MINING

Nexans

Olex

MINING

Australia's cable specialist

Contents

Olex offers a proud history of cable manufacturing expertise, with more than half a century of experience in the industry. Olex offers market leadership in design, quality engineering excellence, distribution and customer service.

World leader in industrial and mining cables

Olex is a world leader in the design and manufacture of cables for mining and industry. In this "traditional" market, staying ahead of customers' expectations, and the competition, has always been important. Every Olex cable is subject to exacting quality control procedures, ensuring rigid testing to relevant standards at every stage of manufacture.

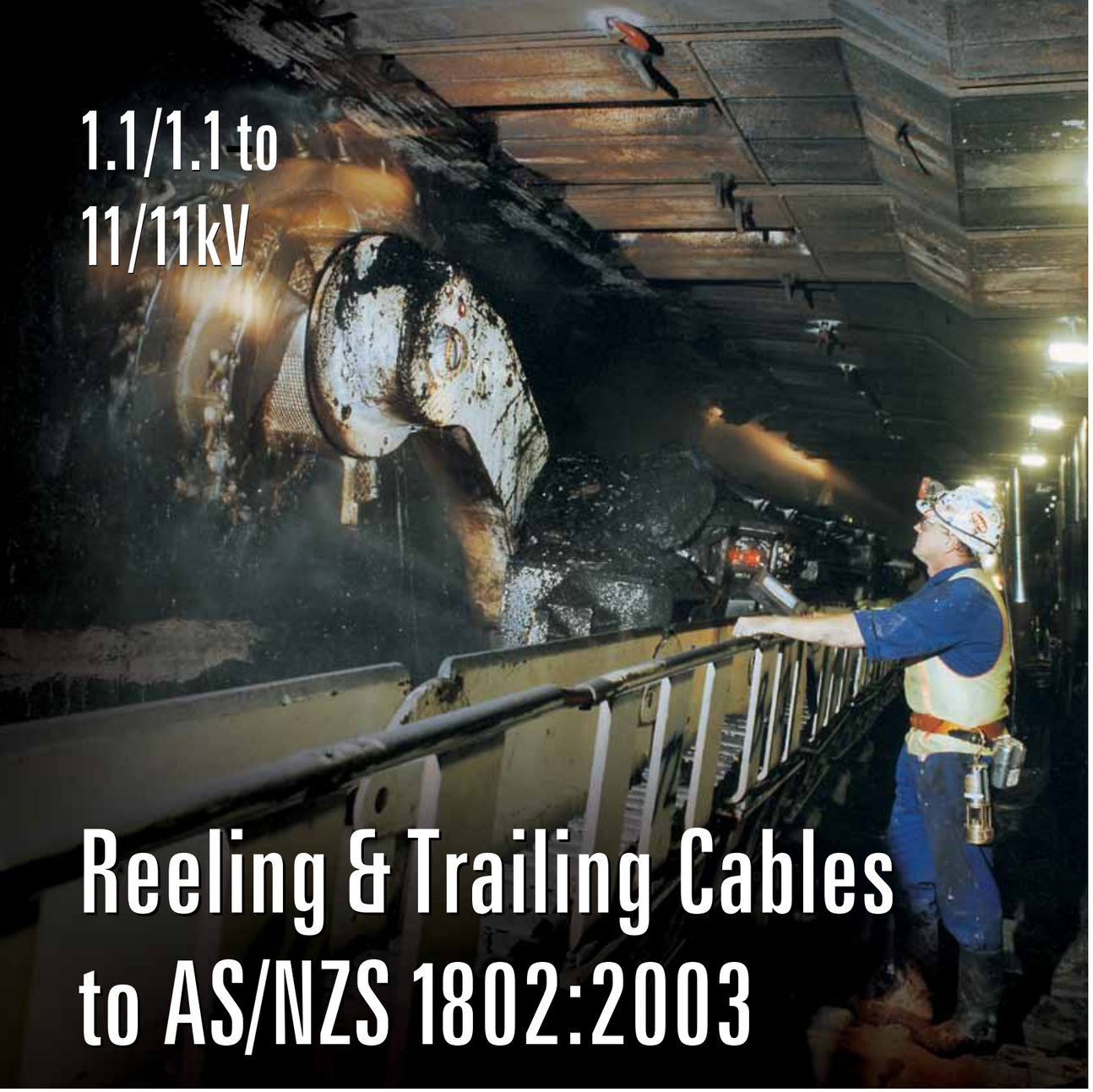
Olex specialises in a range of mining cables designed in response to Australia's specific needs and in accordance with local standards. The quality and toughness of these products make them much sought after on world markets.

Technically Olex is a market leader in materials technology. This skill, coupled with many years of field experience and applications knowhow results in cables which perform above expectations over long service times.

Nexans Olex

Cable design features

Feature	Function	Cable Type	209	210	240	241	245	260	275	409	412.1	440	441.1	441	450	455
			AS/NZS 1802							AS/NZS 2802						
																
		Catalogue page	5	6	7	8	10	11	6	13	14	15	16	17	18	19
Standard conductor construction	Mid-range flexible and 'robust' conductor with resistance to flattening and crushing.		●	●	●	●		●	●	●	●	●	●	●	●	●
Superflex	Definitely flexible and 'soft' with minimum resistance to bending, plus smaller bending radii. Conductor has many more wires each of smaller size.					●	●									
R-EP-90 Insulation	Standard Olex EPR tough but flexible insulation with resistance to damage and good electrical characteristics.		●	●	●	●	●	●	●	●	●	●	●			
XR-EP-90 Insulation	High electrical grade EPR capable of higher electrical stresses.									>11kV		>11kV		●	●	●
Semiconductive extruded screens	Low resistance Earth path around each core with proven electrical performance, but flexible and tolerates flexing and bending.					●	●						●	●	●	●
Metal braided screens	High conductivity short circuit safety, the braids form an earth path with very low electrical resistance and high reliability.		●	●	●			●		●		●			●	
Interstitial earths	Mechanically strong earths replace braided earth screens in cable that is reeled or frequently moved.					●	●		●		●		●	●	●	●
Semiconductive covering on earths	Low resistance path from one earth core to the next so provides higher conductivity earth circuit.					●	●		●				●	●	●	●
Interstitial pilots	Insulated pilots are used for control circuits. Replaces central pilot and allows the cable diameter to be smaller where the cradle is absent.				●			●				●			●(x1)	●(x1)
Cradle	Protects cores against crushing. Semiconductive to prevent phase-to-phase faults without earthing. Usually incorporates the central pilot.		●	●	●	●	●	●	●	●		●	●	●		
Central pilot	Extensible pilot, used for monitoring circuit to trip breakers before cable is mechanically pulled apart. Type 245 cable has three central pilots.		●	●		●	●(x3)		●	●			●	●		
Low lay up lay ratio	Twist of cores allows cable bending and lower lay ratio (more twists) allows smaller bending radius.						●									
Semiconductive extrusion over assembly of cores	Provides semiconductive path to earth conductors at any cut of the sheath or split of insulation through to active conductors.					●	●		●				●	●		
Pliable armour	Impact tolerant and cut resistant armour provides mechanical strength to avoid damage from impact and cutting.							●			●					
Sheath reinforcement	High strength yarns or tapes provide radial mechanical strength to sheath and cable to prevent squashing or crushing of the cable.					●	●		●				●	●	●	●



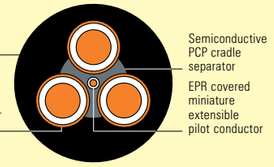
1.1/1.1 to 11/11kV

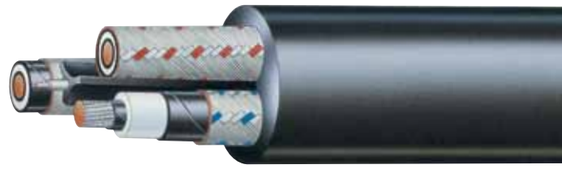
Reeling & Trailing Cables to AS/NZS 1802:2003

Photo courtesy of Ampcontrol

Construction Reeling and trailing cables manufactured to AS/NZS 1802 are robust flexible cables primarily designed for underground coal mines. However, many of these are also suitable for other applications requiring a heavy duty flexible cable, e.g. surface mines, wharf cranes and the like.

