

RALOS Flexible H07 Rubber Cables



APPLICATIONS

This flexible cable can be installed either as fixed or mobile cable under adverse conditions such as in outdoor, oily, acidi, alkaline or submersible environment

SPECIFICATION

EPR Rubber Insulated, Chlorinated Polyethylene Sheathed Flexible Cables

COLOUR

Insulation	Colour
Single- Core	White
2-Core	Blue, brown
2-Core + Earth	Green-yellow, blue, brown
3- Core + Earth	Green- yellow, brown, black, grey
4- Core + Earth	Green- yellow, blue, brown, black, grey
Above 4 -Core + Earth	Green-yellow, other cores black with white numbering.

CABLE CONSTRUCTION

Class 5 (to IEC 60228) **tinned** annealed flexible copper, E14 Ethylene- propylene rubber (EPR) (to EN 50363-1) insulated, EM2 chlorinated polyethylene rubber (CPE) (to EN 50363-2) sheathed

Voltage Rating (V)	AC Voltage 0.6/1kV DC Voltage 0.9/1.5kV
Operating Temperature (°C):	Fixed: -40 °C to 90 °C Flexing: - 25 °C to 90 °C
Specification	BS EN 50525-2-21, IEC 60092-353 AS/ NZS 5000.1, IEC 60331-2, AS/NZS 3191
Sheath Colour	Black
Water Resistance	AD8 Permanent submersion to 500m depth *Protected and fixed wiring installation

1 - CORE

Part Number	Conductor	Insulation	Sheath	Outer Diameter	Approx. Weight
	Nominal Area (mm)	Thickness (mm)	Thickness (mm)	(mm)	(kg/km)
RB1X1.5	1.5	0.8	1.4	6.0	50
RB1X2.5	2.5	0.9	1.4	6.5	65
RB1X4	4	1.0	1.5	7.5	90
RB1X6	6	1.0	1.6	8.5	115
RB1X10	10	1.2	1.8	10.0	180
RB1X16	16	1.2	1.9	11.5	255
RB1X25	25	1.4	2.0	13.4	365
RB1X35	35	1.4	2.2	15.0	485
RB1X50	50	1.6	2.4	17.2	680
RB1X70	70	1.6	2.6	19.2	900
RB1X95	95	1.8	2.8	22.0	1160
RB1X120	120	1.8	3.0	24.0	1460
RB1X150	150	2.0	3.2	26.2	1800
RB1X185	185	2.2	3.4	29.2	2200
RB1X240	240	2.4	3.5	31.8	2830
RB1X300	300	2.6	3.6	35.5	3480
RB1X400	400	2.8	3.8	38.5	4500
RB1X500	500	3.0	4.0	44.0	5800
RB1X630	630	3.0	4.1	48.0	6960

2 - CORE

Part Number	Conductor	Insulation	Sheath	Outer Diameter	Approx. Weight
	Nominal Area (mm)	Thickness (mm)	Thickness (mm)	(mm)	(kg/km)
RB2X1	1	0.8	1.3	8.3	90
RB2X1.5	1.5	0.8	1.5	9.2	115
RB2X2.5	2.5	0.9	1.7	11.0	165
RB2X4	4	1.0	1.8	12.6	230
RB2X6	6	1.0	2.0	14.2	300
RB2X10	10	1.2	3.1	19.2	545
RB2X16	16	1.2	3.3	22.0	765
RB2X25	25	1.4	3.6	25.8	1090
RB2X35	35	1.4	3.8	29.3	1130
RB2X50	50	1.6	4.2	33.8	1580
RB2X70	70	1.6	4.6	37.5	1960
RB2X95	95	1.8	5.0	42.4	2530

2 - CORE + EARTH

Part Number	Conductor	Insulation	Sheath	Outer Diameter	Approx. Weight
	Nominal Area (mm)	Thickness (mm)	Thickness (mm)	(mm)	(kg/km)
RB3G1	1	0.8	1.4	9.0	110
RB3G1.5	1.5	0.8	1.6	10.0	140
RB3G2.5	2.5	0.9	1.8	12.0	200
RB3G4	4	1.0	1.9	13.5	280
RB3G6	6	1.0	2.1	15.5	375
RB3G10	10	1.2	3.3	20.8	675
RB3G16	16	1.2	3.5	23.5	950
RB3G25	25	1.4	3.8	27.5	1360
RB3G35	35	1.4	4.1	30.5	1795
RB3G50	50	1.6	4.5	35.8	2480
RB3G70	70	1.6	4.8	40.2	3285
RB3G95	95	1.8	5.3	45.9	4210
RB3G120	120	1.8	5.6	49.7	5280
RB3G150	150	2.0	6.0	55.4	6280
RB3G185	185	2.2	6.4	60.8	7350
RB3G240	240	2.4	7.1	67.4	9550
RB3G300	300	2.6	7.7	77.5	11800

