

Test Report No:	11-24-1	Date of issue:	27.03.2024
Customer:	Fiberglass Estonia OÜ		
Customer address:	Suur-Jõe tn 75, 80010, Pärnu		
Assignment:	Testing of fiberglass reinforcement <i>Klaasplast sarruse tõmbekatse (koos katsekehade valmistamisega): tõmbetugevus, voolepiir, elastsusmoodul.</i>		
Received samples and data provided by customer:	Fiberglass reinforcements (rebars) HardPlus, D= 3 mm; 4 mm; 6 mm; 7 mm; 8 mm; 10 mm; 12 mm <i>Klaasplast sarrused</i>		

Annex 1-7	Steel for the reinforcement and prestressing of concrete (EN ISO 15630-1:2019)
Lisa 1-7	<i>Sarrus- ja pingestusteras. Katsemeetodid.</i>

Notes / Märkused:

Table 1 Requirements of steel reinforcements and test results / Nõuded terassarrustele ja klaaskiud sarruse katsetulemused

	R_m (MPa)	A (%)	Electrical conductivity / elektrijuhtivus**	Thermal conductivity / soojusjuhtivus**
A500HW SFS 1215*	550	12	Good / Hea	Good / Hea
Fiberglass HardPlus 3 mm	854	0,1	Non / ei juhi	Low / madal
Fiberglass HardPlus 4 mm	1513	1,5	Non / ei juhi	Low / madal
Fiberglass HardPlus 6 mm	687	0,5	Non / ei juhi	Low / madal
Fiberglass HardPlus 7 mm	1007	0,7	Non / ei juhi	Low / madal
Fiberglass HardPlus 8 mm	905	1,3	Non / ei juhi	Low / madal
Fiberglass HardPlus 10 mm	1052	1,2	Non / ei juhi	Low / madal
Fiberglass HardPlus 12 mm	998	3,4	Non / ei juhi	Low / madal
Fiberglass Mesh HardPlus 3 mm	854	0,1	Non / ei juhi	Low / madal
Fiberglass Mesh HardPlus 4 mm	1513	1,5	Non / ei juhi	Low / madal
Fiberglass Mesh HardPlus 6 mm	687	0,5	Non / ei juhi	Low / madal
Fiberglass Mesh HardPlus 7 mm	970	5,9	Non / ei juhi	Low / madal
Fiberglass Mesh HardPlus 8 mm	905	1,3	Non / ei juhi	Low / madal

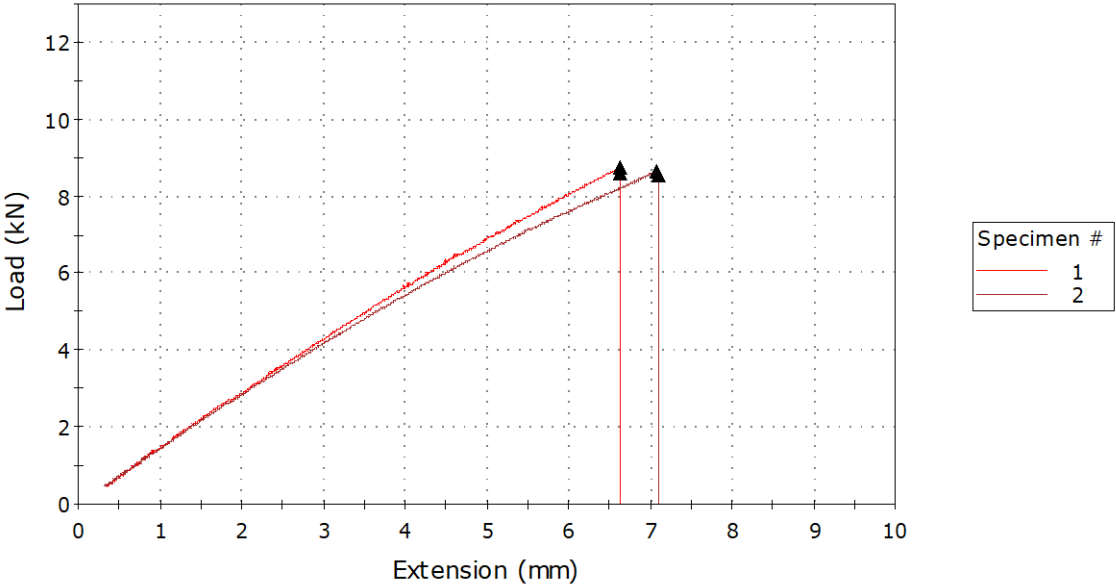
* steel reinforcement values are obtained from the standard / terassarruse tulemused on võetud standardist