Type 209
1.1 to 11kV

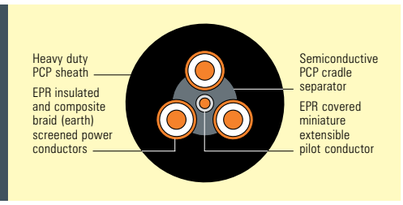


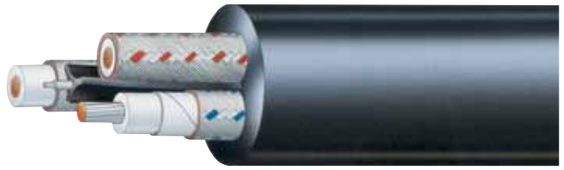


Copper screened cable for use as a flexible feeder to machinery. More suitable as a trailing cable, rather than for reeling. Smaller cables used for drills and hand held tools and equipment. Contains a central pilot.

	Power conductor				Core screen		Pilot conductor		Sheath			
Nominal conductor area mm^2	Strand size no/mm	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Size no/mm	Area of each screen mm^2	Strand size no/mm	Thickness of EPR covering mm	Thickness of sheath mm	Nominal overall diameter mm	Approx mass kg/100m	Product code
Type 209.1												
6	84/0.30	3.4	1.5	6.5	7/0.25	7.2	24/0.20	0.8	3.8	30.0	130	MECR57AA003
10	77/0.40	4.6	1.5	7.7	7/0.25	8.6	24/0.20	0.8	3.8	32.6	160	MECR58AA003
16	126/0.40	5.7	1.6	9.0	7/0.25	9.6	24/0.20	0.8	4.0	35.8	200	MECR59AA003
25	209/0.40	7.2	1.6	10.5	7/0.25	11.3	24/0.20	0.8	4.3	39.7	260	MECR60AA003
35	285/0.40	8.5	1.6	11.8	7/0.25	12.4	24/0.20	0.8	4.6	43.1	310	MECR61AA003
50	380/0.40	10.0	1.7	13.5	7/0.25	14.1	40/0.20	0.8	5.0	47.7	385	MECR62AA003
70	203/0.67	12.0	1.8	16.0	7/0.25	16.5	40/0.20	0.8	5.4	53.9	510	MECR63AA003
95	259/0.67	13.2	2.0	17.6	7/0.25	18.2	40/0.20	0.8	6.0	58.6	610	MECR64AA003
120	336/0.67	15.3	2.1	20.0	7/0.25	20.3	40/0.20	0.8	6.4	64.4	750	MECR65AA003
150	427/0.67	17.1	2.3	22.2	7/0.25	22.3	40/0.20	0.8	6.9	70.2	905	MECR66AA003
185	518/0.67	19.2	2.5	24.7	7/0.30	30.2	40/0.20	0.8	7.4	77.4	1110	MECR67AA003
240	672/0.67	21.8	2.8	27.9	7/0.30	33.6	40/0.20	0.8	8.2	86.0	1380	MECR68AA003
300	854/0.67	24.4	3.0	30.9	7/0.40	50.1	40/0.20	0.8	8.8	95.1	1740	MECR69AA003
Type 209.3												
16	126/0.40	5.7	3.0	12.5	7/0.25	13.1	24/0.20	0.8	5.3	46.2	300	MGCR59AA003
25	209/0.40	7.2	3.0	14.0	7/0.25	14.8	24/0.20	0.8	5.6	50.1	370	MGCR60AA003
35	285/0.40	8.5	3.0	15.3	7/0.25	15.8	24/0.20	0.8	5.9	53.5	430	MGCR61AA003
50	380/0.40	10.0	3.0	16.8	7/0.25	17.2	40/0.20	0.8	6.3	57.6	510	MGCR62AA003
70	203/0.67	12.0	3.0	18.8	7/0.25	18.6	40/0.20	0.8	6.6	62.5	625	MGCR63AA003
95	259/0.67	13.2	3.0	20.0	7/0.25	20.3	40/0.20	0.8	7.1	66.2	725	MGCR64AA003
120	336/0.67	15.3	3.0	22.1	7/0.30	27.2	40/0.20	0.8	7.4	72.0	880	MGCR65AA003
150	427/0.67	17.1	3.0	23.9	7/0.40	39.6	40/0.20	0.8	7.8	78.0	1080	MGCR66AA003
185	518/0.67	19.2	3.0	26.0	7/0.40	42.2	40/0.20	0.8	8.2	83.4	1250	MGCR67AA003
240	672/0.67	21.8	3.0	28.6	7/0.40	46.6	40/0.20	0.8	8.8	90.3	1500	MGCR68AA003
300	854/0.67	24.4	3.0	31.2	7/0.50	63.2	40/0.20	0.8	9.4	98.4	1840	MGCR69AA003
Type 209.6												
16	126/0.40	5.7	5.0	16.5	7/0.25	17.2	24/0.20	0.8	6.4	57.3	440	MICR59AA003
25	209/0.40	7.2	5.0	18.0	7/0.25	18.6	24/0.20	0.8	6.7	61.2	515	MICR60AA003
35	285/0.40	8.5	5.0	19.3	7/0.25	18.6	24/0.20	0.8	7.0	64.6	585	MICR61AA003
50	380/0.40	10.0	5.0	20.8	7/0.25	21.3	40/0.20	0.8	7.3	68.5	670	MICR62AA003
70	203/0.67	12.0	5.0	22.8	7/0.25	23.4	40/0.20	0.8	7.7	73.7	805	MICR63AA003
95	259/0.67	13.2	5.0	24.0	7/0.30	29.2	40/0.20	0.8	8.1	77.8	935	MICR64AA003
120	336/0.67	15.3	5.0	26.1	7/0.30	31.7	40/0.20	0.8	8.5	83.1	1090	MICR65AA003
150	427/0.67	17.1	5.0	27.9	7/0.40	45.7	40/0.20	0.8	8.9	89.1	1310	MICR66AA003
185	518/0.67	19.2	5.0	30.0	7/0.40	48.4	40/0.20	0.8	9.3	94.5	1480	MICR67AA003
240	672/0.67	21.8	5.0	32.6	7/0.40	52.8	40/0.20	0.8	9.9	101.4	1750	MICR68AA003
300	854/0.67	24.4	5.0	35.2	7/0.50	71.5	40/0.20	0.8	10.4	109.3	2120	MICR69AA003
Type 209.11												
25	209/0.40	7.2	7.6	23.4	7/0.25	23.7	24/0.20	0.8	8.1	75.6	750	MKCR60AA003
35	285/0.40	8.5	7.6	24.7	7/0.30	30.2	24/0.20	0.8	8.4	79.7	860	MKCR61AA003
50	380/0.40	10.0	7.6	26.2	7/0.30	31.7	40/0.20	0.8	8.7	83.6	960	MKCR62AA004
70	203/0.67	12.0	7.6	28.2	7/0.30	34.1	40/0.20	0.8	9.1	88.8	1110	MKCR63AA003
95	259/0.67	13.2	7.6	29.4	7/0.40	47.5	40/0.20	0.8	9.6	93.7	1290	MKCR64AA003
120	336/0.67	15.3	7.6	31.5	7/0.40	51.0	40/0.20	0.8	9.9	98.8	1460	MKCR65AA003
150	427/0.67	17.1	7.6	33.3	7/0.40	53.7	40/0.20	0.8	10.3	103.5	1640	MKCR66AA003
185	518/0.67	19.2	7.6	35.4	7/0.40	57.2	40/0.20	0.8	10.7	108.8	1830	MKCR67AA003

Type 210 1.1/1.1kV

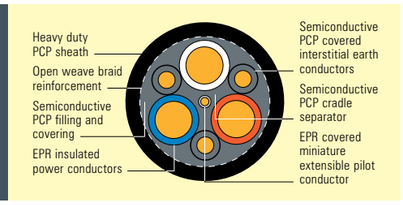




Copper screened cable for hand-held boring machines and drills. Contains a central pilot for earth continuity or for control.

