

INTERNATIONAL SKATING UNION

Communication No. 1019

Rink Board Padding – Short Track Speed Skating

1. This Communication is to specify the requirements according to Rule 280, paragraph 5.

2. These specifications are minimum specifications and apply to ISU Championships, Olympic Winter Games, Olympic Qualifying Events and World Cup Events.

It is recommended that Members follow these specifications when purchasing padding for use during any Short Track Speed Skating activity.

3. The required materials are probably available within any ISU Member through local companies that manufacture bedding or other foam rubber products. The specifications are a result of a Padding Research Project. The complete Project results may be obtained by contacting the ISU Office.

4. The minimum material specifications are as follows:

Padding shall be a composite pad, closed cell foam and open cell foam. The open cell foam is applied due to its superior ability to decrease impact forces.

- 7.62 cm (3 inch) of 32.04 kg/m³ (2 lb/ft³) density closed cell foam
- 12.70 cm (5 inch) of 22.43 kg/m³ (1.4 lb/ft³) density open cell foam (front layer)
- the pad should be 20.32 cm (8 inch) thick
- the height of the pads should be equal to the rink boards
- each piece of padding should be at least 2.13 m (7 ft) long

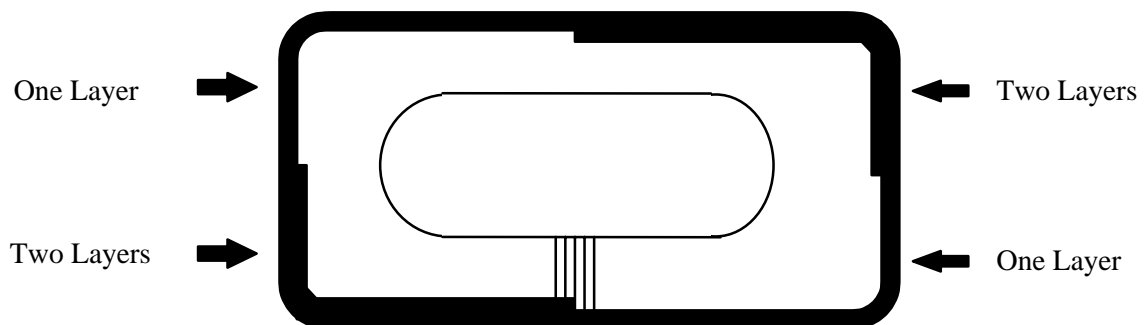
5. Cover

The pad should be covered by a vinyl covering commonly known as “Herculite”, with a smooth texture, low coefficient of friction, and excellent tear resistance. The vinyl coated fabric reinforced with nylon fibers should have a specification of 0.61 kg/m² (0.13 lb/ft²).

For commercial or information purposes, covers may be added to the pads, provided that they are of similar quality material (in order to maintain the protective function of the padding) and provided that they are in compliance with commercial agreements.

6. Placement

Pads shall be placed so that they are perpendicular to the rink boards and do not have a sloped or angled outer surface. Pads must be attached to the boards and to each other. Pads must lie with their weight on the ice. Pads must completely cover the rink board surface and be two layers in the indicated areas. The open cell foam side of the pads must be on the ice side and the closed cell foam side of the pads must be on the board side.



7. Other materials

Other types of padding and/or materials may be used so long as the drop test results, as explained below, produce equal or better results than those of the padding specified above.

8. Drop test

A drop test is performed by attaching a weight of 35 kg (77lbs.) to a rope and pulley with the ability to drop the weight from heights varying from 0.5 m. (2ft.) to 7 m. (23ft.). A platform measuring 1.22 m. x 1.22 m. x 1.9 cm. (4.0ft. x 4.0ft. x 0.75in.) made of polywood and resting on seven equally spaced supports is used to support the various samples to be tested. The weight of 35 kg is calculated to equal approximately one half the weight of an athlete and is calculated to represent the actual mass of an athlete at the time of impact with the padding.

The weight is dropped from various heights to determine the impact absorbing qualities of the material being tested. Various items of data acquisition equipment are used to acquire the necessary impact data to determine impact absorption. Below is listed the necessary technical equipment to be used.

Micron Millennia Plus

- Pentium 200 MHz Processor w/MMX
- 512K Pipeline cache on motherboard
- 32 MB EBO RAM
- 2GB SCSI Hard Drive
- 6X-Plextor SCSI CD-ROM
- Buslogic Flashpoint SCSI Controller
- Internal Iomega JAZ drive
- Number Nine Imagine 128 Series II, 4MB VRAM Video Card
- 104 key enhanced PS/2, 2 button
- Microsoft Windows 95
- National Instruments Labview 4.0 Software

National Instruments Data Acquisition Equipment

- AT-MIO-16XE-50 Low Cost A/D Data Acquisition Board
- SCXI-1321 Terminal Block
- SCXI-1121 Adapter
- SCXI-1100 Module

Sensotec Sensors and Equipment

- PEL Piezoelectric Accelerometer
- Model 41 Tension/Compression Load Cell, Upper Limit 5000 Lb.
- Model CA2 Charge Amplifier

For a more complete explanation of testing procedures and setup of the testing equipment, please contact the International Skating Union Secretariat in Lausanne.

Milano,
March 1, 1999
Lausanne,

Ottavio Cinquanta, President

Fredi Schmid, General Secretary