3 - CORE + EARTH

Part Number	Conductor	Insulation	Sheath	Outer Diameter	Approx. Weight
	Nominal Area (mm)	Thickness (mm)	Thickness (mm)	(mm)	(kg/km)
RB4G1	1	0.8	1.5	10.0	135
RB4G1.5	1.5	0.8	1.7	11.0	170
RB4G2.5	2.5	0.9	1.9	13.0	250
RB4G4	4	1.0	2.0	15.0	350
RB4G6	6	1.0	2.3	17.1	470
RB4G10	10	1.2	3.4	22.8	830
RB4G16	16	1.2	3.6	25.5	1170
RB4G25	25	1.4	4.1	30.7	1700
RB4G35	35	1.4	4.4	34.0	2300
RB4G50	50	1.6	4.8	39.6	3160
RB4G70	70	1.6	5.2	44.7	4200
RB4G95	95	1.8	5.9	51.5	5450
RB4G120	120	1.8	6.0	55.3	6770
RB4G150	150	2.0	6.5	61.5	8050
RB4G185	185	2.2	7.0	68.0	9860
RB4G240	240	2.4	7.7	75.3	12650

4- CORE + EARTH

Part Number	Conductor	Insulation	Sheath	Outer Diameter	Approx. Weight
	Nominal Area (mm)	Thickness (mm)	Thickness (mm)	(mm)	(kg/km)
RB5G1	1	0.8	1.6	11.2	160
RB5G1.5	1.5	0.8	1.8	12.4	205
RB5G2.5	2.5	0.9	2.0	14.5	300
RB5G4	4	1.0	2.2	16.8	420
RB5G6	6	1.0	2.5	19.0	580
RB5G10	10	1.2	3.6	25.0	1120
RB5G16	16	1.2	3.9	28.6	1440
RB5G25	25	1.4	4.4	34.0	2120
RB5G35	35	1.4	4.6	37.8	2750
RB5G50	50	1.6	5.2	44.8	3820
RB5G70	70	1.6	5.7	50.0	5370
RB5G95	95	1.8	6.3	57.2	6930
RB5G120	120	1.8	6.3	64.0	8500
RB5G150	150	2.0	6.8	71.2	9450
RB5G180	180	2.2	7.4	77.6	11360
RB5G240	240	2.4	8.1	86.7	14830

6- CORE + EARTH

Part Number	Conductor	Insulation	Sheath	Outer Diameter	Approx. Weight
	Nominal Area (mm)	Thickness (mm)	Thickness (mm)	(mm)	(kg/km)
RB7G1.5	1.5	0.8	2.6	14.8	325
RB7G2.5	2.5	0.89	2.8	17.2	450
RB7G4	4	1.0	3.1	20.1	630

11- CORE + EARTH

Part Number	Conductor	Insulation	Sheath	Outer Diameter	Outer Diameter
	Nominal Area (mm)	Thickness (mm)	Thickness (mm)	(mm)	(kg/km)
RB12G1.5	1.5	0.8	2.9	18.9	485
RB12G2.5	2.5	0.90	3.1	22.0	695
RB12G4	4	1.0	3.5	25.9	970

17- CORE + EARTH

Part Number	Conductor	Insulation	Sheath	Outer Diameter	Outer Diameter
	Nominal Area (mm)	Thickness (mm)	Thickness (mm)	(mm)	(kg/km)
RB18G1.5	1.5	0.8	3.2	22.2	690
RB18G2.5	2.5	0.9	3.5	26.3	990
RB18G4	4	1.0	3.9	30.8	1400




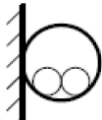




Technical Information

Current Rating and Voltage Drop Rubber Insulated Cables

Flexible Cables with Rubber Insulated, Chlorinated Polyethylene Rubber Sheathed
Table 1: Current - Carrying Capacities (Amp) [CU/ERP/CPE or TC/ERP/CPE Cables]

Conductor Operating Temperature: 90°C
Ambient Temperature: 40°C

BS EN 50525-2-21
AS/NZS 3008

Cross-sectional area	Single-phase a.c or d.c				Three-phase a.c			
	2-single core				3-single core			
	Unenclosed spaced	Spaced from surface	Touching	Enclosed in conduit in air	Enclosed Spaced	Spaced from surface	Touching	Enclosed in conduit in air
								