	Power conductor				Core screen		Pilot conductor		Sheath			
Nominal conductor area	Strand size	Nominal conductor diameter	Insulation thickness	Nominal diameter over insulation	Strand size	Area of each screen	Strand size	Thickness of EPR covering	Thickness of sheath	Nominal overall diameter	Approx mass	Product code
mm^2	no/mm	mm	mm	mm	no/mm	mm^2	no/mm	mm	mm	mm	kg/100m	
Type 210												
1.5	30/0.25	1.5	1.4	4.4	7/0.25	5.2	24/0.20	0.8	3.0	23.7	80	MEDR54AA003
2.5	50/0.25	1.9	1.5	5.0	7/0.25	5.8	24/0.20	0.8	3.0	25.1	92	MEDR55AA003

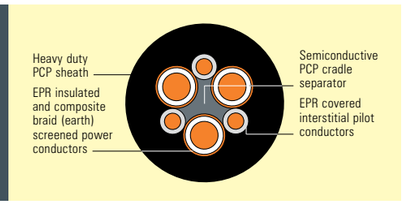
Type 275 1.1/1.1kV

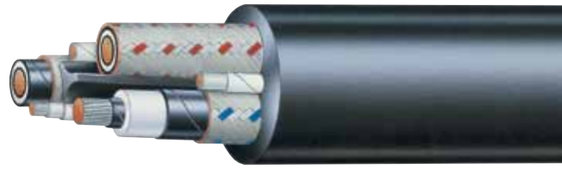


Overall semiconductive rubber screened cable for shuttle cars and pump cable. Earth cores designed to reduce instances of wire breaks during reeling while under tension. Cable includes one central pilot suitable for earth continuity monitoring.

	Power conductor				Earth conductors				Pilot conductor		Sheath		
Nominal conductor area	Strand size	Nominal conductor diameter	Insulation thickness	Nominal diameter over insulation	Strand size	Nominal conductor area	Thickness of SC PCP covering	Strand size	Thickness of EPR covering	Thickness including SC PCP layer	Nominal overall diameter	Approx mass	Product code
mm^2	no/mm	mm	mm	mm	no/mm	mm^2	mm	no/mm	mm	mm	mm	kg/100m	
Type 275													
16	126/0.40	5.7	1.6	9.0	60/0.30	4.2	1.0	24/0.20	0.8	3.8	30.2	145	MEIR59AA003
25	209/0.40	7.2	1.6	10.5	100/0.30	7.1	1.0	24/0.20	0.8	4.0	33.9	205	MEIR60AA003
35	285/0.40	8.5	1.6	12.1	140/0.30	9.9	1.0	24/0.20	0.8	4.3	37.9	260	MEIR61AA003
50	380/0.40	10.0	1.7	13.4	99/0.40	12.4	1.0	40/0.20	0.8	4.7	41.6	325	MEIR62AA003

Type 240 1.1 to 11kV

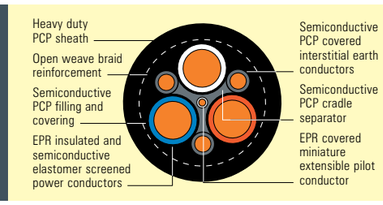




Copper screened cable for power supply. May be used as feeder to machinery or longwall supply. Cable contains 3 large pilots and large core screens provide for low resistance earthing.

	Power conductor				Core screen		Pilot conductor		Sheath			
Nominal conductor area	Strand size	Nominal conductor diameter	Insulation thickness	Nominal diameter over insulation	Strand size	Area of each screen	Strand size	Thickness of EPR covering	Thickness of sheath	Nominal overall diameter	Approx mass	Product code
mm^2	no/mm	mm	mm	mm	no/mm	mm^2	no/mm	mm	mm	mm	kg/100m	
Type 240.1												
6	84/0.30	3.4	1.5	6.5	7/0.25	7.2	18/0.30	1.0	3.8	30.0	135	MEFR57AA003
10	77/0.40	4.6	1.5	7.7	7/0.25	8.6	27/0.30	1.0	3.8	32.6	165	MEFR58AA003
16	126/0.40	5.7	1.6	9.0	7/0.25	9.6	42/0.30	1.0	4.0	35.8	205	MEFR59AA003
25	209/0.40	7.2	1.6	10.5	7/0.25	11.3	66/0.30	1.2	4.3	39.7	270	MEFR60AA003
35	285/0.40	8.5	1.6	11.8	7/0.25	12.4	90/0.30	1.2	4.6	43.1	325	MEFR61AA003
50	380/0.40	10.0	1.7	13.5	7/0.25	14.1	120/0.30	1.2	5.0	47.7	405	MEFR62AA003
70	203/0.67	12.0	1.8	16.0	7/0.25	16.5	39/0.67	1.2	5.4	53.9	540	MEFR63AA003
95	259/0.67	13.2	2.0	17.6	7/0.25	18.2	39/0.67	1.2	6.0	58.6	645	MEFR64AA003
120	336/0.67	15.3	2.1	20.0	7/0.25	20.3	42/0.67	1.4	6.4	64.4	780	MEFR65AA003
150	427/0.67	17.1	2.3	22.2	7/0.25	22.3	54/0.67	1.4	6.9	70.2	950	MEFR66AA003
185	518/0.67	19.2	2.5	24.7	7/0.30	30.2	63/0.67	1.4	7.4	77.4	1150	MEFR67AA003
240	672/0.67	21.8	2.8	27.9	7/0.30	33.6	77/0.67	1.6	8.2	86.0	1440	MEFR68AA003
300	854/0.67	24.4	3.0	30.9	7/0.40	50.1	98/0.67	1.6	8.8	95.1	1810	MEFR69AA003
Type 240.3												
16	126/0.40	5.7	3.0	12.5	7/0.25	13.1	42/0.30	1.4	5.3	46.2	305	MGFR59AA003
25	209/0.40	7.2	3.0	14.0	7/0.25	14.8	66/0.30	1.4	5.6	50.1	380	MGFR60AA003
35	285/0.40	8.5	3.0	15.3	7/0.25	15.8	90/0.30	1.4	5.9	53.5	445	MGFR61AA003
50	380/0.40	10.0	3.0	16.8	7/0.25	17.2	120/0.30	1.4	6.3	57.6	525	MGFR62AA003
70	203/0.67	12.0	3.0	18.8	7/0.25	18.6	39/0.67	1.4	6.6	62.5	660	MGFR63AA003
95	259/0.67	13.2	3.0	20.0	7/0.25	20.3	39/0.67	1.4	7.1	66.2	755	MGFR64AA003
120	336/0.67	15.3	3.0	22.1	7/0.30	27.2	42/0.67	1.6	7.4	72.0	915	MGFR65AA003
150	427/0.67	17.1	3.0	23.9	7/0.40	39.6	54/0.67	1.6	7.8	78.0	1120	MGFR66AA003
185	518/0.67	19.2	3.0	26.0	7/0.40	42.2	63/0.67	1.8	8.2	83.4	1290	MGFR67AA003
240	672/0.67	21.8	3.0	28.6	7/0.40	46.6	77/0.67	1.8	8.8	90.3	1560	MGFR68AA003
300	854/0.67	24.4	3.0	31.2	7/0.50	63.2	98/0.67	1.8	9.4	98.4	1920	MGFR69AA003
Type 240.6												
16	126/0.40	5.7	5.0	16.5	7/0.25	17.2	42/0.30	1.4	6.4	57.3	445	MIFR59AA003
25	209/0.40	7.2	5.0	18.0	7/0.25	18.6	66/0.30	1.4	6.7	61.2	525	MIFR60AA003
35	285/0.40	8.5	5.0	19.3	7/0.25	18.6	90/0.30	1.6	7.0	64.6	600	MIFR61AA003
50	380/0.40	10.0	5.0	20.8	7/0.25	21.3	120/0.30	1.6	7.3	68.5	690	MIFR62AA003
70	203/0.67	12.0	5.0	22.8	7/0.25	23.4	39/0.67	1.6	7.7	73.7	835	MIFR63AA003
95	259/0.67	13.2	5.0	24.0	7/0.30	29.2	39/0.67	1.6	8.1	77.8	965	MIFR64AA003
120	336/0.67	15.3	5.0	26.1	7/0.30	31.7	42/0.67	1.8	8.5	83.1	1120	MIFR65AA003
150	427/0.67	17.1	5.0	27.9	7/0.40	45.7	54/0.67	1.8	8.9	89.1	1350	MIFR66AA003
185	518/0.67	19.2	5.0	30.0	7/0.40	48.4	63/0.67	1.8	9.3	94.5	1530	MIFR67AA003
240	672/0.67	21.8	5.0	32.6	7/0.40	52.8	77/0.67	1.8	9.9	101.4	1810	MIFR68AA003
300	854/0.67	24.4	5.0	35.2	7/0.50	71.5	98/0.67	1.8	10.4	109.3	2190	MIFR69AA003
Type 240.11												
25	209/0.40	7.2	7.6	23.4	7/0.25	23.7	66/0.30	2.0	8.1	75.6	760	MKFR60AA003
35	285/0.40	8.5	7.6	24.7	7/0.30	30.2	90/0.30	2.0	8.4	79.7	870	MKFR61AA003
50	380/0.40	10.0	7.6	26.2	7/0.30	31.7	120/0.30	2.0	8.7	83.6	975	MKFR62AA003
70	203/0.67	12.0	7.6	28.2	7/0.30	34.1	39/0.67	2.0	9.1	88.8	1140	MKFR63AA003
95	259/0.67	13.2	7.6	29.4	7/0.40	47.5	39/0.67	2.0	9.6	93.7	1320	MKFR64AA003
120	336/0.67	15.3	7.6	31.5	7/0.40	51.0	42/0.67	2.2	9.9	98.8	1490	MKFR65AA003
150	427/0.67	17.1	7.6	33.3	7/0.40	53.7	54/0.67	2.2	10.3	103.5	1680	MKFR66AA003
185	518/0.67	19.2	7.6	35.4	7/0.40	57.2	63/0.67	2.2	10.7	108.8	1880	MKFR67AA003

