolate fuel tanks and pipes from the Driver/Passenger compartment. The risk of fuel spillage from accident damage can be reduced by use of bag type tanks or by

## Polycarbonate Windows

If used on side and rear windows should be a minimum thickness of 4mm and manufactured from a high quality safety plastic such as LEXAN or MAKROLON polycarbonate to meet the relevant MSA / FIA regulations.

For more information see page 9 of this publication or visit [www.plastics4performance.co.uk](http://www.plastics4performance.co.uk)

Drawing 94

HELMET STANDARDS



BS 6658-85 Type A



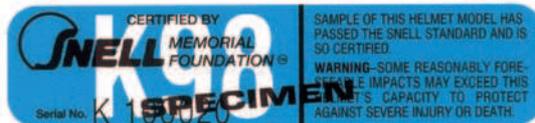
BS 6658-85 Type A/FR



SA2000



SA2005



K98



K2005



SFI 31.1A



SFI 31.2A



FIA