(mm ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	21	21	16	17	20	17	16	15
1.5	26	26	20	21	25	22	20	19
2.5	35	34	27	28	33	29	27	24
4	46	46	36	37	45	38	36	31
6	59	58	46	46	57	49	46	41
10	83	81	64	64	80	69	64	55
16	110	106	85	82	106	91	85	73
25	147	141	114	109	142	121	114	94
35	183	174	141	132	177	151	141	118
50	231	218	178	167	223	191	178	144
70	292	274	225	204	283	241	225	183
95	351	328	271	248	341	290	271	214
120	418	389	322	286	406	346	322	256
150	483	448	373	336	470	400	372	291
185	555	512	428	377	540	459	427	334
240	668	613	515	452	651	553	514	391
300	772	705	594	-	752	637	591	458
400	933	843	715	-	909	764	709	533
500	1090	975	830	-	1062	884	821	630
630	1288	1135	969	-	1256	1030	956	719

Current Rating and Voltage Drop

Rubber Insulated Cables

Flexible Cables with Rubber Insulated, Chlorinated Polyethylene Rubber Sheathed

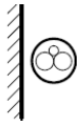

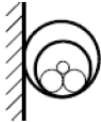
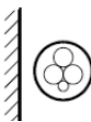

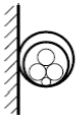
Table 2: Current - Carrying Capacities (Amp) [CU/ERP/CPE or TC/ERP/CPE Cables]

Conductor Operating Temperature: 90°C

Ambient Temperature: 40°C

BS EN 50525-2-21

AS/NZS 3008

Cross-sectional area	Single-phase a.c or d.c			Three-phase a.c		
	2-core cables			3-Core + Earth or 4-Core + Earth		
	Unenclosed spaced	Unenclosed touching	Enclosed in conduit in air	Unenclosed Spaced	Unenclosed Touching	Enclosed in conduit in air
						
(mm ²)	(A)	(A)	(A)	(A)	(A)	(A)
1	19	18	16	16	15	14
1.5	24	23	20	20	19	17
2.5	32	30	27	27	26	23
4	43	40	35	36	34	29
6	55	51	44	46	43	37
10	78	72	62	66	61	52
16	103	96	1.80	87	81	67
25	136	128	106	116	108	89
35	169	158	129	144	135	111
50	213	199	163	182	170	136
70	269	251	207	230	214	173
95	322	300	242	275	256	202
120	381	355	289	327	303	242
150	438	408	328	375	348	274
185	499	464	375	428	396	314
240	596	554	439	511	472	379
300	682	633	511	584	539	-
400	811	751	595	692	638	-

* Note: 1. Current carrying capacity and voltage drop are per comprehensive table in AS/NZS 3008.1.1:2009

2. Voltage drop per AS/NZS 3000 must not exceed 5% of nominal system voltage

Table 3: Correction Factor for Ambient Air Temperature

Ambient Temperature	(°C)										
	15	20	25	30	35	40	45	50	55	60	65
EPR (90°C)	1.26	1.2	1.15	1.1	1.05	1.0	0.94	0.88	0.81	0.73	0.65

Table 4: Flexible Rubber Insulated and Sheathed Cables Bending Radius, according to EN 50565-1

Minimum bending radius	For Cable Diameter D (mm)			
	D ≤ 8	8 < D ≤ 12	12 < D ≤ 20	D ≥ 20
For fixed installation	3D	3D	4D	4D
At inlet of portable appliance or mobile equipment. No Mechanical Load on cable	4D	3D	5D	6D
Under mechanical Load	6D	6D	6D	8D

Table 5: Maximum Conductor Resistance D.C at 20°C

Nominal Cross-sectional Area mm ²	Maximum conductor resistance DC at 20°C					
	Class 1		Class 2		Class 5	
	Bare	Tinned	Barre	Tinned	Bare	Tinned
	Ω/km	Ω/km	Ω/km	Ω/km	Ω/km	Ω/km
0.5	36.0	36.7	36.0	36.7	39.0	40.1
0.75	24.5	24.8	24.5	24.8	26.0	26.7
1	18.1	18.2	18.1	18.2	19.5	20.0
1.5	12.1	12.2	12.1	12.2	13.3	13.7
2.5	7.41	7.56	7.41	7.56	7.98	8.21
4	4.61	4.70	4.61	4.70	4.95	5.09
6	3.08	3.11	3.08	3.11	3.30	3.39
10	-	-	1.83	1.84	1.91	1.95
16	-	-	1.15	1.16	1.21	1.24
25	-	-	0.727	0.734	0.780	0.795
35	-	-	0.524	0.529	0.554	0.565
50	-	-	0.387	0.391	0.386	0.393
70	-	-	0.268	0.270	0.272	0.277
95	-	-	0.193	0.195	0.206	0.210
120	-	-	0.153	0.154	0.161	0.164
150	-	-	0.124	0.126	0.129	0.132
185	-	-	0.0991	0.100	0.106	0.108
240	-	-	0.0754	0.0762	0.0801	0.0817
300	-	-	0.0601	0.0607	0.0641	0.0654
400	-	-	0.0470	0.0475	0.0486	0.0495
500	-	-	0.0366	0.0369	0.0384	0.0391
630	-	-	0.0283	0.0286	0.0287	0.0292

RALOS Rubber Cable

Certificate of Compliance

DKSH Australia Pty. Ltd.

