

DATE: April 2018
 LOT NO: _____
 SIZE: S/C - 1.0 Sqmm 'Y' Cl₂
 QUANTITY: _____
 STD LENGTH: _____

M/S COBRA CABLES (P) LTD.
 Shade No.3, DSIDC, Jhilmil Indl. Area, Delhi - 110095
IS:694-2010



TEST CERTIFICATES

CM/L-2124432																																				
DRUM / COIL	OVER ALL DIA MAX	OUTER SHEATH THICKNESS		INSULATION THICKNESS		CONDUCTOR		PHYSICAL TESTS INSULATION										PHYSICAL TEST ON SHETH					INSULATION RESISTANCE VOLUME RESISTIVITY													
								CR AT 200C MAX OHM/KM	T.S. N/MM ² FOR AL. ANEALING FOR COPPER	WRAPPING FOR ALU.	T.S. N/MM ²	% ELONGATION	AGEING		LOSS OF MASS	HOT DEFORMATION	SHRINKAGE	HEATSHOCK TEST NO SIGN CRACKS OF CRACKS OR SCALES	T.S. N/MM ²	% ELONGATION	LOSS OF MASS	HOT DEFORMATION	SHRINKAGE	HEAT SHOCK TEST NO SIGN OF CRACKS OR SCALES	At 700C Min 1x10 ¹⁰ π-Cm.	At 270C Min 1x10 ¹³ π-Cm.										
													T.S. ± 20%	ELONGATION ± 20%													MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
NO	MM	AV	MIN	AV	MIN	MAX		8 ON	MIN	MIN			MAX	MAX	MAX		MIN	MIN	MAX	MAX	MAX															
	3.2	—	—	0.70	0.53	18.10	—	6 OFF	12.5	150			2 Mg/Cm ²	50%	4%				2Mg/Cm ²																	
1.	2.68			0.80	0.70	17.82																														
2.	1			0.78	0.69	17.86																														
3.	2.73			0.81	0.70	17.83	—	—	14.4	230	-6.7	+8.69	0.82	22	0.75	OK	—	—	—	—	—	—	—	—	13	11										
4.				0.79	0.70	17.85																		8.1x10	1.75x10											
5.				0.78	0.65	17.81																														
REMARKS																																				

REMARKS

- (1) AC H V Test At Room Temp. 3 KV (rms) For 5 Minuts
 (2) AC H V Water Immersion Test At 60±3°C. 3 to 6 KV (rms) For 5 Minuts
 (3) DC H V Test At 60±3°C. 1.2 KV For 240 hrs.
 (4) Flamability Test Time Max.60 Sec.
 Unburnt Portion Min 50 MM From Top End
 (5) Cold Bend / Cold Impact test Insulation
 (6) Cold Bend / Cold Impact test Sheath
 (7) Thermal Stability at 200°±0.5°C.
- i) Insulation
 80/100 Minuts
 40/80 Minuts
- ii) Sheath
 (8) Additional Ageing Test
 HV Test for 5 Minuts At 60±3°C.
 Cold Bend/Cold Impact Test
 (9) Persulphate Test (For tinned Copper Cond. Cable Only) g/m²
- No Cracks (-15°/-5°C.)
 No Cracks (-15°/-5°C.)
 No Cracks (-15°/-5°C.)

4.11.18.18
Carried out on
Carried out on
4 sec.
270 mm
No cracks.
9.5 minutes.

For COBRA CABLES (P) LTD.

T & QC INCHARGE

For COBRA CABLES (P) LTD.

DATE: April 2018
 LOT NO: 4.0 samay y'cl5
 SIZE: S/C - 4.0 samay y'cl5
 QUANTITY: 1
 STD LENGTH: 1

M/S COBRA CABLES (P) LTD.
 Shade No.3, DSIDC, Jhilmil Indl. Area, Delhi - 110095
IS:694-2010



