



DUSONC[®] Cable

General Catalogue
Made in R.O.Korea

Control Cables
Welding Cables
Rubber Flexible Cables

IEC 60502 - 1
IEC 60245 - 6

We supply our best quality products to markets all over the world.

DUSONC Cable



Index

Conductors for Rubber Insulated Cables	3
Rubber Insulated Flexiple Cables	4
Rubber Insulated Flexiple Cables - Flat type	6
Welding Cables.....	7
Cables for the Vehicles	8
High Tension Cable.....	9
Unscreened Control Cable	11
Screened Control Cable	12
Hoist Control Cable	13
Traveling Cables for Elevators	14
UTP(Unshielded Twisted Pair)Cables Enhanced CAT. 5E.....	16
Selection of Cable	17
Electrical properties	18
Mechanical properties	19

고무절연 케이블용 도체

Conductors for Rubber Insulated Cables

2등급 단심 및 다심 케이블용 연선

Class 2 Stranded conductors for single-core and multicore cables

Standard : KS C IEC 60228

공칭단면적 Nominal Cross- Sectional Area mm ²	도체의 최소 소선수 Minimum Number of Wires in the Conductor			최대 도체 저항(20℃) Maximum Resistance of Conductor at 20℃	
	원형 도체(비압축) Circular Conductor (Non-compacted)	원형 압축 도체 Circular Compacted Conductor	선형 도체 Shaped Conductor	동 도체 Copper Conductor	
	Cu	Cu	Cu	동선 Plain Wires Ω/km	도금 동선 Metal-Coated Wires Ω/km
0.5	7	-	-	36.0	36.7
0.75	7	-	-	24.5	24.7
1.0	7	-	-	18.1	18.2
1.5	7	6	-	12.1	12.2
2.5	7	6	-	7.41	
4	7	6	-	4.61	4.70
6	7	6	-	3.08	3.11
10	7	6	-	1.83	1.84
16	7	6	-	1.15	1.16
25	7	6	6	0.727	0.734
35	7	6	6	0.524	0.529
50	19	6	6	0.387	0.391
70	19	12	12	0.268	0.270
95	19	15	15	0.193	0.195
120	37	18	18	0.153	0.154
150	37	18	18	0.124	0.126
185	37	30	30	0.0991	0.100
240	61	34	34	0.0754	0.0762
300	61	34	34	0.0601	0.0607
400	61	53	53	0.0470	0.0475

5등급 단심 및 다심 케이블용 가요 동 도체

Class 5 Flexible copper conductors for single-core and multicore cables

Standard : KS C IEC 60228

공칭단면적 Nominal Cross Sectional Area mm ²	도 체 Conductor		최대 도체 저항(20℃) Maximum Resistance of Conductor at 20℃	
	KS C IEC 규격 KS C IEC 60228 (Class5)		동 도체 Copper Conductor	
	최대소선지름 Maximum Diameter of Wires in Conductor mm	바깥 지름 Outer Diameter mm	동 선 Plain Wires Ω/km	도금 동선 Metal-Coated Wires Ω/km
0.5	0.21	0.9	39.0	40.1
0.75	0.21	1.1	26.0	26.7
1.0	0.21	1.3	19.5	20.0
1.5	0.26	1.6	13.3	13.7
2.5	0.26	2.1	7.98	8.21
4	0.31	2.6	4.95	5.09
6	0.31	3.6	3.30	3.39
10	0.41	4.8	1.91	1.95
16	0.41	6.0	1.21	1.24
25	0.41	7.4	0.78	0.795
35	0.41	8.7	0.554	0.565
50	0.41	10.4	0.386	0.393
70	0.51	12.5	0.272	0.277
95	0.51	14.5	0.206	0.210
120	0.51	16.2	0.161	0.164
150	0.51	18.2	0.129	0.132
185	0.51	20.2	0.106	0.108
240	0.51	23.3	0.0801	0.0817
300	0.51	26.0	0.0641	0.0654
400	0.51	30.3	0.0486	0.0495
500	0.61	30.3	0.0486	

고무절연 캡타이어 케이블

Rubber Insulated Flexible Cables (Continue)

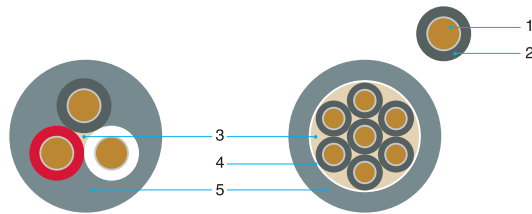
캡타이어 케이블은 강한 시스를 가진 케이블의 총칭이다. 이 케이블은 광산, 농장, 건설공장 현장 등에서 저압 이동용 전기 기기의 배선에 사용되는 전선으로서, 탄력성이 양호한 클로로프렌 고무로 피복되어 충격, 마찰, 굴곡 등의 기계적 내성이 높고, 내수, 내열, 내산 및 내알칼리성 등의 화학적 내성이 강하므로, 이 분야의 용도에 널리 사용된다.

Cabtyre cable is a kind of electric wire used in wiring portable electric appliances, low Voltage for mines, factories, farms, construction fields, etc.

This cable is covered with highly elastic chloroprene rubber. It has such mechanical properties as resistance to physical shock, abrasion and bending and such chemical properties as resistance to water, acid and alkali.

Maximum conductor temperature: 90°C

1. 도 체 : Conductor
2. 절연체 : Insulation
3. 개재물 : Filling
4. 테이프 : Tape
5. 시 스 : Sheath



Standard : KS C IEC 60502-1

도 체 Conductor			단 심 Single Core	2 심 2 Cores	3 심 3 Cores	4 심 4 Cores	5 심 5 Cores	도체저항	시험전압
공칭단면적 Nominal Cross- Sectional Area	최대소선경 Maximum Diameter of Wires in Conductor	바깥지름 Outer Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	Conductor Resistance (20℃) (Max.)	Test Voltage
mm ²	mm	mm	mm	mm	mm	mm	mm	Ω/km	V/5min.
1.0	0.21	1.3	-	11.5	12.2	13.1	13.8	20.0	3,500
1.5	0.26	1.6	7.9	12.3	12.9	14.1	14.6	13.7	3,500
2.5	0.26	2.1	8.4	13.3	14.2	15.3	16.1	8.21	3,500
4	0.31	2.6	9.1	14.5	15.2	16.7	17.7	5.09	3,500
6	0.41	3.6	10.2	17.0	18.2	19.9	21.3	3.39	3,500
10	0.41	4.8	11.6	19.8	21.2	23.2	24.9	1.95	3,500
16	0.41	6.0	12.9	22.4	23.7	26.3	28.3	1.24	3,500
25	0.41	7.4	14.9	26.4	28.2	31.2	33.9	0.795	3,500
35	0.41	8.7	16.3	29.2	31.2	34.5	37.6	0.565	3,500
50	0.41	10.4	18.6	33.8	36.3	40.2	44.0	0.393	3,500
70	0.51	12.5	20.9	38.2	40.8	45.4	49.8	0.277	3,500
95	0.51	14.5	23.5	43.6	46.8	52.0	67.1	0.210	3,500
120	0.51	16.2	25.4	47.4	50.9	56.7	-	0.164	3,500
150	0.51	18.2	28.1	52.6	56.6	62.8	-	0.132	3,500
185	0.51	20.2	30.9	-	-	-	-	0.108	3,500
240	0.51	23.3	34.6	-	-	-	-	0.0817	3,500
300	0.51	26.0	38.0	-	-	-	-	0.0654	3,500
400	0.51	30.3	43.2	-	-	-	-	0.0495	3,500