1 Beyer Road.

Braeside VIC 3195.

Phone: 1800 010 113.

Fax : (03) 9554 6677

Email: sales.quotes@dksh.com

Type of cable: TC/EPR/CPE FLEXIBLE RUBBER CABLE

Size of cable: 1 C x 1.5 mm² ~ 1 C x 630 mm² ,

2 C x 1 mm² ~ 2 C x 25 mm²,

3 C x 1 mm² ~ 3 C x 300 mm²,

4 C, 5 C x 1 mm² ~ 4 C, 5C x 240 mm²,

6 C, 7 C, 10 C, 12 C, 18 C x 1.5 mm² ~ 6 C, 7 C, 10 C, 12 C, 18 C x 4 mm²,

24 C, 36 C x 1.5 mm² ~ 24 C, 36 C x 2.5 mm²

Rated voltage: 450/750 V
600/1000 V

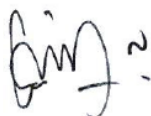
We hereby confirm that the above mentioned cables are produced according to the standard BS EN 50525-2-21:2011 & IEC 60092-353, and are under the strict quality control procedure.

Furthermore, the product has been tested and verified according to the following standards:

- Electrical Tests in accordance with BS EN 50525-2-21 & IEC 60092-353
- Design and measures in accordance with BS EN 60811-201;202;203
- Mechanical Tests in accordance with BS EN 60811-501
- Flame Retardance Tests in accordance with BS EN 60332-1-2
- High Voltage Test based on IEC 60092-353 or AS/NZS 5000.1

Note: This verification is a part of the full test report and should be read in conjunction with it.

Approved by:



QC manager

Letter of Conformity

DKSH Australia Pty. Ltd.

1 Beyer Road.

Braeside VIC 3195.

Phone: 1800 010 113.

Fax : (03) 9554 6677

Email: sales.quotes@dksh.com

To whom it may concern,

Re: RUBBER CABLE TCU/EPR/CPE FLEXIBLE CABLE, 450/750V

Dear Sir/Madam

We reference to the above, we confirm this cable are manufacture according to BS EN 50525-2-21: 2011, AS/NZS 3808 for its insulation and sheath material and its designed for submersed to 500m depth, Fixed installation.

The cable construction: -

Conductor : Tinned copper conductor

Insulation: EPR, Ethylene Proplene Rubber (or Cross-linked elastomeric compound),

EPR is abrasion resistant, good water resistance and is suitable for use at temperatures down to -60°C

Outer-sheath: CPE, Cross-linked chlorinated polyethylene elastomer compound CPE is resistant to ozone and ultraviolet (sunlight) degradation, withstand prolonged immersion in water, it does not become brittle unless temperatures are below -40°C and resistant to most strong acids and bases and many solvents except for chlorinated organics.

The cables are producing under strict production and quality control procedure and ar tested according to BS EN 50525-2-21

1) Electrical test:-

Resistance of conductor to AS/NZS 1125, IEC/BS EN 60228

Voltage test according to test method EN 50395 Clause 6 (0.6/1KV to IEC 60092-353 or AS/NZS 5000.1)

2) Construction and dimension tests according to IEC/BS EN 60811-201, 202

Insulation and sheath thickness and diameter

3) Mechanical properties, test method to IEC/BS EN 60811-501

4) Test under fire condition according to IEC 60332-1-2

5) Water resistance test – Electrical test according Annex D and Annex E for Mechanical test on sheath

This cable is further tested and comply to salt water and Chlorinated water environment, Salt water solution = 20% (weight) common salt (sodium chloride)

Chlorinated water = Deionized (DI) water (PH 6.5 to 8.0, contain 2.5ppm to 5 ppm (milligrams per litre) of free-chlorine)

Test method according to BS EN 50525-2-21 Water resistance test – Electrical test according to Annex D & Annex E for Mechanical test on sheath to.

Should you have further query, please do not hesitate to contact our Sale or below undersign.

Yours faithfully,



Technical Director

Contact Us

NEW SALES ENQUIRIES

Phone: 1800 010 113
Email: sales.quotes@dksh.com
Web: <https://direct.dksh.com.au/electrical>

EXISTING SALES ENQUIRIES

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South Australia

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