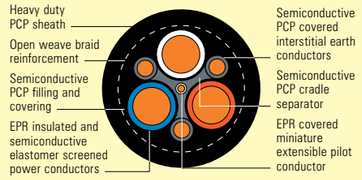
Type 241
1.1 to 11kV



Semiconductive screened cable for various uses, including main feeder cable for continuous miners, pump cable, and power supply cable. Overall semiconductive screen provides protective earth contact for any object breaching the sheath prior to contact with power conductors. Cable contains one central pilot suitable for earth continuity monitoring.

	Power conductor				Earth conductors			Pilot conductor		Sheath			
Nominal conductor area	Strand size	Nominal conductor diameter	Insulation thickness	Nominal diameter over insulation	Strand size	Nominal conductor area	Thickness of SC PCP covering	Strand size	Thickness of EPR covering	Thickness including SC PCP layer	Nominal overall diameter	Approx mass	Product code
mm^2	no/mm	mm	mm	mm	no/mm	mm^2	mm	no/mm	mm	mm	mm	kg/100m	
Type 241.1													
6	84/0.30	3.4	1.5	6.5	18/0.30	1.3	1.0	24/0.20	0.8	3.8	28.5	105	MEGR57AA003
10	77/0.40	4.6	1.5	7.7	27/0.30	1.9	1.0	24/0.20	0.8	3.8	31.1	130	MEGR58AA003
16	126/0.40	5.7	1.6	9.0	42/0.30	3.0	1.0	24/0.20	0.8	3.9	34.1	170	MEGR59AA003
25	209/0.40	7.2	1.6	10.5	66/0.30	4.7	1.0	24/0.20	0.8	4.2	37.9	225	MEGR60AA003
35	285/0.40	8.5	1.6	11.8	90/0.30	6.4	1.0	24/0.20	0.8	4.4	41.2	275	MEGR61AA003
50	380/0.40	10.0	1.7	13.5	120/0.30	8.5	1.0	40/0.20	0.8	4.9	45.9	350	MEGR62AA003
70	203/0.67	12.0	1.8	16.0	39/0.67	13.8	1.0	40/0.20	0.8	5.3	52.2	480	MEGR63AA003
95	259/0.67	13.2	2.0	17.6	39/0.67	13.8	1.0	40/0.20	0.8	5.8	56.7	570	MEGR64AA003
120	336/0.67	15.3	2.1	20.0	42/0.67	14.8	1.2	40/0.20	0.8	6.3	62.7	710	MEGR65AA003
150	427/0.67	17.1	2.3	22.2	54/0.67	19.0	1.2	40/0.20	0.8	6.7	68.3	865	MEGR66AA003
185	518/0.67	19.2	2.5	24.7	63/0.67	22.2	1.4	40/0.20	0.8	7.3	74.9	1030	MEGR67AA003
240	672/0.67	21.8	2.8	27.9	77/0.67	27.1	1.4	40/0.20	0.8	8.0	83.3	1300	MEGR68AA003
300	854/0.67	24.4	3.0	30.9	98/0.67	34.6	1.4	40/0.20	0.8	8.7	91.2	1600	MEGR69AA003
Type 241.3													
16	126/0.40	5.7	3.0	12.5	42/0.30	3.0	1.0	24/0.20	0.8	5.0	43.8	250	MGGR59AA003
25	209/0.40	7.2	3.0	14.0	66/0.30	4.7	1.0	24/0.20	0.8	5.3	47.7	315	MGGR60AA003
35	285/0.40	8.5	3.0	15.3	90/0.30	6.4	1.0	24/0.20	0.8	5.6	51.1	375	MGGR61AA003
50	380/0.40	10.0	3.0	16.8	120/0.30	8.5	1.2	40/0.20	0.8	6.0	55.2	455	MGGR62AA003
70	203/0.67	12.0	3.0	18.8	39/0.67	13.8	1.2	40/0.20	0.8	6.4	60.3	580	MGGR63AA003
95	259/0.67	13.2	3.0	20.0	48/0.67	16.9	1.2	40/0.20	0.8	6.8	63.8	675	MGGR64AA003
120	336/0.67	15.3	3.0	22.1	60/0.67	21.2	1.2	40/0.20	0.8	7.2	69.1	815	MGGR65AA003
150	427/0.67	17.1	3.0	23.9	77/0.67	27.1	1.2	40/0.20	0.8	7.6	73.8	965	MGGR66AA003
185	518/0.67	19.2	3.0	26.0	91/0.67	32.1	1.4	40/0.20	0.8	8.0	79.2	1130	MGGR67AA003
240	672/0.67	21.8	3.0	28.6	112/0.67	42.0	1.4	40/0.20	0.8	8.6	86.0	1380	MGGR68AA003
300	854/0.67	24.4	3.0	31.2	156/0.67	55.0	1.4	40/0.20	0.8	9.1	92.6	1660	MGGR69AA003
Type 241.6													
16	126/0.40	5.7	5.0	16.5	42/0.30	3.0	1.4	24/0.20	0.8	6.1	54.9	370	MIGR59AA003
25	209/0.40	7.2	5.0	18.0	66/0.30	4.7	1.4	24/0.20	0.8	6.4	58.8	445	MIGR60AA003
35	285/0.40	8.5	5.0	19.3	90/0.30	6.4	1.4	24/0.20	0.8	6.7	62.2	515	MIGR61AA003
50	380/0.40	10.0	5.0	20.8	120/0.30	8.5	1.4	40/0.20	0.8	7.1	66.2	600	MIGR62AA003
70	203/0.67	12.0	5.0	22.8	39/0.67	13.8	1.4	40/0.20	0.8	7.4	71.2	735	MIGR63AA003
95	259/0.67	13.2	5.0	24.0	48/0.67	16.9	1.4	40/0.20	0.8	7.9	74.8	845	MIGR64AA003
120	336/0.67	15.3	5.0	26.1	60/0.67	21.2	1.4	40/0.20	0.8	8.3	80.2	995	MIGR65AA003
150	427/0.67	17.1	5.0	27.9	77/0.67	27.1	1.4	40/0.20	0.8	8.6	84.6	1150	MIGR66AA003
185	518/0.67	19.2	5.0	30.0	91/0.67	32.1	1.4	40/0.20	0.8	9.0	90.0	1330	MIGR67AA003
240	672/0.67	21.8	5.0	32.6	119/0.67	42.0	1.4	40/0.20	0.8	9.6	96.8	1600	MIGR68AA003
300	854/0.67	24.4	5.0	35.2	156/0.67	55.0	1.4	40/0.20	0.8	10.2	103.6	1900	MIGR69AA003
Type 241.11													
25	209/0.40	7.2	7.6	23.4	66/0.30	4.7	1.8	24/0.20	0.8	7.8	73.2	655	MKGR60AA003
35	285/0.40	8.5	7.6	24.7	90/0.30	6.4	1.8	24/0.20	0.8	8.1	76.6	735	MKGR61AA003
50	380/0.40	10.0	7.6	26.2	120/0.30	8.5	1.8	40/0.20	0.8	8.5	80.6	830	MKGR62AA003
70	203/0.67	12.0	7.6	28.2	39/0.67	13.8	1.8	40/0.20	0.8	8.9	85.7	985	MKGR63AA003
95	259/0.67	13.2	7.6	29.4	48/0.67	16.9	1.8	40/0.20	0.8	9.3	89.1	1100	MKGR64AA003
120	336/0.67	15.3	7.6	31.5	60/0.67	21.2	1.8	40/0.20	0.8	9.7	94.4	1270	MKGR65AA003
150	427/0.67	17.1	7.6	33.3	77/0.67	27.1	1.8	40/0.20	0.8	10.0	98.9	1440	MKGR66HG003
185	518/0.67	19.2	7.6	35.4	91/0.67	32.1	1.8	40/0.20	0.8	10.4	104.2	1630	MKGR67AA003