고무절연 캡타이어 케이블

Rubber Insulated Flexible Cables

0.6 / 1kV PNCT

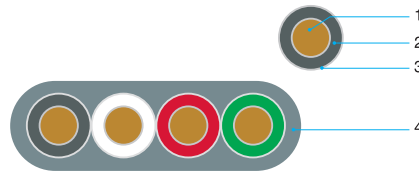
Reference Standard : JSC Standard

선심수 Number of Cores	도 체 Conductor		완성외경 Overall Diameter (Approx.)	개산중량 Weight (Approx.)	도체저항 Conductor Resistance (20°C) (Max.)	시험전압 Test Voltage
	공칭단면적 Nominal Cross Sectional Area	바깥지름 Outer Diameter				
	mm ²	mm				
6	1.0	1.3	15.5	320	20.0	3,500
	1.5	1.6	16.5	390	13.7	3,500
	2.5	2.1	18.0	500	8.21	3,500
	4	2.6	20.0	640	5.09	3,500
	6	3.6	24.0	900	3.39	3,500
7	1.0	1.3	15.5	330	20.0	3,500
	1.5	1.6	16.5	390	13.7	3,500
	2.5	2.1	18.0	510	8.21	3,500
	4	2.6	20.0	670	5.09	3,500
	6	3.6	24.0	950	3.39	3,500
8	1.0	1.3	16.5	390	20.0	3,500
	1.5	1.6	18.0	460	13.7	3,500
	2.5	2.1	19.5	590	8.21	3,500
	4	2.6	21.5	770	5.09	3,500
	6	3.6	26.0	1,100	3.39	3,500
9	1.0	1.3	18.0	440	20.0	3,500
	1.5	1.6	19.0	520	13.7	3,500
	2.5	2.1	21.0	690	8.21	3,500
	4	2.6	23.0	890	5.09	3,500
	6	3.6	28.0	1290	3.39	3,500
10	1.0	1.3	19.5	520	20.0	3,500
	1.5	1.6	20.5	610	13.7	3,500
	2.5	2.1	23.0	800	8.21	3,500
	4	2.6	25.5	1,040	5.09	3,500
	6	3.6	30.5	1,490	3.39	3,500
12	1.0	1.3	20.0	550	20.0	3,500
	1.5	1.6	21.5	670	13.7	3,500
	2.5	2.1	23.5	870	8.21	3,500
	4	2.6	26.0	1,150	5.09	3,500
	6	3.6	31.5	1,650	3.39	3,500
16	1.0	1.3	22.0	690	20.0	3,500
	1.5	1.6	24.0	830	13.7	3,500
	2.5	2.1	26.5	1,100	8.21	3,500
	4	2.6	29.0	1,450	5.09	3,500
	6	3.6	35.5	2,100	3.39	3,500
24	1.0	1.3	26.5	1,000	20.0	3,500
	1.5	1.6	28.5	1,210	13.7	3,500
	2.5	2.1	32.0	1,620	8.21	3,500
	4	2.6	35.0	2,150	5.09	3,500
	6	3.6	43.0	3,130	3.39	3,500
30	1.0	1.3	29.0	1,200	20.0	3,500
	1.5	1.6	31.5	1,470	13.7	3,500
	2.5	2.1	35.0	1,960	8.21	3,500
	4	2.6	38.5	2,600	5.09	3,500
	6	3.6		3,800	3.39	3,500

고무절연캡타이어 케이블

Rubber Insulated Flexible Cables - Flat type

1. 도 체 : Conductor
2. 절연체 : Insulation
3. 테이프 or 편조 : Tape or Braid
4. 시 스 : Sheath



0.6 / 1kV PNCT - F

Reference Standard : JSC Standard

도 체 Conductor		3심 3 Cores		4심 4 Cores		도체저항 Conductor Resistance (20°C) (Max.)	시험전압 Test Voltage
공칭단면적 Nominal Cross Sectional Area	바깥지름 Outer Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	개산중량 Weight (Approx.)	완성외경 Overall Diameter (Approx.)	개산중량 Weight (Approx.)		
mm ²	mm	mm	kg/km	mm	kg/km	Ω /km	V/5min.
1.0	1.3	8.0 X 16.5	200	8.0 X 23.5	290	20.0	3,500
1.5	1.6	8.5 X 17.0	230	8.5 X 24.5	340	13.7	3,500
2.5	2.1	9.0 X 19.0	290	9.5 X 27.0	420	8.21	3,500
4	2.6	10.0 X 20.5	360	10.0 X 29.0	520	5.09	3,500
6	3.6	11.5 X 24.5	490	11.5 X 34.0	700	3.39	3,500
10	4.8	13.0 X 28.5	710	13.0 X 39.0	990	1.95	3,500
16	6.0	14.5 X 32.0	940	14.5 X 44.0	1,310	1.24	3,500
25	7.4	16.5 X 38.0	1,350	17.0 X 52.0	1,880	0.795	3,500
35	8.7	18.0 X 42.0	1,730	18.5 X 57.0	2,400	0.565	3,500
50	10.4	21.0 X 48.5	2,360	21.5 X 66.0	3,250	0.393	3,500
70	12.5	23.5 X 55.0	3,140	24.0 X 74.0	4,310	0.277	3,500
95	14.5	26.5 X 63.0	4,140	27.0 X 84.5	5,680	0.210	3,500
120	16.2	28.5 X 68.5	5,050	29.5 X 92.0	6,910	0.164	3,500
150	18.2	31.5 X 76.0	6,270	32.5 X 104.5	8,680	0.132	3,500
185	20.2	34.5 X 84.0	7,650	-	-	0.108	3,500
240	23.3	39.0 X 94.5	9,940	-	-	0.0817	3,500
300	26.0	42.5 X 104.5	12,220	-	-	0.0654	3,500



용접용케이블

Welding Cables

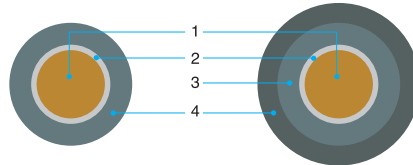
용접용 케이블은 아크 용접기의 2차 에 사용된다.

Welding cable used for the second side of arc welder

Chemical resistance such as heat resistance, acid resistance, alkali resistance.

