

Communication No. 2400

Cut Resistant Clothing & Protection equipment in Short Track Speed Skating

This Communication is based on 2018 ISU Special Regulations for Short Track Speed Skating, Rule 291, paragraph 1 and replaces ISU Communication No.1265. As determined by paragraph 2.1 and paragraph 3 of the Communication and shown in its Annex A part I, a first set of specifications enters into force on July 1st, 2021, and applies mandatorily (green colour) or is strongly recommended (yellow colour). As from July 1^s, 2022, a set of previously recommended specifications will become also mandatory as shown in green colour in Annex A part II.

1. Introduction

All participants in Short Track Speed Skating know and understand that the sport involves risks including the danger of injuries, such as cuts, concussions, and puncture wounds, particularly those resulting from a collision or fall. ISU Members must instruct all participants to respect required safety measures to minimize such risks and dangers. In particular, ISU Members and participants must observe all ISU safety and protection measures, including those stated in the Special Regulations and Technical Rules for Short Track Speed Skating as well as in ISU Communications, in particular, but not limited to, this ISU Communications.

In recent years, new types of races and race formats that have been added in Speed Skating Competitions carry higher risk of injuries due to the proximity of Skaters. For that reason, a new ISU Communication will soon be issued with similar requirements as the ones listed in this Communication, to regulate safety for Skaters taking part in Mass Start, Team Pursuit, Team Sprint and Relay races in Speed Skating.

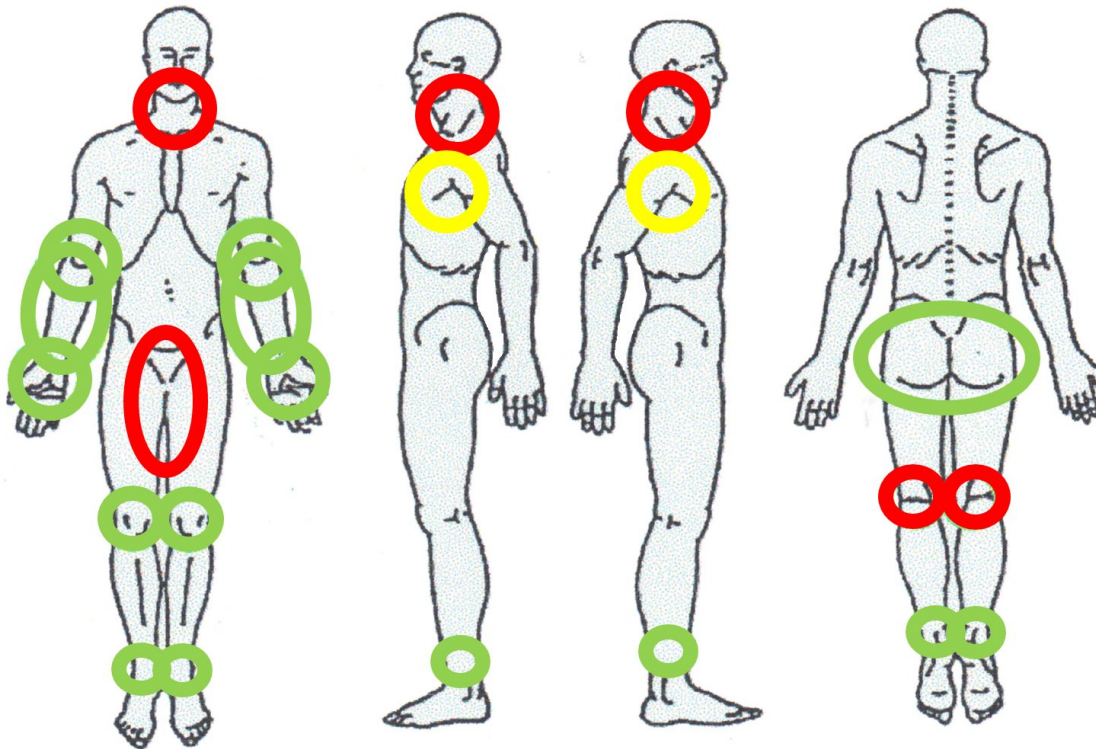
2. Cut Resistant Clothing

The special areas of risk identified during the initial study made in 2004 are still valid. These areas include the neck, groin, axillar region, gluteal region, lower arms, hands, back and front of the knees. Based on a high number of cuts around the ankle, also this area is now added as a high-risk area.

The risk areas are identified as

- zones where the risk of life-threatening injuries involving a laceration of a major artery / vein can happen (red & yellow zones);
- zones where there is a higher risk of getting a serious laceration (green zones).

Depending on the level of performance in competition and training, these areas and other areas must be protected against injury.



In order to determine the suitability of competition clothing materials for Short Track Speed Skating, tests were carried out to simulate the effect of extreme falls and determine the cut resistance quality of materials. Through statistical and error analysis, the results from these tests have been correlated with test results using the same materials under international standard EN388 (this widely recognized standard will be familiar to clothing manufacturers*1). Using the test data, an equation has been determined which makes it possible to test a material according to standard EN388, and then assess its suitability for Short Track Speed Skating.