TEST CERTIFICATES

CM/L-2124432																																		
DRUM / COIL	OVER ALL DIA MAX	OUTER SHEATH THICKNESS		INSULATION THICKNESS		CONDUCTOR		PHYSICAL TESTS										PHYSICAL TEST ON SHEATH					INSULATION RESISTANCE VOLUME RESISTIVITY											
								CR AT 20°C MAX OHM/KM	T.S. N/MM² FOR AL. ANEALING FOR COPPER	WRAPPING FOR ALU.	T.S. N/MM²	% ELONGATION	AGEING		LOSS OF MASS	HOT DEFORMATION	SHRINKAGE	HEATSHOCK TEST NO SIGN CRACKS OF CRACKS OR SCALES	T.S. N/MM²	% ELONGATION	LOSS OF MASS	HOT DEFORMATION	SHRINKAGE	HEAT SHOCK TEST NO SIGN OF CRACKS OR SCALES	At 70°C Min 1x10¹⁰ π-Cm.	At 27°C Min 1x10¹³ π-Cm.								
													T.S. ±20%	ELONGATION +20%													MAX	MAX	MAX	MIN	MIN	MAX	MAX	MAX
NO	MM	AV	MIN	AV	MIN	MAX		8 ON	MIN	MIN			MAX	MAX	MAX		MIN	MIN	MAX	MAX	MAX													
	4.8	—	—	0.80	0.62	4.95	—	6 ON	10	150			2 Mg/Cm²	65%	6%				2Mg/Cm²				12	9										
1.	4.15			0.92	0.81	4.78																1x10	1x10											
2.				0.90	0.77	4.81																												
3.				0.93	0.81	4.79	—	—	13.90	240	63	19.0	0.84	28	1.0	OK						13	11											
4.	4.20			0.89	0.80	4.83																6.5x10	1.6x10											
5.				0.91	0.80	4.82																												

REMARKS

- AC H V Test At Room Temp. 3 KV (rms) For 5 Minuts
- AC H V Water Immersion Test At 60±3°C. 3 to 6 KV (rms) For 5 Minuts
- DC H V Test At 60±3°C. 1.2 KV For 240 hrs.
- Flamability Test Time Max.60 Sec.
Unburnt Portion Min 50 MM From Top End
- Cold Bend / Cold Impact test Insulation
- Cold Bend / Cold Impact test Sheath
- Thermal Stability at 200°±0.5°C.

i) Insulation

ii) Sheath

(8) Additional Ageing Test

HV Test for 5 Minuts At 60±3°C.

Cold Bend/Cold Impact Test

(9) Persulphate Test (For tinned Copper Cond. Cable Only) g/m²

No Cracks (-15°-5°C.)

No Cracks (-15°-5°C.)

80/100

Minuts

40/80

Minuts

No Cracks (-15°-5°C.)

Withstood
 Carried out as
 Carried out as
 6 sec.
 2.0 mm mm
 No cracks.
 96 minutes.

For COBRA CABLES (P) LTD.

T & QC INCHARGE

DATE: April 2018
 LOT NO:
 SIZE: S/C - 6.0 Samm Y etc
 QUANTITY:
 STD LENGTH:

M/S COBRA CABLES (P) LTD.
 Shade No.3, DSIDC, Jhilmil Indl. Area, Delhi - 110095
 IS:694-2010



TEST CERTIFICATES

TEST CERTIFICATE																										CM/L-2124432			
DRUM / COIL	OVER ALL DIA MAX	OUTER SHEATH THICKNESS			INSULATION THICKNESS		CONDUCTOR		PHYSICAL TESTS INSULATION										PHYSICAL TEST ON SHEATH							INSULATION RESISTANCE VOLUME RESISTIVITY			
									CR AT 20°C MAX OHM/KM	T.S. NMM² FOR AL. ANEALING FOR COPPER	WRAPPING FOR ALU.	T.S. NMM²	% ELONGATION	AGEING		LOSS OF MASS	HOT DEFORMATION	SHRINKAGE	HEATSHOCK TEST NO SIGN CRACKS OF CRACKS OR SCALES	T.S. NMM²	% ELONGATION	LOSS OF MASS	HOT DEFORMATION	SHRINKAGE	HEAT SHOCK TEST NO SIGN OF CRACKS OR SCALES				
														T.S. +20%	ELONGATION														
														MM	AV											MIN	AV	MIN	MAX
NO	MM	AV	MIN	AV	MIN	MAX		8 ON	MIN	MIN			MAX	MAX	MAX		MIN	MIN	MAX	MAX	MAX		At 70°C Min 1×10¹⁰ π-Cm.	At 27°C Min 1×10¹³ π-Cm.					
	5.3	—	—	0.80	0.62	3.30	—	6 OFF	10	150			2 Mg/Cm²	6.5%	6%				2Mg/Cm²				12 1×10	9 1×10					
1.	4.95			0.90	0.80	3.02																							
2.	1			0.89	0.80	2.97																							
3.				0.92	0.81	3.05	—	—	14.0	230	7.2	18.5	0.81	30	1.0	OK							13	11					
4.	5.05			0.90	0.78	2.98																	6.7×10	1.7×10					
5.				0.91	0.80	2.98																							
REMARKS																													

REMARKS

- AC HV Test At Room Temp. 3 KV (rms) For 5 Minutes
- AC HV Water Immersion Test At 60±3°C. 3 to 6 KV (rms) For 5 Minutes
- DC HV Test At 60±3°C. 1.2 KV For 240 hrs.
- Flamability Test Time Max. 60 Sec.
Unburnt Portion Min 50 MM From Top End
- Cold Bend / Cold Impact test Insulation
- Cold Bend / Cold Impact test Sheath
- Thermal Stability at 200±0.5°C.

i) Insulation

ii) Sheath

(8) Additional Ageing Test

HV Test for 5 Minutes At 60±3°C.