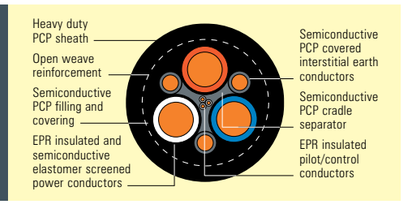
Type 241 Superflex
1.1 to 6.6kV



Similar uses as standard Type 241 except these cables are more flexible and have a smaller 'natural' bending radius. Ideal for use as monorail cable where cable loops will be narrower, thus allowing more space for other equipment and reducing opportunities for getting snagged. Cable contains one central pilot.

	Power conductor				Earth conductors			Pilot conductor		Sheath			
Nominal conductor area	Strand size	Nominal conductor diameter	Insulation thickness	Nominal diameter over insulation	Strand size	Nominal conductor area	Thickness of SC PCP covering	Strand size	Thickness of EPR covering	Thickness including SC PCP layer	Nominal overall diameter	Approx mass	Product code
mm^2	no/mm	mm	mm	mm	no/mm	mm^2	mm	no/mm	mm	mm	mm	kg/100m	
Type 241.1													
70	361/0.50	12.4	1.8	16.4	110/0.40	13.8	1.0	40/0.20	0.8	5.3	53.0	485	MEGE01AA003
95	475/0.50	14.2	2.0	18.6	85/0.40	10.7	1.0	40/0.20	0.8	5.8	58.8	595	MEGE03AA003
120	608/0.50	15.2	2.1	19.9	110/0.40	13.8	1.2	40/0.20	0.8	6.3	62.5	715	MEGE05GG003
150	740/0.50	16.5	2.3	21.6	135/0.40	17.0	1.2	40/0.20	0.8	6.7	67.0	840	MEGE41AA003
185	925/0.50	19.3	2.5	24.8	165/0.40	20.7	1.4	40/0.20	0.8	7.3	75.1	1040	MEGE06AA003
240	1221/0.50	22.9	2.8	29.0	216/0.40	27.1	1.4	40/0.20	0.8	8.0	85.7	1340	MEGE11AA003
Type 241.3													
70	361/0.50	12.4	3.0	19.2	110/0.40	13.8	1.2	40/0.20	0.8	6.4	61.2	590	MGGE01AA003
95	475/0.50	14.2	3.0	21.0	135/0.40	17.0	1.2	40/0.20	0.8	6.8	65.9	710	MGGE03AA003
120	608/0.50	15.2	3.0	22.0	165/0.40	20.7	1.2	40/0.20	0.8	7.2	68.9	820	MGGE05AA003
150	740/0.50	16.5	3.0	23.3	216/0.40	27.1	1.2	40/0.20	0.8	7.6	72.5	940	MGGE41AA003
185	925/0.50	19.3	3.0	26.1	252/0.40	31.7	1.4	40/0.20	0.8	8.0	79.4	1130	MGGE06AA003
240	1221/0.50	22.9	3.0	29.7	324/0.40	40.7	1.4	40/0.20	0.8	8.6	88.3	1420	MGGE11AA003
Type 241.6													
70	361/0.50	12.4	5.0	23.2	110/0.40	13.8	1.4	40/0.20	0.8	7.4	72.1	750	MIGE01GG003
95	475/0.50	14.2	5.0	25.0	135/0.40	17.0	1.4	40/0.20	0.8	7.9	77.0	885	MIGE03GG003
120	608/0.50	15.2	5.0	26.0	165/0.40	20.7	1.4	40/0.20	0.8	8.3	79.9	1000	MIGE05AA003
150	740/0.50	16.5	5.0	27.3	216/0.40	27.1	1.4	40/0.20	0.8	8.6	83.3	1130	MIGE41AA003
185	925/0.50	19.3	5.0	30.1	252/0.40	31.7	1.4	40/0.20	0.8	9.0	90.2	1330	MIGE06AA003
240	1221/0.50	22.9	5.0	33.7	324/0.40	40.7	1.4	40/0.20	0.8	9.6	99.1	1640	MIGE68AA003

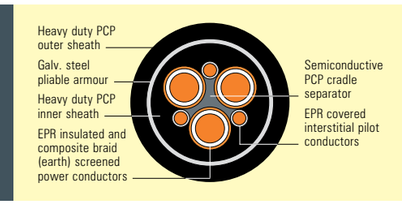
Type 245
1.1 to 6.6kV



Semiconductive screened and very flexible cable for use as longwall shearer cable. The very flexible conductor allows for much reduced bending radii so this cable will tolerate bending in the cable chain (often called 'Bretby'). Cable has 3 central pilots for earth continuity monitoring and for control circuits.