** not test results / ei ole katsetulemused

Given report shall not be produced except in full without written approval of the laboratory. Sampling is done by customer. Given results apply only for tested specimens.	Laboratory of Mechanical Testing and Metrology Ehitajate tee 5, 19086 Tallinn, Estonia +372 620 3342 mlab@taltech.ee mlab.taltech.ee/en	Approved by <u>Vastutav isik</u>  PhD Mart Kolnes
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Annex 1 D= 3 mm

Specimen 1 to 2



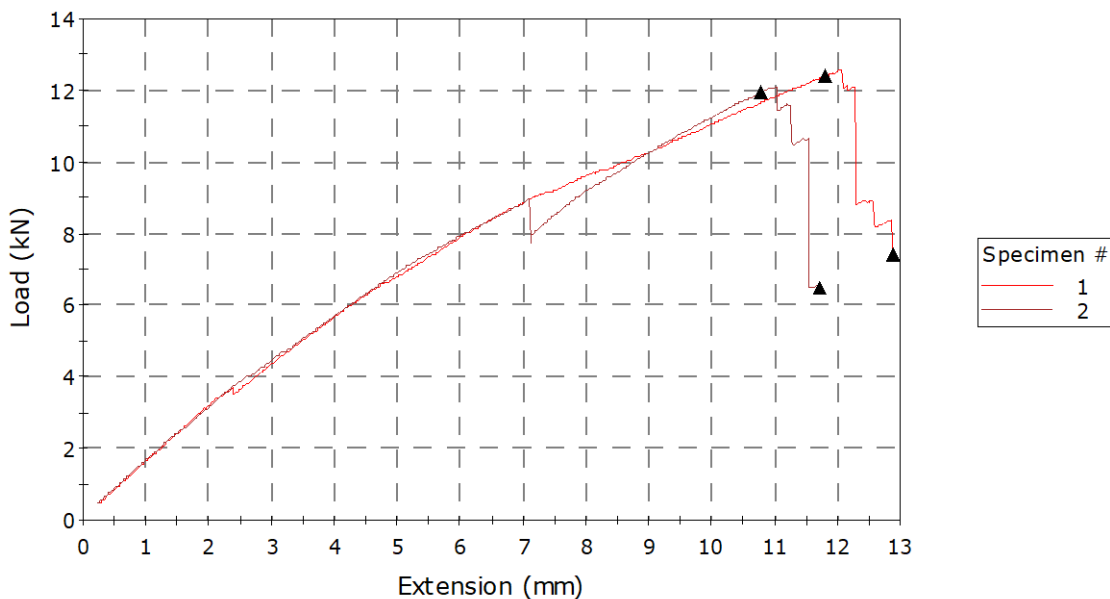
Test results

	Tensile Strength (MPa)	Load at Tensile Strength (kN)	% Non. prop. Elong. at Tensile Strength (%)	% Non. Prop Elongation at Break (%)
1	858.0	8.7	0.0	0.0
2	850.5	8.6	0.1	0.1