Cold Bend/Cold Impact Test

(9) Persulphate Test (For tinned Copper Cond. Cable Only) g/m²

No Cracks (-15°/-5°C.)

No Cracks (-15°/-5°C.)

80/100

Minutes

40/80

Minutes

No Cracks (-15°/-5°C.)

Withstand
 Carried out on
 Carried out on
 5 Sec.
 310 mm mm
 No cracks.

100 minutes.

7

For COBRA CABLES (P) LTD.

T & QC INCHARGE

DATE: April 2018
 LOT NO: 2.50 SGMN 7' 22
 SIZE: S/C - 2.50 SGMN 7' 22
 QUANTITY: 1
 STD LENGTH: 1

M/S COBRA CABLES (P) LTD.
 Shade No.3, DSIDC, Jhilmil Indl. Area, Delhi - 110095
 IS:694-2010



TEST CERTIFICATES

CM/L-2124432																																	
DRUM / COIL	OVER ALL DIA MAX	OUTER SHEATH THICKNESS		INSULATION THICKNESS		CONDUCTOR		PHYSICAL TESTS INSULATION										PHYSICAL TEST ON SHETH					INSULATION RESISTANCE VOLUME RESISTIVITY										
								OR AT 200C MAX OHM/KM	T.S. NMMM ² FOR AL. ANEALING FOR COPPER	WRAPPING FOR ALU.	T.S. NMMM ²	% ELONGATION	AGEING		LOSS OF MASS	HOT DEFORMATION	SHRINKAGE	HEATSHOCK TEST NO SIGN CRACKS OF CRACKS OR SCALES	T.S. NMMM ²	% ELONGATION	LOSS OF MASS	HOT DEFORMATION	SHRINGKAGE	HEAT SHOCK TEST NO SIGN OF CRACKS OR SCALES		At 27°C Min 1×10 ¹³ Tt-Cm.	At 70°C Min 1×10 ¹⁰ Tt-Cm.						
													T.S. ± 20%	ELONGATION + 20%										MIN	MAX			MIN	MAX	MIN	MAX	MIN	MAX
NO	MM	AV	MIN	AV	MIN	MAX		8 ON	MIN	MIN			MAX	MAX	MAX	MAX	MAX	MAX	MIN	MIN	MAX	MAX	MAX										
	4.0	—	—	0.80	0.62	7.41	—	6 OFF	12.5	150			2 Mg/Cm ²	50%	4 %																		
1.	3.67			0.91	0.80	7.26																											
2.	1			0.90	0.77	7.30																											
3.				0.92	0.80	7.29	—	—	14.0	220	-62	+7.9	0.85	20	0.75	OK	—	4 ins sheath	—						13	11							
4.	3.75			0.88	0.79	7.27																			7.7×10	1.68×10							
5.				0.92	0.81	7.25																											

REMARKS

(1) AC H V Test At Room Temp. 3 KV (rms) For 5 Minuts
 (2) AC H V Water Immersion Test At 60±3°C. 3 to 6 KV (rms) For 5 Minuts
 (3) DC H V Test At 60±3°C. 1.2 KV For 240 hrs.
 (4) Flammability Test Time Max.60 Sec.
 Unburnt Portion Min 50 MM From Top End
 (5) Cold Bend / Cold Impact test Insulation
 (6) Cold Bend / Cold Impact test Sheath
 (7) Thermal Stability at 200°±0.5°C.

i) Insulation

ii) Sheath

(8) Additional Ageing Test

HV Test for 5 Minuts At 60±3°C.

Cold Bend/Cold Impact Test

(9) Persulphate Test (For tinned Copper Cond. Cable Only) g/m²

No Cracks (-15°/-5°C.)
 No Cracks (-15°/-5°C.)

80/100
 Minuts
 40/80
 Minuts

No Cracks (-15°/-5°C.)

Withstood
Carried out ok
Carried out ok
5 sec.
300 mm
NO cracks.
98 minutes

For COBRA CABLES (P) LTD.

T & QC INCHARGE