

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 20
 Tested by Andrew Konoplev, Alina Shurupova
 Approved by Nikolay Zykov
 Date of issue 30-Jan-26
 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 YUZH CABLE WORKS, PJSC
 Address Autogennaya str. 7, Kharkov, 61099, Ukraine
 Standard TY Y 31.3-00214534-018-2003
 Test procedure Tests
 Cable type АBBГнр -LS 4×16
 Trade mark YUZH CABLE
 Rating(s) Uo/U 0,66/1,0
 Dates of receipt of test item 19-Jan-26
 Dates of performance of tests From 20-Jan-26 to 29-Jan-26
 Summary of test results PASS

Ref No.	Tests	Prescribed	Observed				Verdict
1	Electrical tests		BU	BN	BK	GY	Pass
1.1	Resistance of conductors (Ω/km)	Max. 1,91	1,85	1,84	1,83	1,84	Pass
1.2	Volume resistivity of insulation at 20°C (Ω·cm)	Min. 10 ¹³	8,45	8,92	8,22	8,85	Pass
	at 70°C (Ω·cm)	Min. 10 ¹⁰	6,40	6,33	5,98	5,89	Pass
1.3	Voltage test 2,4 kV/4 h	No breakdown of the insulation	No breakdown of the insulation				Pass
2	Non-electrical tests						
2.1	Measurement of thickness of insulation - value (mm)	1,0 _{-0,2}	1,06	1,04	1,05	1,05	Pass
2.2	Measurement of thickness of sheath - value (mm)	1,8	1,97				Pass

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Ref No.	Tests	Prescribed	Observed				Verdict
2.3	Mechanical properties of insulation						
	<i>Without ageing:</i>						
	Tensile strength (N/mm ²)	Min. 12,5	13,5	13,3	13,7	13,8	Pass
	Elongation-at-break (%)	Min. 150	280	290	275	285	Pass
	<i>After ageing in air oven:</i>						
	Duration (h) / Temperature (°C)	168 / (100±2)					
	Tensile strength (N/mm ²)	Min. 12,5	12,8	12,6	12,9	13,0	Pass
	Elongation-at-break (%)	Min. 150	260	272	257	264	Pass
	Tensile strength variation (%)	Max. ±25	-5,0	-5,2	-5,8	-6,0	Pass
	Elongation-at-break variation (%)	Max. ±25	-7,2	-6,3	-6,5	-7,3	Pass
	<i>Pressure test at high temperature</i>						
	Duration (h) / Temperature (°C)	4 / (80±2)					
Median of the depth of indentation (%)	Max. 50	24	25	26	24	Pass	
<i>Heat shock test</i>							
Duration (h) / Temperature (°C)	1 / (150±3) No cracks	No cracks	No cracks	No cracks	No cracks	Pass	
2.4	Mechanical properties of sheath						
	<i>Without ageing:</i>						
	Tensile strength (N/mm ²)	Min. 12,5		14,6			Pass
	Elongation-at-break (%)	Min. 150		300			Pass
	<i>After ageing in air oven:</i>						
	Duration (h) / Temperature (°C)	168 / (100±2)					
	Tensile strength (N/mm ²)	Min. 12,5		13,6			Pass
	Elongation-at-break (%)	Min. 150		272			Pass
	Tensile strength variation (%)	Max. ±25		-7,2			Pass
	Elongation-at-break variation (%)	Max. ±25		-9,5			Pass
	<i>Heat shock test</i>						
	Duration (h) / Temperature (°C)	1 / (150±3) No cracks		No cracks			Pass
<i>Pressure test at high temperature</i>							
Duration (h) / Temperature (°C)	6 / (80±2)						
Median of the depth of indentation (%)	Max. 50		28			Pass	

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Ref No.	Tests	Prescribed	Observed				Verdict
2.5	Additional ageing test on pieces of completed cables	168 / (100±2)					
	Duration (h) / Temperature (°C)						
	<i>mechanical properties of insulation:</i>						
	Tensile strength variation (%)		Max. ±25	-9,9	-9,0	-9,5	-9,7
	Elongation-at-break variation (%)	Max. ±25	-8,5	-8,2	-7,8	-7,9	Pass
	<i>mechanical properties of sheath:</i>						
	Tensile strength variation (%)	Max. ±25	-6,6				Pass
	Elongation-at-break variation (%)	Max. ±25	-7,0				Pass
2.6	Vertical flame propagation						
	- time of application of flame s	60					
	- distance between the lower edge of the top support and the onset of charring mm	Min 50	358				Pass
	- distance between the lower edge of the top support and the charring extends downwards mm	Max 540	510				Pass

Nikolay Zykov,
 Head of TCCP

Andrew Konoplev,
 Head of the Laboratory of electrical tests

Alina Shurupova,
 Head of Laboratory of promising developments

