

B-95/N-94 Addendum February 2, 1998

1998 Addendum to the 1995 STANDARD FOR PROTECTIVE HEADGEAR

For Use With Bicycles

and to the

1994 STANDARD FOR PROTECTIVE HEADGEAR

for Use in Non-Motorized Sports

Introduction

This document modifies the two of Foundation's Standards for Protective Headgear which apply to helmets recommended for bicycling. The changes are so minor as to be considered editorial. The purpose of this addendum is merely to demonstrate the compliance of Snell B-95 and N-94 Certified headgear with the requirements of the Consumer Product Safety Commission standard and to resolve any uncertainty that a line for line comparison of the Snell and CPSC documents might create.

Helmets currently in production and certified to either of these two Standards need not be resubmitted for testing. The random sample test program which applies to all Snell Certified products will establish and document each certified model's compliance well in advance of the effective date set for the CPSC's mandatory requirements.

The Foundation's certification of a particular helmet model to the requirements of the 1995 Standard for Protective Helmets for Use in Bicycling and/or the 1994 Standard for Protective Helmets for Use in Non-Motorized Sports signifies the Foundation's support that the model meets all the performance requirements of the

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CPSC bicycle helmet standard. However, CPSC also imposes packaging and informational requirements over and above those of this augmented standard.

If written assurance is provided that headgear duly Snell certified and labeled to the augmented standard will also satisfy the additional packaging and informational requirements, the Foundation will authorize labeling, packaging and advertising confirming the Foundation's findings that the product indeed "Complies with CPSC Safety Standard for Bicycle Helmets for Persons Age 5 and Older."

REQUIREMENTS

Unless specifically waived in this addendum, all those requirements and procedures stated in the original Standards documents continue to apply.

LABELING AND MARKING

The requirements for marking and labeling included in the original Snell Standards continue. In addition, the three numbered requirements and the conditional requirement for helmets sensitive to common solvents etc. must also incorporate a "signal word" as follows:

These items must be preceded by the signal word "WARNING" or, if the items are not expressed in English, the most appropriate translation of "WARNING." Only a single signal word is required if more than one of these items are included on a single label but each label containing any of these items must include the signal word. The signal word shall be all in capital letters, bold print, and a type size equal to or greater than the other text on the label.

EXTENT OF PROTECTION

Although the requirements for both Snell Standards call out more head coverage than CPSC, the test lines specified by CPSC for the ISO M and O headforms are, in fact, 0.2 mm lower in the brow region than in the Snell Standards. Since 0.2 mm is well within the expected error of most current helmet marking equipment and procedures and since both Snell Standards call for five or more millimeters of additional coverage at the back of the head no redress is considered necessary for the difference.

CONDITIONING FOR TESTING

The barometric pressure for all conditioning and testing environments shall be 75 to 110 kPa. The laboratory temperature and relative humidity shall be within 17°C to 27°C and 20% to 80% respectively. All test samples shall be stabilized within these ambient conditions for at least four hours before further conditioning and testing.

The requirements for cold and hot conditioning continue unchanged. The wet conditioning shall not be by shower but shall instead be as follows:

The sample shall be immersed crown down in potable water at a temperature of 17°C to 27°C to a crown depth of 305 mm ± 25 mm for a period of not less than four (4) hours, nor more than twenty-four (24) hours.

DYNAMIC TEST OF RETENTION SYSTEM

The equipment and procedures for the dynamic test of the retention system as described in the original 1995 and 1994 Standards Documents shall no longer apply. The following is to be used in their place.

The helmet shall be placed on a headform in such a manner that the chin strap may be fastened under a device whose upper end approximates the contour of the bony structure of the jaw. The device will then be given a mechanical pre-load followed by a dynamic loading. The retention system fails if it cannot support the mechanical loads or if the maximum deflection during the dynamic load exceeds 30 mm. The retention system also fails if it cannot be easily and quickly unfastened after testing.

a. This chinstrap loading device shall consist of a simulated jaw attached to an inertial hammer. The jaw portion shall consist of two freely spinning metal rollers mounted in a rigid frame. The rollers shall be each $12.7 \text{ mm} \pm 0.5 \text{ mm}$ in diameter and separated by $76 \text{ mm} \pm 1 \text{ mm}$ on center. The inertial hammer shall be suspended from the frame midway between the rollers and shall permit a mass of 4 kg to be dropped in a guided fall of at least 60 cm to a rigid stop such that the entire shock of the stop shall be delivered through the hammer and frame to the rollers. The mass of this device including the 4 kg drop weight shall be $11 \text{ kg} \pm 0.5 \text{ kg}$.

b. Once the helmet is on the headform and the chinstrap buckled under the rollers, the entire mass of the chinstrap loading device shall be suspended from the chinstrap for at least 60 seconds.

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c. A baseline position for the device shall be marked and the 4 kg mass shall then be raised 60 cm and released to fall to the rigid stop. The peak dynamic deflection of the device from the baseline shall be recorded.