Maximum conductor temperature: 90°C

- 1. 도 체 : Conductor
- 2. 세퍼레이터 : Separator
- 3. 절연체 : Insulation
- 4. 시 스 : Sheath



60245 KSC IEC 81 : 천연고무 또는 이와 동등한 합성고무 시스의아크 용접 전극 케이블

Standard : KS C IEC 60245-6

도 체 Conductor		피복합계 두께 Total Thickness of Covering Specified Value	복합피복 1) 시스템 Thickness of Sheath of Composite Covering Specified Value	평균완성 외경 Mean Overall Diameter		최대도체 저항(20°C) Maximum Conductor Resistance at 20 °C	
공칭단면적 Nominal Cross Sectional Area mm ²	최대소선지름 Maximum Diameter of Wires in Conductor mm			하 한 Lower Limit mm	상 한 Upper Limit mm	주석도금 연동선 Tinned Wires Ω /km	연동선 Untinned Wires Ω /km
16	0.21	2.0	1.3	9.2	11.5	1.19	1.16
25	0.21	2.0	1.3	10.5	13.0	0.78	0.758
35	0.21	2.0	1.3	11.5	14.5	0.552	0.536
50	0.21	2.2	1.5	13.5	17.0	0.39	0.379
70	0.21	2.4	1.6	15.5	19.5	0.276	0.268
95	0.21	2.6	1.7	18.0	22.0	0.204	0.198
120	0.21	2.8	1.9	21.5	25.4	0.176	0.161
150	0.21	2.9	1.9	24.6	28.1	0.139	0.132

1) 복합피복 절연체 두께는 분리해서 측정하면 안된다.

The thickness of the insulation of composite covering is not measured separately

60245 KSC IEC 82 : 천연고무 또는 이와 동등한 합성고무 시스의아크 용접 전극 케이블

Standard : KS C IEC 60245-6

도 체 Conductor		피복합계 두께 Total Sheath Thickness		평균완성 외경 Mean Overall Diameter		최대도체 저항(20°C) Maximum Conductor Resistance at 20 °C	
공칭단면적 Nominal Cross Sectional Area mm ²	최대소선지름 Maximum Diameter of Wires in Conductor mm	inner layer mm	outer layer mm	하 한 Lower Limit mm	상 한 Upper Limit mm	주석도금 연동선 Tinned Wires Ω /km	연동선 Untinned Wires Ω /km
16	0.21	0.7	1.3	9.2	11.5	1.19	1.16
25	0.21	0.7	1.3	10.5	13.0	0.78	0.758
35	0.21	0.7	1.3	11.5	14.5	0.552	0.536
50	0.21	0.7	1.5	13.5	17.0	0.39	0.379
70	0.21	0.8	1.6	15.5	19.5	0.276	0.268
95	0.21	0.9	1.7	18.0	22.0	0.204	0.198
120	0.21	1.1	1.9	21.5	25.4	0.176	0.161
150	0.21	1.2	1.9	24.6	28.1	0.139	0.132

1) 복합피복 절연체 두께는 분리해서 측정하면 안된다.

The thickness of the insulation of composite covering is not measured separately

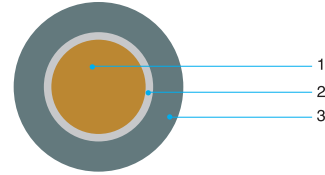
차량용케이블

Cable for the Vehicles

차량용 케이블은 철도 차량용 전기기기의 접속,
인출선, 차체배선 또는 점퍼선으로 사용한다.

Vehicles cable used for connection line,
lead wire, power line in chassis, jumper wire.

- 1. 도 체 : Conductor
- 2. 세퍼레이터 : Separator
- 3. 절연체 : Insulation



차량용가고 폴리에틸렌전선

Cable for the Vehicles

Standard : KRS 2240-2267

도 체	Conductor	600V WL 1					1500V WL 2					도체저
공칭단면	바깥지름	완성외		절연저	표면누설저항	시험전	완성외		절연저항	표면누설저	시험전	Conductor Resistance (20°C) (Max.)
Nominal Cross-Sectional Area	Outer Diameter (Approx.)	Overall Diameter (Approx.)		Insulation Resistance (20°C) (Min.)	Surface Leakage	Test Voltage	Overall Diameter (Approx.)		Insulation Resistance (20°C) (Min.)	Surface Leakage	Test Voltage	
mm ²	mm	mm	mm	MΩ• km	MΩ	kV/1min.	mm	mm	MΩ• km	MΩ	kV/1min.	Ω/k
200	21.2	26.5	28.5	20	50	3.0	28.0	28.5	20	50	5.4	0.0993
150	18.7	23.6	24.0	20	60	3.0	24.0	24.9	20	60	5.4	0.136
125	16.9	21.8	22.2	20	60	3.0	23.0	23.1	20	60	5.4	0.16
100	15.2	19.9	20.3	20	70	3.0	20.3	21.4	25	70	5.4	0.193
80	13.5	17.2		20	70	2.5	18.6	19.6	25	80	5.4	0.243
60	11.6	15.4	15.6	20	80	2.5	16.8	17.6	30	80	5.4	0.329
50	10.4	14.1	14.4	20	90	2.5	15.5	16.4	30	90	5.4	0.411
38	9.1	12.0	12.4	20	100	2.2	13.2	14.1	30	90	5.4	0.525
30	8.1	11.0	11.4	20	100	2.2	12.3	13.0	35	90	5.4	0.661
22	7.0	9.9		25	100	2.2	11.1	11.9	45	100	5.4	0.892
14	4.9	7.2	7.6	30	100	2.2	9.0	9.7	50	100	5.4	1.390
8	3.7	6.0	6.4	35	200	2.2	7.8	8.4	60	100	5.4	2.45
5.5	3.1	5.4	5.8	40	200	2.2	7.2	7.8	65	200	5.4	3.5
3.5	2.5	4.8	5.2	45	200	2.2	6.6	7.2	75	200	5.4	5.38
2.0	1.8	4.2		60	200	2.2	6.0	6.5	95	200	5.4	9.91
1.25	1.5	3.8	4.1	70	200	2.2	5.6	6.1	100	200	5.4	15.5
0.75	1.2	3.5	3.8	80	300	2.2	5.3	5.8	120	200	5.4	25.8



고장력 케이블

High Tension Cable

운송기계, 하역기계 등의 릴용 케이블로 이동용 기기의 전원 공급용 전선으로 사용한다.

A high tension cable is used for power supplies, for high mechanical stresses on mobile equipment and for reeling operation.

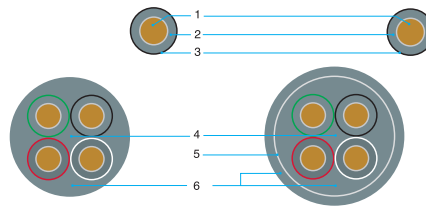
Characteristics

- 고장력 High Tension
- 내충격성 Impact Resistance
- 내마모성 Abrasion Resistance
- 내굴곡성 Bending Resistance
- 난연성 Flame Retardance
- 내후성 Weather Resistance

Application Ranges

- Unloader
- Stacker & Reclaimer
- Gantry Crane, etc.