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Annex 2 D= 4 mm

Tensile Test

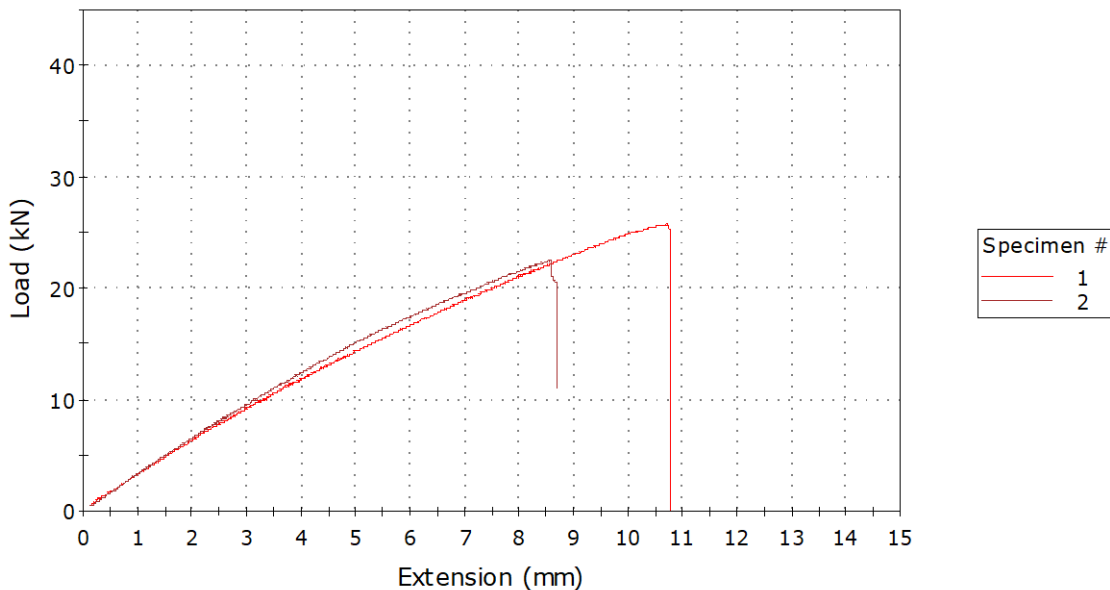


	Tensile Strength (MPa)	Load at Tensile Strength (kN)	% Non.Prop Elongation at Break (%)	% Non. prop. Elong. at Tensile Strength (%)	Notes
1	1540.2	12.4	1.5	2.1	
2	1485.4	11.9	1.5	2.2	

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Annex 3 D= 6 mm

Specimen 1 to 2



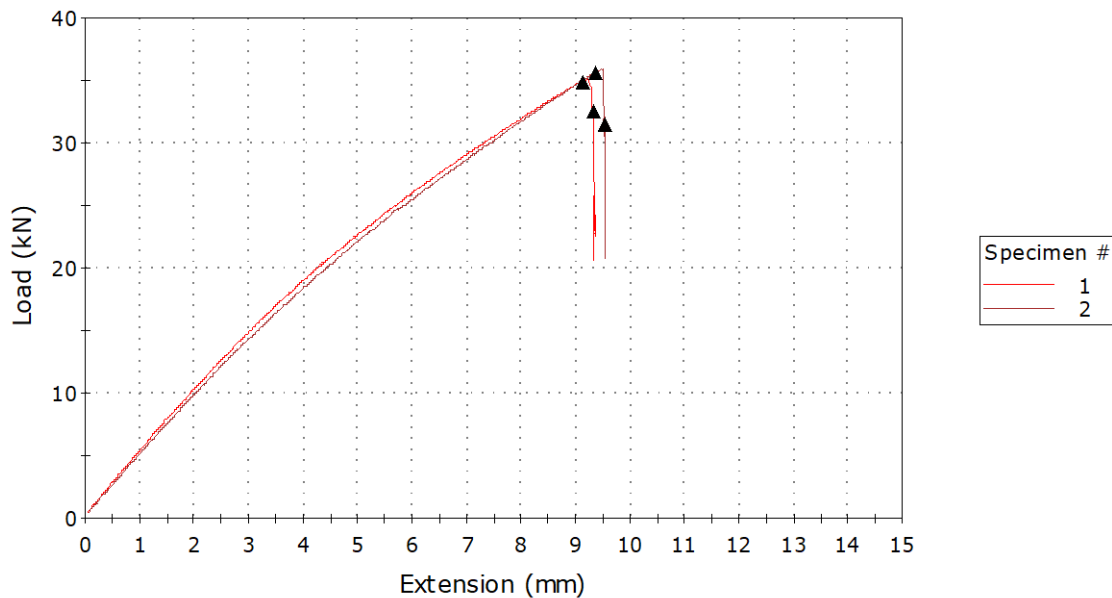
Test results

	Tensile Strength (MPa)	Load at Tensile Strength (kN)	% Non.Prop Elongation at Break (%)	% Non. prop. Elong. at Tensile Strength (%)
1	733.7	25.7	0.8	0.6
2	640.6	22.4	0.8	0.4