Since 2016, the standard EN388 (see also ISO 13997) includes a pressure test. The ISU will investigate if such test is applicable for situations in Short Track Speed Skating. If so, further recommendations and/or requirements on cut resistant suits will follow, but not before season 2022/23.

At the time of issuing the previous ISU Communication 1265, there were no fabrics existing that could meet Level 3 or 4 of the EN388 Cut Resistance Standard. Therefore, under the EN388-2004 Cut Resistance Level 2 was set as the minimum standard for Racing Suits.

The fabrics were heavy, not breathable, and not stretchable; so only high-risk areas were mandatory to be covered. With the recent improvements on the fabrics, there are full body suits that are more comfortable (lighter, breathable, dryer), and also less expensive. They can be purchased in every part of the world. As recent observations also show that stitches in the uniforms weaken the fabrics and that a blade could reach a high-risk zone by entering via a non-protected area of racing suits, this Communication makes full-body suits or full-body underwear required instead of previous requirements that only high-risk zones had to be covered with cut resistant fabrics.

No limitations will be imposed on the manufacture of protective competition clothing/uniforms other than the protective material must comply with Standard EN388. At the moment of issuing this Communication, Level 5 cut resistant racing suits are already in development.

*1 <https://www.en-standard.eu/search/?q=en388>

Due to the availability of better fabrics, the ISU recommends that all ISU Members who will be purchasing new outfits for the season 2021/22 implement the new safety guidelines as specified in paragraph 2.1 below, already for such purchase.

From the 2004 study, it was established that the minimum required level of cut resistance, as specified in Standard EN388, needs to be higher for heavier and faster skaters. This is mainly true for injuries happening when two skaters fall and hit the paddings together. But many injuries actually happen during the race with skaters following each other closely, independently of their speed and weight. Recently collected statistics also indicate that more injuries are happening in training and in other competitions with younger skaters than with national team skaters and in ISU Events. For that reason, this Communication also includes recommendations for all levels of Skaters competing in short track, and not only for the ISU level.

2.1. Racing suit requirements for different levels of Skaters.

Based on the above, the ISU defines 4 levels of Skaters, with reference to existing events and competition circuits. The safety requirements for the different levels of Skaters apply to racing both during training and at competitions.

Level of Skaters*	Type of Competitions*	Racing suits minimum requirements or recommendations as of July 1st, 2022 (from season 2022/23)
(i) ISU Level	<ul style="list-style-type: none"> Olympic Games All ISU Events Other competitions at equivalent competitive level as ISU Events 	Mandatory required minimum: <ul style="list-style-type: none"> Full-body racing/ underwear suit, Cut resistant level 3
(ii) International Level & National Elite Level for Junior A-B and Seniors:	<ul style="list-style-type: none"> ISU recognized Junior competitions (Challenger series, Star Class, Danubia), Other competitions (national and international) at equivalent competitive level (Juniors and Seniors, below ISU Level) 	Mandatory required minimum: <ul style="list-style-type: none"> Full-body racing/underwear suit, Cut resistant level 2 Highly Recommended: <ul style="list-style-type: none"> Full-body racing/underwear suit, Cut resistant level 3
(iii) International Level & National Elite Level for Juniors C-D & Masters; Lower levels than (ii) for Juniors A-B & Seniors	<ul style="list-style-type: none"> International competitions National competitions at equivalent competitive level 	Highly Recommended minimum: <ul style="list-style-type: none"> Full-body racing/underwear suit, Cut resistant level 2
(iv) Development Levels	<ul style="list-style-type: none"> National, regional & local development circuits over the age of 10 	Recommended minimum: <ul style="list-style-type: none"> For high-risk areas of uniform/underwear suit, Cut resistant level 2

For the season 2021/22 see Annex A, part I, for mandatory requirements and recommendations.

3. Further requirements and recommendations

- Cut resistant protection may be either integrated in the actual competition uniform or be worn as special underwear. Recent research tend to show that an extra layer (when using an underwear combination) actually provides better protection than the integration of cut resistant protection directly in the racing suit.
- The racing suit must always cover entirely the neck regardless of the Skater's position. It is the Skater's responsibility to make sure the suit is zipped completely.
- If a neck guard is used, it must be placed under the suit in such a way that a blade cannot slide under the guard.
- No part of the body, except for the face, should be uncovered.
- Cut resistant ankle socks can also be used.

Cut resistant racing suits and cut resistant underwear have great longevity if taken care of properly and can therefore be passed on to other skaters in clubs and associations.

To ensure consistency in the testing of the fabrics used, the manufacturers of cut resistant clothing/uniforms are strongly recommended to have samples of their fabric tested at an international recognized standard testing institute, for example:

In Europe:

SATRA Quality Assurance, Ltd:

SATRA Technology Centre, Wyndham Way, Telford Way, Kettering, Northamptonshire, NN16 8SD,
UK + 44 1536 410000

www.satra.co.uk

In Asia:

SATRA Technology Services (Dongguan) Limited

Unit 110 Xinzhongyin Garden, Hongwei Rd, Xiping, Nancheng District, Dongguan, Guangdong,
China Tel: +86 769 2288 8020

www.satra.cn

In North America:

Groupe CTT Group

Tel.: 450-778-1870 / 1-877-288-8378

3000, avenue Boullé, Saint-Hyacinthe (Québec) CANADA J2S 1H9

www.gcttg.com

Helmets

Skaters of all levels must wear helmets that are in compliance with the current ASTM standard (American Society for Testing and Materials) or other standard that would be approved by the ISU. The helmets must have a regular shape (round or oval) and may not have protrusions unless these are small and completely integrated in the overall shape of the helmet.