- 도체 : Conductor
- 절연체 : Insulation
- 테이프 : Tape
- 개재물 : Filling
- 보강층 : Reinforce Layer
- 시스 : Sheath

0.6/1kV HC-2R P[®]

Reference Standard : JSC Standard

도체 Conductor		3 심 3 Cores		4 심 4 Cores		도체 저항	절연저항	시험 전압
공칭단면적 Nominal Cross-Sectional Area	바깥 지름 Outer Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	개산중량 Weight (Approx.)	완성외경 Overall Diameter (Approx.)	개산중량 Weight (Approx.)	Conductor Resistance (20°C) (Max.)	Insulation Resistance (20°C) (Min.)	Test Voltage
mm ²	mm	mm	kg/km	mm	kg/km	Ω /km	MΩ·km	V/1min.
6	3.6	19.0	600	21.0	730	3.39	400	3,000
10	4.8	22.0	850	24.0	1,050	1.95	300	3,000
16	6.0	25.0	1,170	27.0	1,450	1.24	300	3,000
25	7.4	28.0	1,600	31.0	2,010	0.795	300	3,000
35	8.7	31.0	2,010	35.0	2,570	0.565	200	3,000
50	10.4	37.0	2,800	41.0	3,540	0.393	200	3,000
70	12.5	44.0	3,990	49.0	5,030	0.277	200	3,000
95	14.5	49.0	5,080	54.0	6,420	0.210	200	3,000
120	16.2	53.0	6,130	59.0	7,780	0.164	200	3,000
150	18.2	58.0	7,450	64.0	9,460	0.132	200	3,000
185	20.2	65.0	9,290	72.0	11,830	0.108	200	3,000
240	23.3	72.0	11,810	80.0	15,060	0.0817	200	3,000
300	26.0	78.0	14,310	88.0	18,290	0.0654	200	3,000

0.6/1kV HC-3R P

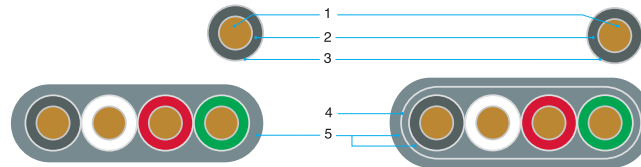
Reference Standard : JSC Standard

도체	바깥 지름	완성외경	개산중량	완성외경	개산중량	도체 저항	절연저항	시험 전압
공칭단면적	Outer Diameter (Approx.)	Overall Diameter (Approx.)	Weight (Approx.)	Overall Diameter (Approx.)	Weight (Approx.)	Conductor Resistance (20°C) (Max.)	Insulation Resistance (20°C) (Min.)	Test Voltage
mm ²	mm	mm	kg/km	mm	kg/km	Ω /km	MΩ·km	V/1min.
6	3.6	22.0	640	24.0	780	3.390	500	3,000
10	4.8	25.0	890	27.0	1,100	1.950	400	3,000
16	6.0	30.0	1,280	32.0	1,600	1.240	400	3,000
25	7.4	33.0	1,710	36.0	2,130	0.795	400	3,000
35	8.7	36.0	2,140	40.0	2,680	0.565	400	3,000
50	10.4	43.0	3,000	47.0	3,770	0.393	400	3,000
70	12.5	47.0	3,870	52.0	4,900	0.277	400	3,000
95	14.5	52.0	4,910	58.0	6,260	0.210	400	3,000
120	16.2	59.0	6,280	66.0	8,010	0.164	400	3,000
150	18.2	64.0	7,560	71.0	9,650	0.132	400	3,000
185	20.2	72.0	9,450	79.0	12,030	0.108	400	3,000
240	23.3	79.0	11,900	88.0	15,220	0.0817	400	3,000
			14,310	95.0	18,320	0.0654	400	3,000

고장력 케이블

High Tension Cable

1. 도 체 : Conductor
2. 절연체 : Insulation
3. 테이프 or 편조 : Tape or Braid
4. 보강층 : Reinforce Layer
5. 시 스 : Sheath



0.6/1kV HC-2F P

Reference Standard : JSC Standard

도 체 Conductor		3 심 3 Cores		4 심 4 Cores		도체 저항 Conductor Resistance (20°C) (Max.)	절연저항 Insulation Resistance (20°C) (Min.)	시험 전압 Test Voltage
공칭단면적 Nominal Cross- Sectional Area	바깥 지름 Outer Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	개산중량 Weight (Approx.)	완성외경 Overall Diameter (Approx.)	개산중 Weight (Approx.)			
mm ²	mm	mm	kg/km	mm	kg/km	Ω /km	MΩ · km	V/1min.
10	4.8	13.0 X 28.0	670	12.5 X 35.0	870	1.950	300	3,000
16	6.0	15.0 X 33.0	930	15.0 X 45.0	1,300	1.240	300	3,000
25	7.4	17.5 X 37.0	1,290	17.0 X 51.0	1,790	0.795	300	3,000
35	8.7	18.0 X 41.0	1,650	18.5 X 56.5	2,290	0.565	200	3,000
50	10.4	21.0 X 49.0	2,290	21.5 X 66.5	3,160	0.393	200	3,000
70	12.5	25.0 X 58.0	3,250	25.5 X 79.0	4,470	0.277	200	3,000
95	14.5	27.5 X 65.0	4,170	28.0 X 88.0	5,720	0.210	200	3,000
120	16.2	30.0 X 71.0	5,090	30.5 X 95.5	6,980	0.164	200	3,000
150	18.2	32.0 X 77.0	6,150	33.0 X 103.5	8,450	0.132	200	3,000
185	20.2	36.0 X 87.0	7,710	37.0 X 118.0	10,690	0.108	200	3,000
240	23.3	40.0 X 97.0	9,900	41.0 X 131.0	13,650	0.0817	200	3,000
300	26.0	43.5 X 105.0	11,990	-	-	0.0654	200	3,000