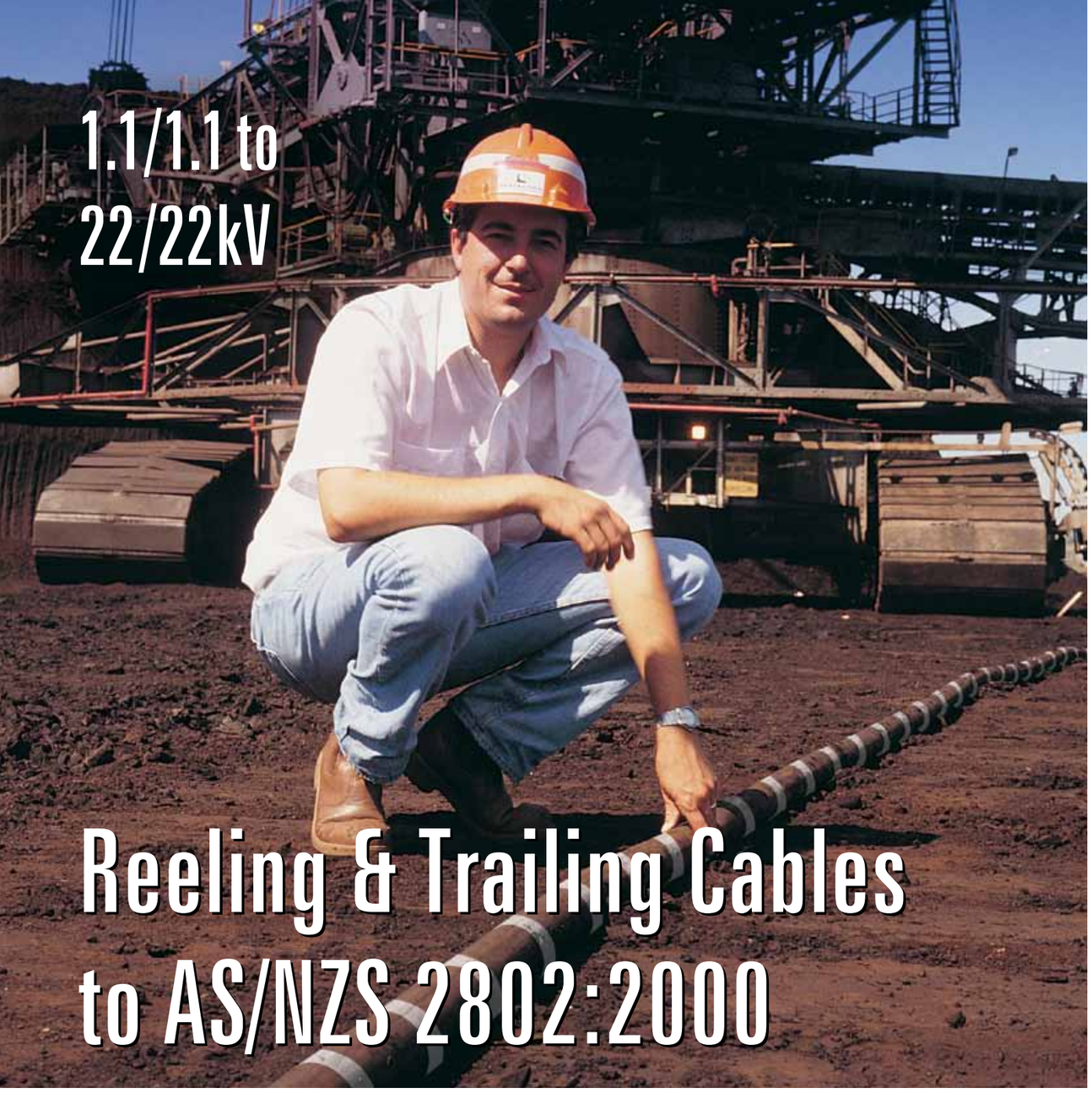
	Power conductor				Earth conductors			Pilot conductor		Sheath			
Nominal conductor area	Strand size	Nominal conductor diameter	Insulation thickness	Nominal diameter over area	Strand size	Nominal conductor area	Thickness of SC PCP covering	Strand size	Thickness of EPR covering	Thickness including SC PCP layer	Nominal overall diameter	Approx mass	Product code
mm^2	no/mm	mm	mm	mm	no/mm	mm^2	mm	no/mm	mm	mm	mm	kg/100m	
Type 245.1													
50	703/0.30	9.7	1.7	13.2	120/0.30	8.5	1.0	28/0.25	0.8	4.8	48.4	395	MEVE27AA003
70	988/0.30	11.6	1.8	15.6	180/0.30	12.7	1.0	28/0.25	0.8	5.1	53.9	505	MEVE26AA003
95	1332/0.30	13.9	2.0	18.3	150/0.30	10.6	1.0	28/0.25	0.8	5.6	60.4	630	MEVE28AA003
120	1702/0.30	15.7	2.1	20.4	195/0.30	13.8	1.2	28/0.25	0.8	6.0	65.5	765	MEVE32AA003
150	2146/0.30	17.6	2.3	22.7	235/0.30	16.6	1.2	28/0.25	0.8	6.3	70.5	915	MEVE29AA003
Type 245.3													
50	703/0.30	9.7	3.0	16.5	120/0.30	8.5	1.0	28/0.25	0.8	5.7	56.8	490	MGVE27AA003
70	988/0.30	11.6	3.0	18.4	180/0.30	12.7	1.2	28/0.25	0.8	6.0	61.2	600	MGVE26AA003
95	1332/0.30	13.9	3.0	20.7	235/0.30	16.6	1.2	28/0.25	0.8	6.4	66.6	735	MGVE28AA003
120	1702/0.30	15.7	3.0	22.5	300/0.30	21.2	1.2	28/0.25	0.8	6.7	71.0	870	MGVE32AA003
150	2146/0.30	17.6	3.0	24.4	375/0.30	26.5	1.2	28/0.25	0.8	7.0	75.2	1020	MGVE29AA003
Type 245.6													
50	703/0.30	9.7	5.0	20.5	120/0.30	8.5	1.4	28/0.25	0.8	6.7	67.2	635	MIVE27AA003
70	988/0.30	11.6	5.0	22.4	180/0.30	12.7	1.4	28/0.25	0.8	7.0	71.7	755	MIVE26AA003
95	1332/0.30	13.9	5.0	24.7	235/0.30	16.6	1.4	28/0.25	0.8	7.4	77.1	905	MIVE28AA003
120	1702/0.30	15.7	5.0	26.5	300/0.30	21.2	1.4	28/0.25	0.8	7.7	81.3	1050	MIVE32AA003
150	2146/0.30	17.6	5.0	28.4	375/0.30	26.5	1.4	28/0.25	0.8	8.0	85.8	1210	MIVE29AA003

Type 260
1.1 to 11kV



Copper screened and pliable armoured cable for use as supply cable where mechanical protection and strength is required. May be used as a feeder cable to machinery and suitable for sandmining operations. Cable has 3 large pilots.

