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Report No.: 0153-3.305/  
No.: 015-12/28-2024-1  
Date: 06.03.2024

# TESTING REPORT

**Testing subject:**

**Sport equipment**

**Applicant: QUEGO DOO**  
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**31000 Uzice**  
**Serbia**

**Inquiry date: 05.03.2024**

**Sample submitted by:**

Applicant

**Sampling method:**

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Head of the Department

FTN Acting Dean

Prof. dr Dejan Lukić

Prof. dr Boris Dumnić



## Designation of testing operators

The following operators are designated for executing the testing report number 015 – 12/ 28-2024-1 is determined:

Prof. Dr Sebastian Baloš  
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Date: 05.03.2024



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**EXAMINATION SUBJECT:** Sports equipment for simulating skiing

**TEST OBJECTIVE:** Determination of bearing capacity and deflection

**TESTING METHOD:** Three-point bend test.

**TESTING DEVICE:** VEB ZDM Leipzig 5/91, Measuring range: 0 – 10 kN

**TEST RESULTS:**

The client delivered sports equipment for simulating skiing in conditions when there is no snow. Sports equipment is shown in Figure 1.



*Figure 1. Preview of sports equipment.*

It is necessary to determine whether there is a presence of plastic deformation (after unloading) of the part concerning the load acting on the middle of the sample. The load is applied with a steel die, over a rubber pad to simulate the user's footwear. The presentation of the layout of the experiment is given in Figure 2.



*Figure 2. Preview of the layout of the experiment.*

During the test, the deflection of the part depending on the load was monitored, as well as the permanent deflection after the removal of the load. The test results are given in Table 1.

Table 1. Test results.

Serial number	Load [kg]	Initial distance from the floor [mm]	Distance from the floor when loaded [mm]	Distance from the floor after unloading [mm]	Deflection when loaded [mm]	Permanent deflection after unloading [mm]
1.	120	59.1	47	59.1	12.1	0
2.	140	59.1	45.1	59.1	14.0	0
3.	160	59.1	43.1	59.1	16.0	0
4.	200	59.1	38.5	58.1	20.6	1.0
5.	276	59.1	0	55	59.1	4.1

Figure 3 shows the part with a load of 276 kg. With that load, there was a deflection that was equal to the case when the central part of the device touched the ground.



*Figure 3. Preview of the loaded part.*

**CONCLUSION:** Based on the obtained results, it can be concluded that under the effect of a load of up to 160 kg, permanent (plastic) deformations of the sample do not occur, at 200 kg they are relatively small (1 mm) and reaching a deflection equivalent to touching the substrate with the central part of the sample is achieved with a load of 276 kg.

Test written by:

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