0.6/1kV HC-3F P

Reference Standard : JSC Standard

도 체 Conductor		3 심 3 Cores		4 심 4 Cores		도체 저항 Conductor Resistance (20°C) (Max.)	절연저항 Insulation Resistance (20°C) (Min.)	시험 전압 Test Voltage
공칭단면적 Nominal Cross- Sectional Area	바깥 지름 Outer Diameter (Approx.)	완성외경 Overall Diameter (Approx.)	개산중량 Weight (Approx.)	완성외경 Overall Diameter (Approx.)	개산중 Weight (Approx.)			
mm ²	mm	mm	kg/km	mm	kg/km	Ω /km	MΩ · km	V/1min.
10	4.8	15.0 X 30.5	780	15.0 X 41.0	1,070	1.950	400	3,000
16	6.0	17.5 X 37.5	1,140	18.0 X 51.0	1,580	1.240	400	3,000
25	7.4	19.5 X 42.0	1,520	20.0 X 57.0	2,100	0.795	400	3,000
35	8.7	21.0 X 46.0	1,920	21.5 X 62.0	2,630	0.565	400	3,000
50	10.4	24.5 X 55.0	2,670	25.0 X 73.0	3,660	0.393	400	3,000
70	12.5	27.0 X 61.0	3,460	27.5 X 82.0	4,740	0.277	400	3,000
95	14.5	29.5 X 68.0	4,400	30.5 X 91.0	6,030	0.210	400	3,000
120	16.2	33.5 X 78.0	5,660	34.0 X 103.0	7,710	0.164	400	3,000
150	18.2	36.0 X 84.0	6,770	36.5 X 113.5	9,350	0.132	400	3,000
185	20.2	40.0 X 94.0	8,480	41.0 X 127.0	11,660	0.108	400	3,000
240	23.3	44.0 X 104.0	10,690	45.0 X 135.0	14,380	0.0817	400	3,000
300	26.0	47.5 X 112.5	12,890	-	-	0.0654	400	3,000

차폐 제어 케이블 - 스크린 제어 케이블

Unscreened Control Cable

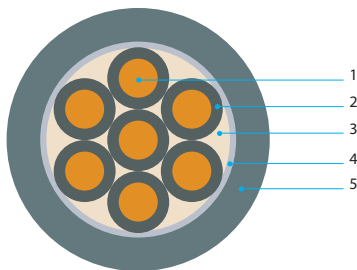
캡타이어 케이블은 강한 시스를 가진 케이블의 총칭이다. 이 케이블은 광산, 농장, 건설공장 현장 등에서 저압 이동용 전기 기기의 배선에 사용되는 전선으로서, 탄력성이 양호한 클로로프렌 고무로 피복되어 충격, 마찰, 굴곡 등의 기계적 내성이 높고, 내수, 내열, 내산 및 내알칼리성 등의 화학적 내성이 강하므로, 이 분야의 용도에 널리 사용된다.

Cabtyre cable is a kind of electric wire used in wiring portable electric appliances, low Voltage for mines, factories, farms, construction fields, etc.

This cable is covered with highly elastic chloroprene rubber. It has such mechanical properties as resistance to physical shock, abrasion and bending and such chemical properties as resistance to water, acid and alkali.

Maximum conductor temperature: 90°C

Unscreened type



- 1. 도 체 : Conductor
- 2. 절연체 : Insulation
- 3. 개재물 : Filling
- 4. 테이프 : Tape
- 5. 시 스 : Sheath

Nominal cross sectional area	number of Core	Conductor					Insulation Thickness (mm)	Sheath Thickness (mm)	Over all Diameter (mm)완성 외경	Net Weight (kg/200M)	Conductor Resistance (Ω/km)
		q'ty	Dia(mm)	절 연 외 경	연선경						
0.5	2C	20	0.18	1.57	1.58	0.93	0.32	1.16	5.20	7.00	39.00
	3C	20	0.18	1.56	1.59	0.93	0.32	1.08	5.60	8.00	39.00
	4C	20	0.18	1.59	1.72	0.93	0.36	1.05	5.70	9.30	39.00
	6C	20	0.18	1.55	1.59	0.93	0.32	1.12	7.00	13.80	39.00
	8C	20	0.18	1.59	1.61	0.93	0.34	1.24	8.00	18.90	39.00
	10C	20	0.18	1.59	1.63	0.93	0.34	1.43	9.10	25.00	39.00
	12C	20	0.18	1.59	1.63	0.93	0.34	1.53	10.50	27.40	39.00
0.75	20C	20	0.18	1.59	1.63	0.93	0.34	1.62	18.10	49.30	39.00
	2C	30	0.18	1.88	1.90	1.14	0.38	1.10	6.20	10.20	26.00
	3C	30	0.18	1.88	1.90	1.14	0.38	1.10	6.50	12.10	26.00
	4C	30	0.18	1.90	1.91	1.14	0.38	1.09	6.90	14.10	26.00
	6C	30	0.18	1.90	1.91	1.14	0.38	1.32	8.50	20.50	26.00
	8C	30	0.18	1.90	1.95	1.14	0.39	1.61	9.70	27.40	26.00
	10C	30	0.18	1.89	1.93	1.14	0.39	1.70	12.20	36.70	26.00
	12C	30	0.18	1.90	1.88	1.92	0.39	1.45	13.50	42.50	26.00
1.25	20C	30	0.18	1.91	1.97	1.14	0.40	1.84	15.10	60.00	26.00
	30C	30	0.18	1.89	1.93	2.14	0.40	1.56	17.80	79.50	26.00
	2C	50	0.18	2.31	2.33	1.47	0.43	1.24	6.50	12.40	15.10
	3C	50	0.18	2.25	2.33	1.47	0.41	1.35	7.70	18.80	15.10
	4C	50	0.18	2.31	2.34	1.47	0.43	1.15	8.20	20.60	15.10
	6C	50	0.18	2.27	2.30	1.47	0.41	1.26	9.20	26.60	15.10
	7C	50	0.18	2.29	2.32	1.47	0.42	1.48	10.50	33.40	15.10
	8C	50	0.18	2.28	2.34	1.47	0.42	1.73	11.30	39.80	15.10
	10C	50	0.18	2.32	2.40	1.47	0.45	1.85	13.10	52.50	15.10
	12C	50	0.18	2.30	2.31	1.47	0.42	1.86	14.90	66.50	15.10
2.5	16C	50	0.18	2.31	2.40	1.47	0.44	1.89	15.30	75.10	15.10
	20C	50	0.18	2.31	2.40	1.47	0.44	2.01	16.50	92.25	15.10
	24C	50	0.18	2.31	2.37	1.47	0.44	2.32	18.20	108.00	15.10
	30C	50	0.18	2.30	2.36	1.47	0.43	2.33	19.70	132.00	15.10
	2C	45	0.25	2.83	2.87	1.97	1.43	1.55	7.70	20.00	7.98
	3C	45	0.25	2.86	2.90	1.97	1.44	1.10	8.10	23.00	7.98
	4C	45	0.25	2.86	2.90	1.97	1.44	1.15	9.30	33.20	7.98
	5C	45	0.25	2.86	2.95	1.97	1.45	1.12	10.60	40.00	7.98
	7C	45	0.25	2.84	2.91	1.97	1.44	1.73	12.60	50.00	7.98
	12C	45	0.25	2.84	2.89	1.97	1.43	2.40	16.40	100.00	7.98

차폐 제어 케이블 - 스크린 제어 케이블

Screened Control Cable

캡타이어 케이블은 강한 시스를 가진 케이블의 총칭이다. 이 케이블은 광산, 농장, 건설공장 현장 등에서 저압 이동용 전기 기기의 배선에 사용되는 전선으로서, 탄력성이 양호한 클로로프렌 고무로 피복되어 충격, 마찰, 굴곡 등의 기계적 내성이 높고, 내수, 내열, 내산 및 내알칼리성 등의 화학적 내성이 강하므로, 이 분야의 용도에 널리 사용된다.