	Power conductor				Core screen		Pilot conductor		Pliable armour			Sheath				
Nom cond area mm^2	Strand size no/mm	Nom cond diam mm	Ins thick mm	Nominal diam over insulation mm	Strand size no/mm	Area of each screen mm^2	Strand size no/mm	Thickness of EPR covering mm	Diam over bedding mm	Strand size no/mm	Diam over bedding mm	Thickness of inner sheath mm	Thickness of outer sheath mm	Nom overall diam mm	Approx mass kg/100m	Product code
Type 260.1																
6	84/0.30	3.4	1.5	6.5	7/0.25	7.2	18/0.30	1.0	26.2	7/0.45	28.9	2.0	3.8	36.9	230	MEHR57AA003
10	77/0.40	4.6	1.5	7.7	7/0.25	8.6	27/0.30	1.0	28.8	7/0.45	31.5	2.0	3.8	39.5	265	MEHR58AA003
16	126/0.40	5.7	1.6	9.0	7/0.25	9.6	42/0.30	1.0	32.7	7/0.90	38.1	2.5	4.0	46.5	410	MEHR59AA003
25	209/0.40	7.2	1.6	10.5	7/0.25	11.3	66/0.30	1.2	35.9	7/0.90	41.3	2.5	4.3	50.4	495	MEHR60AA003
35	285/0.40	8.5	1.6	11.8	7/0.25	12.4	90/0.30	1.2	38.7	7/0.90	44.1	2.5	4.6	53.8	565	MEHR61AA003
50	380/0.40	10.0	1.7	13.5	7/0.25	14.1	120/0.30	1.2	42.4	7/0.90	47.8	2.5	5.0	58.4	665	MEHR62AA003
70	203/0.67	12.0	1.8	16.0	7/0.25	16.5	39/0.67	1.2	47.8	7/0.90	53.2	2.5	5.4	64.6	835	MEHR63AA003
95	259/0.67	13.2	2.0	17.6	7/0.25	18.2	39/0.67	1.2	53.3	7/0.90	58.7	3.5	6.0	71.4	1000	MEHR64AA003
120	336/0.67	15.3	2.1	20.0	7/0.25	20.3	42/0.67	1.4	58.3	7/0.90	63.7	3.5	6.4	77.2	1180	MEHR65AA003
150	427/0.67	17.1	2.3	22.2	7/0.25	22.3	54/0.67	1.4	63.1	7/0.90	68.5	3.5	6.9	83.0	1370	MEHR66AA003
185	518/0.67	19.2	2.5	24.7	7/0.30	30.2	63/0.67	1.4	69.1	7/0.90	74.5	3.5	7.4	90.0	1610	MEHR67AA003
240	672/0.67	21.8	2.8	27.9	7/0.30	33.6	77/0.67	1.6	78.2	7/1.25	85.7	4.5	8.2	103.0	2150	MEHR68AA003
300	854/0.67	24.4	3.0	30.9	7/0.40	50.1	98/0.67	1.6	86.0	7/1.25	93.5	4.5	8.8	112.1	2590	MEHR69AA003
Type 260.3																
16	126/0.40	5.7	3.0	12.5	7/0.25	13.1	42/0.30	1.4	40.3	7/0.90	45.7	2.5	5.3	56.9	560	MGHR59AA003
25	209/0.40	7.2	3.0	14.0	7/0.25	14.8	66/0.30	1.4	43.5	7/0.90	48.9	2.5	5.6	60.8	650	MGHR60AA003
35	285/0.40	8.5	3.0	15.3	7/0.25	15.8	90/0.30	1.4	48.5	7/0.90	53.9	3.5	5.9	66.3	775	MGHR61AA003
50	380/0.40	10.0	3.0	16.8	7/0.25	17.2	120/0.30	1.4	51.7	7/0.90	57.1	3.5	6.3	70.4	875	MGHR62AA003
70	203/0.67	12.0	3.0	18.8	7/0.25	18.6	39/0.67	1.4	56.0	7/0.90	61.4	3.5	6.6	75.3	1030	MGHR63AA003
95	259/0.67	13.2	3.0	20.0	7/0.25	20.3	39/0.67	1.4	58.6	7/0.90	64.0	3.5	7.1	78.9	1150	MGHR64AA003
120	336/0.67	15.3	3.0	22.1	7/0.30	27.2	42/0.67	1.6	63.8	7/0.90	69.2	3.5	7.4	84.7	1340	MGHR65AA003
150	427/0.67	17.1	3.0	23.9	7/0.40	39.6	54/0.67	1.6	71.1	7/1.25	78.6	4.5	7.8	95.0	1770	MGHR66AA003
185	518/0.67	19.2	3.0	26.0	7/0.40	42.2	63/0.67	1.8	75.6	7/1.25	83.1	4.5	8.2	100.4	1990	MGHR67AA003
240	672/0.67	21.8	3.0	28.6	7/0.40	46.6	77/0.67	1.8	81.2	7/1.25	88.7	4.5	8.8	107.3	2300	MGHR68AA003
300	854/0.67	24.4	3.0	31.2	7/0.50	63.2	98/0.67	1.8	88.1	7/1.25	95.6	4.5	9.4	115.4	2710	MGHR69AA003
Type 260.6																
16	126/0.40	5.7	5.0	16.5	7/0.25	17.2	42/0.30	1.4	51.2	7/0.90	56.6	3.5	6.4	70.1	795	MIHR59AA003
25	209/0.40	7.2	5.0	18.0	7/0.25	18.6	66/0.30	1.4	54.5	7/0.90	59.9	3.5	6.7	74.0	895	MIHR60AA003
35	285/0.40	8.5	5.0	19.3	7/0.25	18.6	90/0.30	1.6	57.3	7/0.90	62.7	3.5	7.0	77.4	985	MIHR61AA003
50	380/0.40	10.0	5.0	20.8	7/0.25	21.3	120/0.30	1.6	60.5	7/0.90	65.9	3.5	7.3	81.2	1100	MIHR62AA003
70	203/0.67	12.0	5.0	22.8	7/0.25	23.4	39/0.67	1.6	66.9	7/1.25	74.4	4.5	7.7	90.7	1450	MIHR63AA003
95	259/0.67	13.2	5.0	24.0	7/0.30	29.2	39/0.67	1.6	70.2	7/1.25	77.7	4.5	8.1	94.8	1610	MIHR64AA003
120	336/0.67	15.3	5.0	26.1	7/0.30	31.7	42/0.67	1.8	74.7	7/1.25	82.2	4.5	8.5	100.2	1800	MIHR65AA003
150	427/0.67	17.1	5.0	27.9	7/0.40	45.7	54/0.67	1.8	79.8	7/1.25	87.3	4.5	8.9	106.2	2080	MIHR66AA003
185	518/0.67	19.2	5.0	30.0	7/0.40	48.4	63/0.67	1.8	84.4	7/1.25	91.9	4.5	9.3	111.5	2300	MIHR67AA003
240	672/0.67	21.8	5.0	32.6	7/0.40	52.8	77/0.67	1.8	90.0	7/1.25	97.5	4.5	9.9	118.4	2630	MIHR68AA003
300	854/0.67	24.4	5.0	35.2	7/0.50	71.5	98/0.67	1.8	96.9	7/1.25	104.4	4.5	10.4	126.3	3060	MIHR69AA003
Type 260.11																
25	209/0.40	7.2	7.6	23.4	7/0.25	23.7	66/0.30	2.0	68.0	7/1.25	75.5	4.5	8.1	92.7	1380	MKHR60AA003
35	285/0.40	8.5	7.6	24.7	7/0.30	30.2	90/0.30	2.0	71.5	7/1.25	79.0	4.5	8.4	96.7	1530	MKHR61AA003
50	380/0.40	10.0	7.6	26.2	7/0.30	31.7	120/0.30	2.0	74.7	7/1.25	82.2	4.5	8.7	100.6	1660	MKHR62AA003
70	203/0.67	12.0	7.6	28.2	7/0.30	34.1	39/0.67	2.0	79.0	7/1.25	86.5	4.5	9.1	105.8	1860	MKHR63AA003
95	259/0.67	13.2	7.6	29.4	7/0.40	47.5	39/0.67	2.0	82.9	7/1.25	90.4	4.5	9.6	110.7	2080	MKHR64AA003
120	336/0.67	15.3	7.6	31.5	7/0.40	51.0	42/0.67	2.2	87.4	7/1.25	94.9	4.5	9.9	115.8	2290	MKHR65AA003
150	427/0.67	17.1	7.6	33.3	7/0.40	53.7	54/0.67	2.2	91.3	7/1.25	98.8	4.5	10.3	120.5	2510	MKHR66AA003
185	518/0.67	19.2	7.6	35.4	7/0.40	57.2	63/0.67	2.2	95.8	7/1.25	103.3	4.5	10.7	125.9	2750	MKHR67AA003



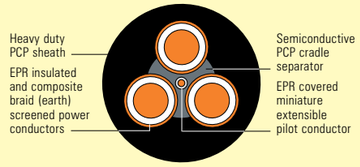
1.1/1.1 to 22/22kV

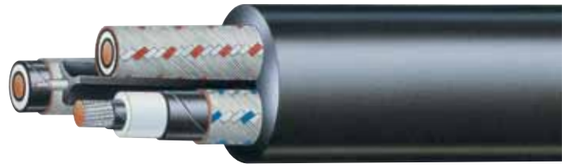
Reeling & Trailing Cables to AS/NZS 2802:2000

Construction Reeling and trailing cables manufactured to AS/NZS 2802 are also robust flexible cables, but are primarily designed for other than underground coal mine applications. These comprise two categories of cable – Class 1, which (to enhance general handling characteristics) are designed with thinner insulation and sheath when compared with equivalent size and voltage of Class 2 cables.

