



Department of Production Engineering Materials Testing Laboratory; Tel: +381 21 4852339, fax: +381 21 454495.

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

TESTING REPORT

Testing subject:

Sport equipment

Applicant: QUEGO DOO

Vukole Dabića 6 31000 Uzice Serbia

Inquiry date: 05.03.2024

Sample submitted by: Applicant

Sampling method: –

Head of the Department

FTN Acting Dean

Prof. dr Dejan Lukić

Prof. dr Boris Dumnić







Designation

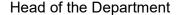
of testing operators

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

Prof. Dr Sebastian Baloš PhD Petar Janjatovic MSc Milan Pecanac

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.



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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: Head of the laboratory:

MSc Milan Pećanac Prof. dr Sebastian Baloš