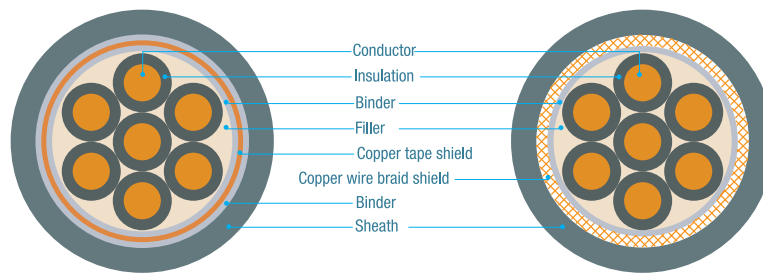
Cabtyre cable is a kind of electric wire used in wiring portable electric appliances, low Voltage for mines, factories, farms, construction fields, etc.

This cable is covered with highly elastic chloroprene rubber. It has such mechanical properties as resistance to physical shock, abrasion and bending and such chemical properties as resistance to water, acid and alkali.

Maximum conductor temperature: 90°C

Copper tape collective shield type

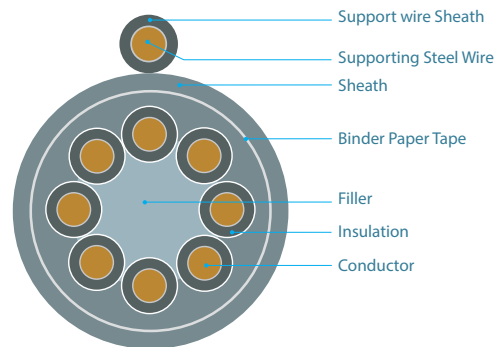
Copper wire braid collective shield type



Nominal cross sectional area	number of Core	Conductor					Insulation Thickness (mm)	Sheath Thickness (mm)	Over all Diameter (mm)완성 외경	Net Weight (kg/200M)	Conductor Resistance (Ω/km)
		q'ty	Dia(mm)	절 연 외 경	연선경						
0.5	2C	20	0.18	1.57	1.58	0.93	0.32	1.16	5.20	7.00	39.00
	3C	20	0.18	1.56	1.59	0.93	0.32	1.08	5.60	8.00	39.00
	4C	20	0.18	1.59	1.72	0.93	0.36	1.05	5.70	9.30	39.00
	6C	20	0.18	1.55	1.59	0.93	0.32	1.12	7.00	13.80	39.00
	8C	20	0.18	1.59	1.61	0.93	0.34	1.24	8.00	18.90	39.00
	10C	20	0.18	1.59	1.63	0.93	0.34	1.43	9.10	25.00	39.00
									10.50	27.40	39.00
0.75	20C	20	0.18	1.59	1.63	0.93	0.34	1.62	18.10	49.30	39.00
	2C	30	0.18	1.88	1.90	1.14	0.38	1.10	6.20	10.20	26.00
	3C	30	0.18	1.88	1.90	1.14	0.38	1.10	6.50	12.10	26.00
	4C	30	0.18	1.90	1.91	1.14	0.38	1.09	6.90	14.10	26.00
	6C	30	0.18	1.90	1.91	1.14	0.38	1.32	8.50	20.50	26.00
	8C	30	0.18	1.90	1.95	1.14	0.39	1.61	9.70	27.40	26.00
1.25	12C	30	0.18	1.90	1.88	1.92	0.39	1.45	13.50	42.50	26.00
	20C	30	0.18	1.91	1.97	1.14	0.40	1.84	15.10	60.00	26.00
	30C	30	0.18	1.89	1.93	2.14	0.40	1.56	17.80	79.50	26.00
	2C	50	0.18	2.31	2.33	1.47	0.43	1.24	6.50	12.40	15.10
	3C	50	0.18	2.25	2.33	1.47	0.41	1.35	7.70	18.80	15.10
	4C	50	0.18	2.31	2.34	1.47	0.43	1.15	8.20	20.60	15.10
2.5	7C	50	0.18	2.29	2.32	1.47	0.42	1.48	10.50	33.40	15.10
	8C	50	0.18	2.28	2.34	1.47	0.42	1.73	11.30	39.80	15.10
	10C	50	0.18	2.32	2.40	1.47	0.45	1.85	13.10	52.50	15.10
	12C	50	0.18	2.30	2.31	1.47	0.42	1.86	14.90	66.50	15.10
	16C	50	0.18	2.31	2.40	1.47	0.44	1.89	15.30	75.10	15.10
	20C	50	0.18	2.31	2.40	1.47	0.44	2.01	16.50	92.25	15.10
2.5	30C	50	0.18	2.30	2.36	1.47	0.43	2.33	19.70	132.00	15.10
	2C	45	0.25	2.83	2.87	1.97	1.43	1.55	7.70	20.00	7.98
	3C	45	0.25	2.86	2.90	1.97	1.44	1.10	8.10	23.00	7.98
	4C	45	0.25	2.86	2.90	1.97	1.44	1.15	9.30	33.20	7.98
	5C	45	0.25	2.86	2.95	1.97	1.45	1.12	10.60	40.00	7.98
	7C	45	0.25	2.84	2.91	1.97	1.44	1.73	12.60	50.00	7.98

크레인제어케이블

Hoist Control Cable



Standard: KS C IEC 60502-1

Nominal cross sectional area (mm ²)	number of Core	Conductor			Sheath Thickness (mm)	Over all Diameter (mm) 완성 외경	Net Weight (kg/200M)	Conductor Resistance (Ω/km)
		q'ty	Dia(mm)	Insulation (mm)				
1.5	8C	59	0.18	0.50	2.00	15.50	7.00	13.30
	10C	59	0.18	0.50	2.15	18.00	8.00	13.30
	14C	59	0.18	0.50	2.15	21.00	9.30	13.30

Construction & Material

1. Conductor

Conductor is Tinned Copper, the structure and name of conductor follow the attached table.

2. Insulation

Conductor is wrapped up in PVC, and minimum averages thickness of insulator and minimum thickness of specific part should be more than standard in the attached table.

3. Jacket

Sheath of cable is thermostable compound complying with PVC. (Black)

4. Supporting steel wire

Supporting wire is attached on the side of cable.