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Annex 4 D= 7 mm

Specimen 1 to 2



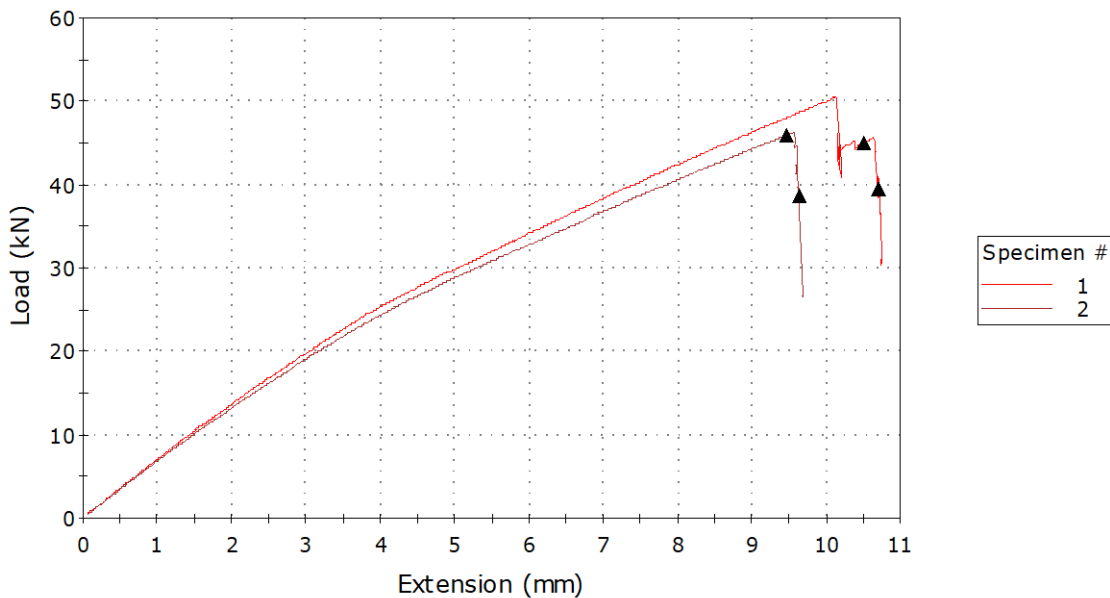
Test results

	Load at Tensile Strength (kN)	Tensile Strength (MPa)	% Non-Prop_Elong. at Tensile Strength (%)	% Non.prop Elongation at Break (%)
1	34.9	996.8	0.7	1.1
2	35.6	1017.1	0.6	1.1

