

TESTING CENTER OF CABLE PRODUCTS

Autogennaya str. 7, Kharkov, 61099, Ukraine,
 Phone: +38 057 754 52 75
 E-mail: lab@yuzhcable.com.ua

Accredited by:

National Accreditation Agency of Ukraine - A national accreditation body of Ukraine
 Certificate of Accreditation № 20353 dated January 16, 2024; Valid until January 15,
 2029

TEST REPORT

Report reference number 29
 Tested by Andrew Konoplev, Alina Shurupova
 Approved by Nikolay Zykov
 Date of issue 20-Jan-25
 Testing laboratory Testing center of cable products,
 Address Autogennaya str. 7, Kharkov, 61099, Ukraine,
 Phone: +38 057 754 52 75, E-mail: lab@yuzhcable.com.ua
 Manufacturer YUZHicable WORKS, PJSC
 Address Autogennaya str. 7, Kharkov, 61099, Ukraine
 Standard HD 626 S1:1996
 Test procedure Tests
 Wire type Conductor CIP 2A 3x16+1x25
 Trade mark YUZHicable
 Rating(s) Uo/U 0,6/1
 Dates of receipt of test item 02-Jan-25
 Dates of performance of tests From 03-Jan-25 to 17-Jan-25
 Summary of test results PASS

Ref No.	Tests	Prescribed	Observed				Verdict
1	Electrical tests		1	2	3	N	
1.1	Resistance of conductors: (Ω/km)	Max. 1,91	1,86	1,85	1,86		Pass
	- phase conductors						
	- neutral messenger	Max. 1,38				1,35	Pass
1.2	Volume resistivity of insulation at 90°C ($\Omega\cdot\text{cm}$)	Min. $1,0\times 10^{12}$	$6,2\times 10^{12}$	$6,8\times 10^{12}$	$6,5\times 10^{12}$	$5,8\times 10^{12}$	Pass
1.3	Voltage test after 10 min immersion in water 4 kV/5 min	No breakdown	No breakdown				Pass
2	Non-electrical tests						
2.1	Measurement of dimensions: value: (mm)						Pass
	- diameter of phase conductors	4,6-5,1	5,02	4,98	5,01		
	- diameter of neutral messenger	5,7-6,1				5.95	Pass

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Ref No.	Tests	Prescribed	Observed				Verdict
2.2	Measurement of thickness of insulation mean value: (mm) - phase conductors	1,3 _{-0.23}	1,33	1,32	1,33		Pass
	- neutral messenger	1,3 _{-0.23}				1,34	Pass
2.3	Breaking tension of neutral messenger: (kN)	Min. 7,4				7,9	Pass
2.4	Mechanical properties of insulation <i>Before ageing:</i> Tensile strength (MPa)	Min. 12,5	16,9	17,7	17,2	17,5	Pass
	Elongation-at-break (%)	Min. 200	490	490	520	510	Pass
	<i>After ageing in air oven:</i> Duration (h) / Temperature (°C)	168 / (135±3)					
	Tensile strength variation (%)	Max. ±25	-7,2	-8,4	-6,8	-7,0	Pass
	Elongation-at-break variation (%)	Max. ±25	-5,1	-4,8	-5,4	-6,6	Pass
	<i>Hot set test</i> Time under load (min)/Temperature (°C)	15 / (200±3)					
	mechanical stress (MPa)	0,2					
	Elongation under load (%)	Max. 175	65	75	60	85	Pass
	Permanent elongation after cooling (%)	Max. 15	0	5	0	5	Pass
	<i>Shrinkage test</i> Duration (h) / Temperature (°C)	1 / (130±3)					
Shrinkage (%)	Max. 4,0	1,85	1,82	1,73	1,77	Pass	
<i>Water absorption</i> Duration (h) / Temperature (°C)	336 / (85±2)						
Increase of mass (mg/cm ²)	Max. 1,0	0,42	0,39	0,25	0,33	Pass	
<i>Pressure test at high temperature</i> Duration (h) / Temperature (°C)	4 / (90±2)						
Depth of indentation (%)	Max. 50	27	24	24	28	Pass	
2.5	Test at low temperature Duration (h) / Temperature (°C)	4 / - 40	No cracks				Pass

Nikolay Zykov,
Head of TCCP

Andrew Konoplev,
Head of the Laboratory of electrical tests

Alina Shurupova,
Head of Laboratory of promising developments

