



Test Report

British Approvals Service for Cables



Report No	243/7603223	This Report consists of 6 pages
Client	BASEC on behalf of National Cables Industry P.O. Box 27472 Al Dhaid Road, Al Sajja Ind. Area Sharjah United Arab Emirates	
BASEC Ref No	D3TTB558 dated 12 October 2010	
Items tested	1 sample of Electric Cable	
Specification	BS 5467:1997 & A3:2008 Including Amendments 1496, 15645 & A3	
Results	The sample submitted complied with the requirements of the specification for the tests which were requested.	
Tested by	S Brown 	Technician
Authorized by	I McGuinness 	Laboratory Manager
Issue Date	05 November 2010	



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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10**4 core****Conductor size:** 300.0sq.mm**F100 TESTS****ASSESSMENT**

Marking Elements a,b,c Embossed
ELECTRIC CABLE 600/1000V BS 5467 PASS

Marking on 2 line(s) Character size 8mm. Repeat intervals (a,b,c):- 470 mm PASS

Marking Elements d,e
Identification of manufacturer Embossed
NATIONAL CABLES INDUSTRY U.A.E. - 4x300mm² CU/XLPE/SWA/PVC 2010 PASS

Repeat interval:- 460mm PASS

Construction

Sheath colour Black PASS

Extruded bedding PASS

Filler PASS

Conductor:-Compacted shaped stranded plain annealed Cu Core lay up RH PASS

Armoured Galvanised steel wire LH Lay/Size: 2.46mm PASS

Voltage Tests:-

Complete Cable @ 3.5 kV PASS

Thickness of oversheath Mean N/A Minimum 3.13mm PASS

Thickness of extruded bedding Mean N/A Minimum 1.93mm PASS

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Date job raised:- 13/10/10	Testing completed:- 04/11/10	Checked by:- I McGuinness

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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10

4 core

Conductor size: 300.0 sq.mm

F100 TESTS

ASSESSMENT

Tests on individual cores

Core I.D and sequence	Red	Yellow	Blue	Black	PASS
Indelibility	P	P	P	N/T	PASS
Class of conductor	2	2	2	N/T	PASS
No. of Wires	61	61	61	N/T	PASS
Conductor resistance (ohms/km)	0.0598	0.0599	0.0599	N/T	PASS
Insulation Thickness					
Mean (mm)	2.26	2.00	2.32	N/T	PASS
Min (mm)	1.93	1.62	1.79	N/T	PASS

Overall assessment F100 tests:- PASS

F50 Tests

Heat shock test

Sheath PASS

Overall assessment F50 tests:- PASS

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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10**4 core****Conductor size: 300.0 sq.mm****F25 TESTS****ASSESSMENT**

Flame Test on complete cable

PASS

Tensile tests on Sheath

Compound	9
Tensile strength unaged (N/mm ²)	22.6
Elongation at Break-unaged (%)	272
Tensile strength aged 7 days Air @ 100 C	22.6
% Var Tensile strength aged 7 days in air @ 100 C	0
Elongation @ break aged 7 days Air @ 100 C	273
% Var.Elongation aged 7 days Air @ 100 C	0
Compatibility Tensile Strength after ageing	22.0
Compatibility Elongation @ break after ageing	279
Compatibility % Var Tensile Strength	-3
Compatibility % Var Elongation at break	3

Assessment of tensile tests on sheath

PASS

Tensile tests on Cores

Compound	GP8			
	Red	Yellow	Blue	Black
Tensile strength unaged (N/mm ²)	27.6	27.0	27.5	N/T
Elongation at Break-unaged (%)	600	605	610	N/T
% Var Tensile strength, aged 7 days @ 135 C air	-2	-3	5	N/T
% Var.Elongation at break, aged 7 days @ 135 C air	-8	-7	-7	N/T
Compatibility Tensile Strength after ageing	25.7	25.8	24.3	N/T
Compatibility Elongation @ break after ageing	553	552	532	N/T
Compatibility % Var Tensile Strength	-7	-4	-11	N/T
Compatibility % Var Elongation at break	-8	-9	-13	N/T

Assessment of tensile tests on cores

PASS

Overall assessment F25 tests:- PASS

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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10**4 core****Conductor size: 300 sq.mm****F5 TESTS****ASSESSMENT****Tests on Sheath or complete cable**

Compound	9 BLACK	
Insulation resistance constant @ 20 C Mohms.km	194.2	PASS
Cold elongation @ -15 C		PASS
Cold Impact @ -15 C		PASS
Hot pressure %	20	PASS
Loss of Mass (mg/cm ²)	0.63	PASS

Tests on Bedding

Compound	POLY SYNTH BLACK	
Tensile strength (N/mm ²)	20.7	PASS
Elongation at Break (%)	277	PASS

Tests on individual cores

Compound	GP8			
CORE COLOURS	Red	Yellow	Blue	
Hot set test Max Elongation %	75	100	80	PASS
Hot set test Permanent Elongation %	0	5	0	PASS
Water absorption (Gravimetric) mg/cm ²	0.25	0.23	0.17	PASS
Insulation resistance constant @ 90 C Mohms.km	35.1	25.1	21.6	PASS
% Shrinkage of cores after test 1hr @ 130 C	1.5	2	2	PASS

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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10

4 core

Conductor size: 300 sq.mm

F5 TESTS

ASSESSMENT

Tests on armour:-

Armour resistance (ohms/km):	0.391	PASS
Armour wrapping test:		PASS
Mass of Zinc coating on Armour (g/m ²):	274.6	PASS
Tensile test (Aluminium Wire) (N/mm ²)		N/A

Overall assessment F5 tests:- PASS

The sample complied with the requirements of the standard

Note: one specimen used for thickness measurements

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