Skaters must make sure the helmet strap is tied properly so that the helmet stays in a firm and correct position during the entire race.

Large aeration holes and openings, through which a skate blade would fit, are forbidden. To that effect, the ISU strongly recommends that for new purchases ISU Members/Skaters buy helmets that do not have slits or holes that are longer or larger than the thickness of the helmet.

Gloves

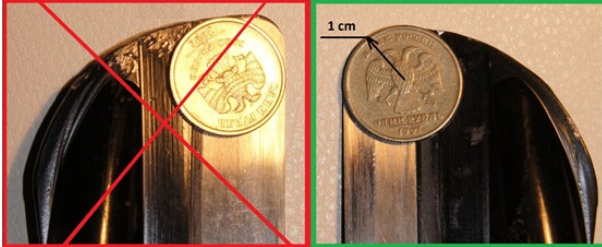
Cut resistant gloves or mitts must be used. The material must be at least of Cut resistant Level 3. For ISU Events, Olympic Winter Games and Winter Youth Olympic Games, the gloves or mitts used for Short Track must be predominantly white. Gloves of Cut resistant level 4 and 5 are easy to find already and are recommended.

Eyewear Protection

ISU highly recommends eye wear protection meeting ANSI Z87.1 Standard or ASTM F803 made with polycarbonate lenses designed to withstand impact for all Skaters above development level.

Blades

As per Rule 291, paragraph 1 f), the blades of all Skaters must have the tubes closed and the blade ends must be rounded off with a minimum radius of 10 mm.



4. Application and Control

As a general principle, for Skater's equipment, Rule 291 of the ISU Special Regulations for Short Track Speed Skating applies.

According to Rule 291, paragraph 2, each Skater is solely responsible that his/her personal equipment meets the highest safety criteria in order to obtain the utmost safety for the Skaters.

ISU Members must ensure that all Skaters of levels (i) and (ii), as indicated in section 2.1 above, who are entered for ISU Events and International competitions shall respect the above-mentioned Rules and the specifications of this Communication. For the clothing/uniforms, the specifications in the table in section 2.1. shall be respected as soon as possible, but at the latest as of July 1, 2022. In the meantime, for all ISU Events and Olympic Winter Games, the current mandatory requirements for racing suits remains: Cut resistant level 2 for high-risk zones.

For participants in ISU Events, Olympic Winter Games & Winter Youth Olympic Games, the ISU Members must ensure that the manufacturers of their competition clothing/uniform are labelling their products confirming that the Cut resistant fabrics used meet the above-described equipment requirements according to EN388, with also the Cut resistant level indicated.

ISU Members must provide documents that confirm the requirements of the Cut resistant fabric by sending it to the ISU office at the same time as getting the design of the racing uniform approved for the coming season.

Such document must be in English, duly drafted, dated, and signed by the manufacturer and it must be provided before the competition clothing/uniforms will be considered acceptable.

The ISU may carry out controls on the use of the required cut resistant competition clothing/uniforms and the other protective equipment at ISU Events. Skaters must be able to present product quality labels/seals or other proper documentation about the uniforms and the materials used. Skaters may be requested to show the inside of their racing suit for control. Such request will never be made right before a race but might be made right after or at a preselected time announced clearly. For helmets, if the seal of approval is not shown, ISU may use other means to inspect the equipment, such as brand collection, picture for further examination, etc.

Find all the detailed equipment specifications for each level of Skaters for this upcoming season and the following seasons in Appendix A.

5. Sanctions for Non-compliance

Non-compliance with the requirements listed in this ISU Communication will result in an immediate exclusion of the Skater(s) concerned from the respective ISU Event, Olympic Winter Games or Winter Youth Olympic Games.

Skaters not wearing their equipment properly will get a Penalty for breach of Equipment Rules. Skaters going into the starting lane without the proper equipment or with the equipment worn improperly will be excluded from the race.

6. Raising Awareness and Knowledge of Safety Measures and Protection

Obviously, the safety program respecting cut-resistant uniform material, together with all the other safety measures specified in the ISU Rules, cannot absolutely assure full protection for all competitors under all conditions. Experience demonstrates that stumbles and falls occur in high-speed ice sports. All ISU Members and their clubs, coaches and officials who conduct training programs are strongly encouraged to teach safe skating techniques during training and to insist upon compliance by their competitors with ISU Rules during competitions. As per Rule 141, paragraph 1, it is the responsibility of the ISU Members to ensure that their Competitors are physically and mentally prepared to compete safely.

Tubbergen,
June 16, 2021
Lausanne,

Jan Dijkema, President

Fredi Schmid, Director General