엘리베이터에 대한 1호트러짐 1케이블

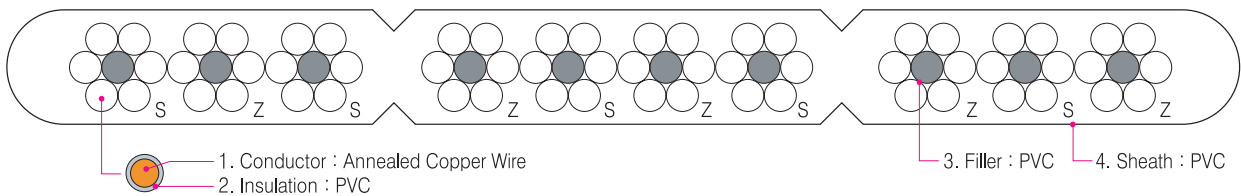
Traveling Cables for Elevators

300V EVVF-L

300V PVC Insulated & Sheathed flat type cable for elevators (without reinforcing wire)

No. of Cores	Conductor			Thickness of Insulation	Thickness of Sheath	Approx. Overall Diameter	Test Voltage	Min. Insulation Resistance at 20	Max. Conductor Resistance at 20	Approx. Weight	Standard Length
	Nominal Sectional Area	Composition	Outer Diameter								
	mm ²	No./mm	mm	mm	mm	mm	V	Ω-km	Ω/km	kg/km	m
30(5 x 6)	0.75	30/0.18	1.1	0.5	1.3	9.0 x 43.0	1,000	20	25.6	610	500
40(5 x 8)	0.75	30/0.18	1.1	0.5	1.3	9.0 x 56.0	1,000	20	25.6	840	500
60(6 x 10)	0.75	30/0.18	1.1	0.5	1.4	9.2 x 73.0	1,500	20	25.6	1,145	500

Construction

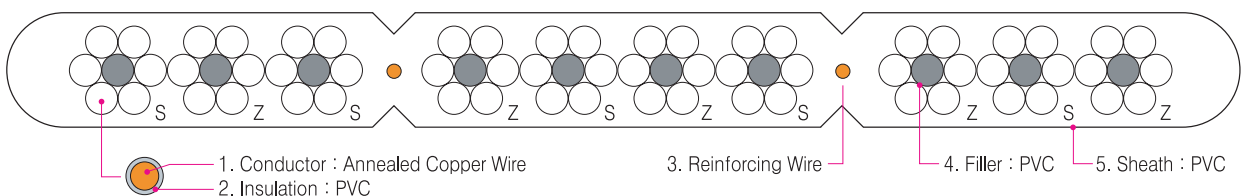


300V EVVF-H

300V PVC Insulated & Sheathed flat type cable for elevators (with reinforcing wire)

No. of Cores	Conductor			Thickness of Insulation	Reinforcing Wire		Thickness of Sheath	Approx. Overall Diameter	Test Voltage	Min. Insulation Resistance at 20	Max. Conductor Resistance at 20	Approx. Weight	Standard Length
	Nominal Sectional Area	Composition	Outer Diameter		No. of Cores	Diameter							
	mm ²	No./mm	mm	mm	mm	mm	mm	mm	V	Ω-km	Ω/km	kg/km	m
30(5 x 6)	0.75	30/0.18	1.1	0.5	2	2	1.3	9.0 x 46.0	1,000	20	25.6	660	500
40(5 x 8)	0.75	30/0.18	1.1	0.5	2	2	1.3	9.0 x 61.0	1,000	20	25.6	940	500
60(6 x 10)	0.75	30/0.18	1.1	0.5	2	2	1.4	9.2 x 83.0	1,500	20	25.6	1,294	500

Construction



엘리베이터에 대한 하트러짐 케이블

Traveling Cables for Elevators

600V EVVF-L

600V PVC Insulated & Sheathed flat type cable for elevators (without reinforcing wire)

No. of Cores	Conductor			Thickness of Insulation	Thickness of Sheath	Approx. Overall Diameter	Test Voltage	Min. Insulation Resistance at 20	Max. Conductor Resistance at 20	Approx. Weight	Stand Length
	Nominal Sectional Area	Composition	Outer Diameter								
	mm ²	No./mm	mm	mm	mm	mm	V	Ω-km	Ω/km	kg/km	m
30(5 x 6)	0.75	30/0.18	1.1	0.8	1.3	10.5 x 53.0	1,500	20	25.6	780	500
40(5 x 8)	0.75	30/0.18	1.1	0.8	1.3	10.5 x 68.0	1,500	20	25.6	1,015	500

600V EVVF-H

600V PVC Insulated & Sheathed flat type cable for elevators (with reinforcing wire)

No. of Cores	Conductor			Thickness of Insulation	Reinforcing Wire		Thickness of Sheath	Approx. Overall Diameter	Test Voltage	Min. Insulation Resistance at 20	Max. Conductor Resistance at 20	Approx. Weight	Stand Length
	Nominal Sectional Area	Composition	Outer Diameter		No. of Cores	Diameter							
	mm ²	No./mm	mm	mm	mm	mm	mm	mm	V	Ω-km	Ω/km	kg/km	m
30(5 x 6)	0.75	30/0.18	1.1	0.8	2	2	1.3	10.5 x 58	1,500	20	25.6	885	500
40(5 x 8)	0.75	30/0.18	1.1	0.8	2	2	1.3	10.5 x 72	1,500	20	25.6	1,150	500

300V EVVF-L

300V PVC Insulated & Sheathed flat type cable for elevators (without reinforcing wire)

No. of Cores	Conductor			Thickness of Insulation	Thickness of Sheath	Approx. Overall Diameter	Test Voltage	Min. Insulation Resistance at 20	Max. Conductor Resistance at 20	Approx. Weight	Stand Length
	Nominal Sectional Area	Composition	Outer Diameter								
	mm ²	No./mm	mm	mm	mm	mm	V	Ω-km	Ω/km	kg/km	m
24C	0.75	30/0.18	1.1	0.6	1.0	4.6 x 66.0	1,000	20	25.6	515	500
20C	0.75	30/0.18	1.1	0.6			1,000	20	25.6		
24C					1.1	5.8 x 62.5				600	500
2P	0.5	20/0.18	0.93	0.38			500	100	39.0		



UTP(Unshielded Twisted Pair) Cables Enhanced CAT. 5E

Application Standard

- ┆ Data And Voice Transmission(100MHz)
- ┆ Gigabit Ethernet
- ┆ 155 Mbps ATM
- ┆ 100 Mbps Fast Ethernet
- ┆ 10/100 Base-T(IEEE 802.3)
- ┆ ADSL/VDSL/ISDN

Standards Applied

- ┆ ANSI/EIA/TIA-568-B.2
- ┆ ISO/IEC-11801
- ┆ KSC-3342
- ┆ UL-444

Type

- ┆ 2/4/25 Pair

Industry Standards And Construction

Type	Standards	Construction
CMR	UL-1666	Conductor : 0.51mm Annealed Copper Wire(24AWG) Insulation : HDPE Sheath : Flame Retardant PVC
CM	UL-1581 IEC 332-3	Conductor : 0.51mm Annealed Copper Wire(24A Insulation : HDPE WG) Sheath : Flame Retardant PVC

Product Spec.

