

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 13

Tested by Andrew Konoplev, Alina Shurupova

Approved by Nikolay Zykov

Date of issue 19-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 IEC 60502-1:2004 Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV) - Part 1: Cables for rated voltages of 1 kV (Um = 1,2 kV) and 3 kV (Um = 3,6 kV)

Test procedure Tests

Cable type АПвБ6Шп-1 4×240

Trade mark YUZH CABLE

Rating(s) Uo/U 0,6/1

Dates of receipt of test item 06-Jan-26

Dates of performance of tests From 07-Jan-26 to 16-Jan-26

Summary of test results PASS

Ref No.	Tests	Prescribed	Observed				Verdict
1	Electrical tests						
			BU	BN	BK	GY	
1.1	Resistance of conductors (Ω/km)	Max. 0,125	0,122	0,122	0,120	0,121	Pass
1.2	Volume resistivity of insulation at (90±2)°C (Ω·cm)	Min. 10 ¹²	5,54	5,72	6,05	5,91	Pass
	Insulation resistance constant K _i at (90±2)°C (MΩ·km)	Min. 3,67	8,10	8,15	8,38	7,94	Pass
1.3	Voltage test 3,5 kV/5 min	No breakdown of the insulation	No breakdown of the insulation				Pass
2	Non-electrical tests						
2.1	Measurement of thickness of insulation - nominal value (mm)	1,7	1,74	1,75	1,73	1,75	Pass
2.2	Measurement of thickness of extruded inner covering - nominal value (mm)	1,6	1,73				Pass
2.3	Measurement of thickness of the armour galvanized steel tapes - value (mm)	0,5	0,5				Pass
2.4	Measurement of thickness of sheath - nominal value (mm)	2,9	3,15				Pass

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

Ref No.	Tests	Prescribed	Observed				Verdict
2.6	Mechanical properties of insulation <i>Without ageing:</i>						
	Tensile strength (N/mm ²)	Min. 12,5	19,4	18,5	19,8	18,0	Pass
	Elongation-at-break (%)	Min. 200	610	600	580	520	Pass
	<i>After ageing in air oven:</i>						
	Duration (h) / Temperature (°C)	168 / (135±3)					
	Tensile strength variation (%)	Max. ±25	-4,4	-5,1	-3,8	-5,7	Pass
	Elongation-at-break variation (%)	Max. ±25	-6,2	-7,7	-7,2	-6,7	Pass
	<i>Hot set test</i>						
	Time under load (min) / Temperature (°C)	15 / (200±3)					
	mechanical stress (N/cm ²)	20					
	Elongation under load (%)	Max. 175	65	75	65	80	Pass
	Permanent elongation after cooling (%)	Max. 15	0	0	0	5	Pass
	<i>Water absorption</i>						
	Duration (h) / Temperature (°C)	336 / (85±2)					
	Increase of mass (mg/cm ²)	Max. 1,0	0,21	0,22	0,19	0,21	Pass
	<i>Shrinkage test</i>						
	Duration (h) / Temperature (°C)	1 / (130±3)					
	Shrinkage (%)	Max. 4,0	1,9	2,0	2,1	1,8	Pass
2.7	Mechanical properties of sheath <i>Without ageing:</i>						
	Tensile strength (N/mm ²)	Min. 12,5		19,8			Pass
	Elongation-at-break (%)	Min. 300		600			Pass
	<i>After ageing in air oven:</i>						
	Duration (h) / Temperature (°C)	240 / (110±2)					
	Elongation-at-break (%)	Min. 300		580			Pass
	<i>Shrinkage test</i>						
	Duration (h) / Temperature (°C)	5 / (80±2)					
	Heating, cycles	5					
	Shrinkage (%)	Max. 3,0		1,44			Pass
	<i>Pressure test at high temperature</i>						
	Duration (h) / Temperature (°C)	6 / (110±2)					
	Median of the depth of indentation (%)	Max. 50		19			Pass

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

Ref No.	Tests	Prescribed	Observed				Verdict
2.8	Additional ageing test on pieces of completed cables Duration (h) / Temperature (°C) <i>mechanical properties of insulation:</i> Tensile strength variation (%) Elongation-at-break variation (%)	168 / (100±2) Max. ±25 Max. ±25	-8,9 -9,6	-8,5 -9,8	-9,2 -10,3	-9,9 -10,6	 Pass Pass
	<i>mechanical properties of sheath:</i> Elongation-at-break (%)	Min. 300	570				Pass

Nikolay Zykov,
Head of TCCP

Andrew Konoplev,
Head of the Laboratory of electrical tests

Alina Shurupova,
Head of Laboratory of promising developments