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Annex 5 D= 8 mm

Specimen 1 to 2



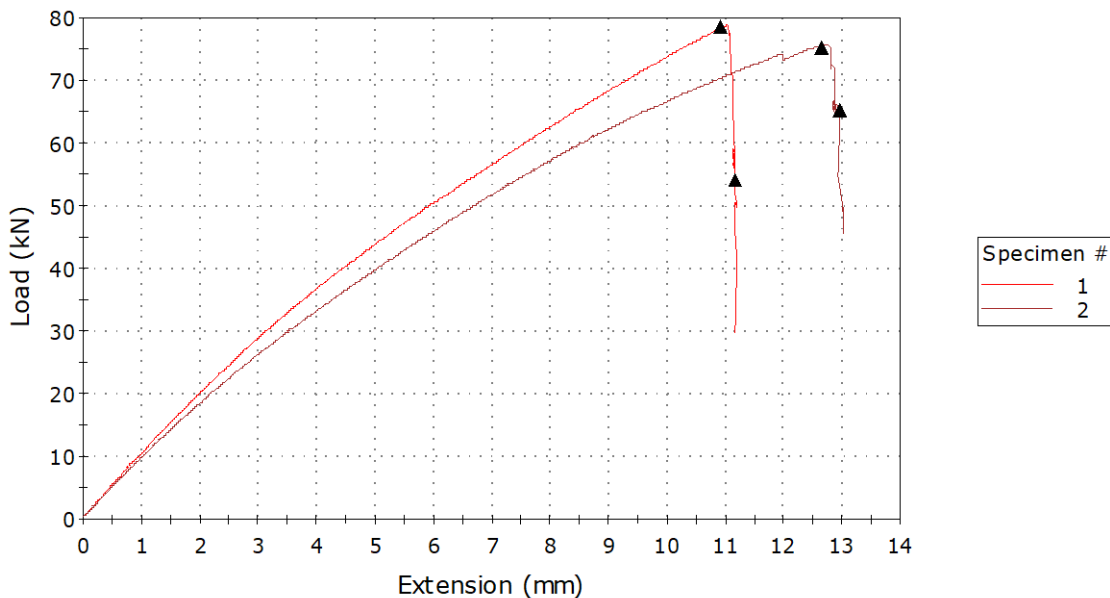
Test results

	Tensile Strength (MPa)	Load at Tensile Strength (kN)	% Non. Prop. Elong. at Tensile Strength (%)	% Non. Prop. Elongation at Break (%)
1	896.4	45.0	1.6	2.2
2	913.1	45.9	0.9	1.6

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Annex 6 D= 10 mm

Specimen 1 to 2



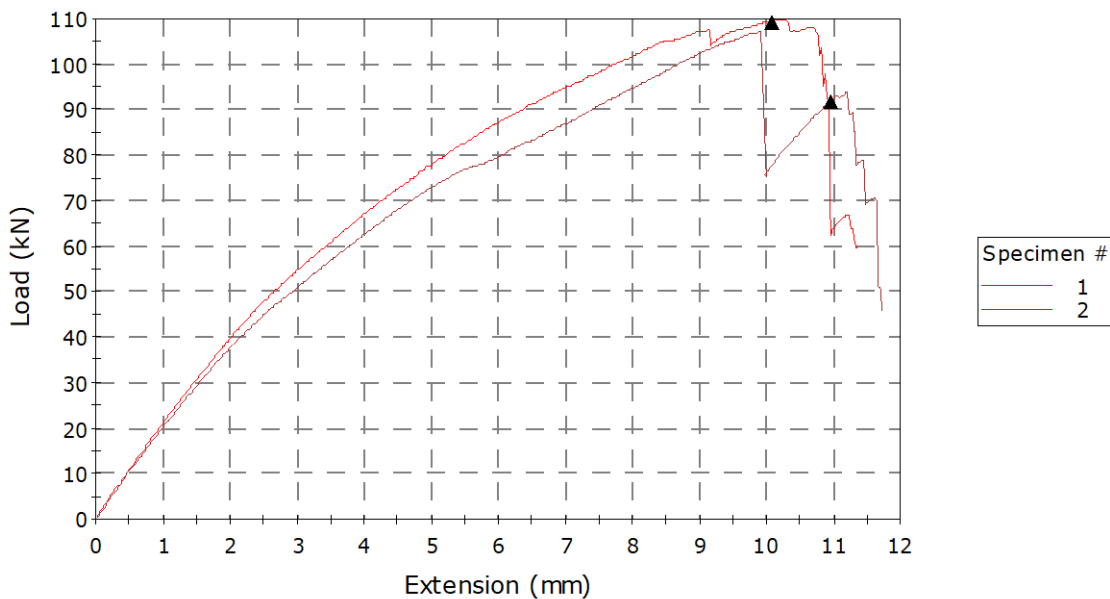
Test results

	Tensile Strength (MPa)	Load at Tensile Strength (kN)	% Non. Prop. Elong. at Tensile Strength (%)	% Non. Prop. Elongation at Break (%)
1	1072.4	78.4	1.0	2.5
2	1031.2	75.4	1.4	2.2

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Annex 7 D= 12 mm

Tensile Test



Test results*

	Tensile Strength (MPa)	Load at Tensile Strength (kN)	% Non. Prop. Elong. at Tensile Strength (%)	%Non. Prop. Elongation at Break (%)
1	1081.2	109.4	3.5	4.2
2	915.3	91.8	3.3	4.6

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