Type	Color	Pair NO./ Conductor Dia.	External Dia.	Weight	Packing	Standard Length
			mm	Kg/Km		m
CMR	Gray	4/0.51	5.2	30	BOX	300
	Black	4/0.51	5.2	30	BOX	300
CMR	Gray	2/0.51	4.8	20	BOX	300
	Gray	4/0.51	5.2	30	BOX	300
	Black	4/0.51	5.2	30	BOX	300
	Blue	4/0.51	5.2	30	BOX	300
	Red	4/0.51	5.2	30	BOX	300
	Yellow	4/0.51	5.2	30	BOX	300

Electrical Performance

DC Resistance(Max.)	DC Resistance Unbalance(Max.)	Mutual Capacitance	Capacitance Unbalance(Max.)
┆ /100m at 20°C	%	nF/100m at 1KHz/20°C	pF/100m at 1KHz
9.38	5.0	5.6	330

Frequency	RL (Min.)	Attenuation (Max.)	Pr-Pr NEXT (Min.)	Powersum NEXT (Min.)	Pr-Pr ELFEXT (Min.)	Powersum ELFEXT(Min.)
MHz	dB	dB	dB	dB	dB	dB
0.772	-	1.8	67.0	64.0	66.3	63.0
1.0	20.0	2.0	65.3	62.3	63.8	60.8
4.0	23.0	4.1	56.3	53.3	51.7	48.7
8.0	24.5	5.8	51.8	48.8	45.7	42.7
10.0	25.0	6.5	50.3	47.3	43.8	40.8
16.0	25.0	8.2	47.2	44.2	39.7	36.7
20.0	25.0	9.3	45.8	42.8	37.3	34.7
25.0	24.3	10.4	44.3	41.3	35.8	32.8
31.25	23.6	11.7	42.9	39.9	33.8	30.9
62.5	21.5	17.0	38.4	35.4	27.8	24.8
100.0	20.1	22.0	35.3	32.3	23.8	20.8

Selection of Cable

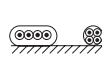
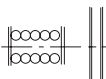
									
Type of cable	Cylindrical	Mono spiral	Vertical cable	Festoon systems	Cable tender systems	Guide pulley systems	Energy chain systems	Basket systems	Lift systems
	Cable winding reels								
ETC [®]									
ESCV [®]									
EHTC									
EHTC-OF									
ERDFC [®]									
EFLFC [®]									
EFC-									
OF [®]									
ESCB [®]									
EHLC [®]									
EEC [®]									

Main use  Surable 

Electrical properties

Rubber-insulated

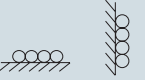
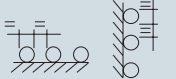
Current-carrying capacity

							
Type of laying Cross section	1 cable laid on ground	1 cable in air	Number of layers on reel				
			1	2	3	4	5
mm²	A	A	A	A	A	A	A
up to 10kV	1	1.05	0.8	0.61	0.49	0.42	0.34
1.0	18	19	14	11	9	8	6
1.5	23	24	18	14	11	10	8
2.5	30	32	24	18	15	13	10
4	41	43	33	25	20	17	14
6	53	56	42	32	26	22	18
10	74	78	59	45	36	31	25
16	99	104	79	60	49	42	34
25	131	138	105	80	64	55	45
35	162	170	130	99	79	68	55
50	202	212	162	123	99	85	69
70	250	263	200	153	123	105	85
95	301	316	241	184	147	126	102
120	352	370	282	215	172	148	120
150	404	424	323	246	198	170	137
185	461	484	369	281	226	194	157
240	540	567	432	329	265	227	184
300	620	651	496	378	304	260	211
above 10kV							
16	105		84	64	51	44	36
25	139		111	85	68	58	47
35	172		138	105	84	72	58
50	215		172	131	105	90	73
70	265		212	162	130	111	90
95	319		255	195	156	134	108

De-rating factors for an ambient temperature other than 30 °C

Interflex [®]	10	15	20	25	35	40	45	50	55	60	65	70
ETC [®] , ESCV [®] , EHLC [®]	1.18	1.14	1.10	1.05	0.95	0.89	0.84	0.77	0.71	0.63	0.55	0.45
EFLFC [®]	1.18	1.14	1.10	1.05	0.95	0.89	0.84	0.77	0.71	0.63	0.55	0.45
ERDFC [®]	1.18	1.14	1.10	1.05	0.95	0.89	0.84	0.77	0.71	0.63	0.55	0.45
EHTC, EHTC-OF	1.18	1.14	1.10	1.05	0.95	0.89	0.84	0.77	0.71	0.63	0.55	0.45
ESCB [®]	1.22	1.17	1.12	1.06	0.94	0.87	0.79	0.71	0.61	0.50		

De-rating factors for grouping

Arrangement	Number of multi-core cables or number of single or three-phase circuits made up of single-core cables(2 or 3 loaded conductors)													
	1	2	3	4	5	6	7	8	9	10	12	14	16	18
Bunched directly at the wall, the floor, in conduit or ducting on or in the wall 	1.0	0.8	0.7	0.65	0.6	0.57	0.54	0.52	0.5	0.48	0.45	0.43	0.41	0.39
Single layer on the wall or floor, touching 	1.0	0.85	0.79	0.75	0.73	0.72	0.72	0.72	0.71					0.7
Single layer on the wall or floor, spaced with a clearance of 1 x cable diameter between adjacent cables 	1.0	0.94	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Single layer under ceiling, spaced with a clearance 	0.95	0.81	0.72	0.68	0.66	0.64	0.63	0.62						0.61
Single layer under ceiling, spaced with a clearance of 1x cable diameter between adjacent cables 	0.95	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85

Mechanical properties

Minimum permissible bending radius R

Trailing cables		Type of application						
		Fixed installation	Anchoring reel	Festoon operation	Cable winding reels		Cable tender systems	Guide pulley systems
					Cylindrical	Mono spiral		
Up to 0.6/1kV								
Maximum	up to 8mm	3 x d	3 x d	3 x d	5 x d	4 x d	7.5 x d	
overall diameter	up to 12mm	3 x d	4 x d	4 x d	5 x d	4 x d	7.5 x d	
of the cable	up to 20mm	4 x d	5 x d	5 x d	5 x d	5 x d	7.5 x d	
	above 20mm	4 x d	5 x d	5 x d	6 x d	5 x d	7.5 x d	
Above 0.6/1kV		6 x d	10 x d	10 x d	12 x d	10 x d	15 x d	



Vietnam Represented Office:

Dusonc Vietnam - Quanpham Co.,Ltd
Address: 285 Dien Bien Phu, Ward 07 -district 03,
Ho Chi Minh City - Vietnam
Tel +84 39304952 - 39302400
Fax: +84 39304953
Email: info@quanpham.vn
Website: www.quanpham.vn