The reeling and trailing cables to the two Australian standards (1802 and 2802) are equal to, and in many cases surpass the most stringent known international standards.

Type 409
1.1 to 22kV

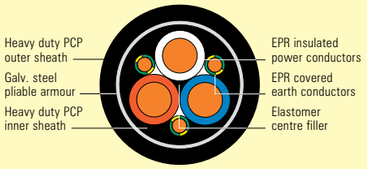




Copper screened cable for use as a flexible feeder to machinery. More suited as a trailing cable, rather than for reeling. Smaller cables used for drills and hand tools and equipment. Larger cables ideal for power supply to draglines, shovels and drills. Cable includes central semiconductive cradle for support and protection of power cores. Contains a central pilot.

	Power conductor				Core screen		Pilot conductors		Sheath			
Nominal conductor area mm^2	Strand size no/mm	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size no/mm	Area of each screen mm^2	Strand size no/mm	Thickness of EPR covering mm	Thickness mm	Nominal overall diameter mm	Approx mass kg/100m	Product code
Type 409.1 – Class 2												
6	84/0.30	3.4	1.5	6.5	7/0.25	7.2	24/0.20	0.8	3.8	30.0	130	MELR57AA003
10	77/0.40	4.6	1.5	7.7	7/0.25	8.6	24/0.20	0.8	3.8	32.6	160	MELR58AA003
16	126/0.40	5.7	1.6	9.0	7/0.25	9.6	24/0.20	0.8	4.0	35.8	200	MELR59AA003
25	209/0.40	7.2	1.6	10.5	7/0.25	11.3	24/0.20	0.8	4.3	39.7	260	MELR60AA003
35	285/0.40	8.5	1.6	11.8	7/0.25	12.4	24/0.20	0.8	4.6	43.1	310	MELR61AA003
50	380/0.40	10.0	1.7	13.5	7/0.25	14.1	40/0.20	0.8	5.0	47.7	385	MELR62AA003
70	203/0.67	12.0	1.8	16.0	7/0.25	16.5	40/0.20	0.8	5.4	53.9	510	MELR63AA003
95	259/0.67	13.2	2.0	17.6	7/0.30	21.8	40/0.20	0.8	6.0	59.3	630	MELR64AA003
120	336/0.67	15.3	2.1	20.0	7/0.30	24.7	40/0.20	0.8	6.4	65.1	770	MELR65AA003
150	427/0.67	17.1	2.3	22.2	7/0.40	36.1	40/0.20	0.8	6.9	72.1	975	MELR66AA003
185	518/0.67	19.2	2.5	24.7	7/0.40	40.5	40/0.20	0.8	7.4	78.6	1160	MELR67AA003
240	672/0.67	21.8	2.8	27.9	7/0.50	57.7	40/0.20	0.8	8.2	88.6	1490	MELR68AA003
300	854/0.67	24.4	3.0	30.9	7/0.50	63.2	40/0.20	0.8	8.8	96.3	1800	MELR69AA003
Type 409.3 – Class 2												
16	126/0.40	5.7	3.0	12.5	7/0.25	13.1	24/0.20	0.8	5.3	46.2	300	MGLR59AA003
25	209/0.40	7.2	3.0	14.0	7/0.25	14.8	24/0.20	0.8	5.6	50.1	370	MGLR60AA003
35	285/0.40	8.5	3.0	15.3	7/0.25	15.8	24/0.20	0.8	5.9	53.5	430	MGLR61AA003
50	380/0.40	10.0	3.0	16.8	7/0.25	17.2	40/0.20	0.8	6.3	57.6	510	MGLR62AA003
70	203/0.67	12.0	3.0	18.8	7/0.25	18.6	40/0.20	0.8	6.6	62.5	625	MGLR63AA003
95	259/0.67	13.2	3.0	20.0	7/0.25	20.3	40/0.20	0.8	7.1	66.2	725	MGLR64AA003
120	336/0.67	15.3	3.0	22.1	7/0.30	27.2	40/0.20	0.8	7.4	72.0	880	MGLR65AA003
150	427/0.67	17.1	3.0	23.9	7/0.40	39.6	40/0.20	0.8	7.8	78.0	1080	MGLR66AA003
185	518/0.67	19.2	3.0	26.0	7/0.40	42.2	40/0.20	0.8	8.2	83.4	1250	MGLR67AA003
240	672/0.67	21.8	3.0	28.6	7/0.40	46.6	40/0.20	0.8	8.8	90.3	1500	MGLR68AA003
300	854/0.67	24.4	3.0	31.2	7/0.50	63.2	40/0.20	0.8	9.4	98.4	1840	MGLR69AA003
Type 409.6 – Class 2												
16	126/0.40	5.7	5.0	16.5	7/0.25	17.2	24/0.20	0.8	6.4	57.3	440	MILR59AA003
25	209/0.40	7.2	5.0	18.0	7/0.25	18.6	24/0.20	0.8	6.7	61.2	515	MILR60AA003
35	285/0.40	8.5	5.0	19.3	7/0.25	18.6	24/0.20	0.8	7.0	64.6	585	MILR61AA003
50	380/0.40	10.0	5.0	20.8	7/0.25	21.3	40/0.20	0.8	7.3	68.5	670	MILR62AA003
70	203/0.67	12.0	5.0	22.8	7/0.25	23.4	40/0.20	0.8	7.7	73.7	805	MILR63CF003
95	259/0.67	13.2	5.0	24.0	7/0.30	29.2	40/0.20	0.8	8.1	77.8	935	MILR64AA003
120	336/0.67	15.3	5.0	26.1	7/0.30	31.7	40/0.20	0.8	8.5	83.1	1090	MILR65AA003
150	427/0.67	17.1	5.0	27.9	7/0.40	45.7	40/0.20	0.8	8.9	89.1	1310	MILR66AA003
185	518/0.67	19.2	5.0	30.0	7/0.40	48.4	40/0.20	0.8	9.3	94.5	1480	MILR67AA003
240	672/0.67	21.8	5.0	32.6	7/0.40	52.8	40/0.20	0.8	9.9	101.4	1750	MILR68AA003
300	854/0.67	24.4	5.0	35.2	7/0.50	71.5	40/0.20	0.8	10.4	109.3	2120	MILR69AA003
Type 409.11 – Class 2												
25	209/0.40	7.2	7.6	23.4	7/0.25	23.7	24/0.20	0.8	8.1	75.6	750	MKLR60AA003
35	285/0.40	8.5	7.6	24.7	7/0.30	30.2	24/0.20	0.8	8.4	79.7	860	MKLR61AA003
50	380/0.40	10.0	7.6	26.2	7/0.30	31.7	40/0.20	0.8	8.7	83.6	960	MKLR62AA003
70	203/0.67	12.0	7.6	28.2	7/0.30	34.1	40/0.20	0.8	9.1	88.8	1110	MKLR63AA003
95	259/0.67	13.2	7.6	29.4	7/0.40	47.5	40/0.20	0.8	9.6	93.7	1290	MKLR64AA003
120	336/0.67	15.3	7.6	31.5	7/0.40	51.0	40/0.20	0.8	9.9	98.8	1460	MKLR65AA003
150	427/0.67	17.1	7.6	33.3	7/0.40	53.7	40/0.20	0.8	10.3	103.5	1640	MKLR66AA003
185	518/0.67	19.2	7.6	35.4	7/0.40	57.2	40/0.20	0.8	10.7	108.8	1830	MKLR67AA003
Type 409.22 – Class 2												
35	285/0.40	8.5	10.5	32.6	7/0.40	55.4	24/0.20	0.8	10.0	105.0	1410	MMLR61AA003
50	380/0.40	10.0	10.5	34.1	7/0.40	58.1	40/0.20	0.8	10.3	108.9	1530	MMLR62AA003
70	203/0.67	12.0	10.5	36.1	7/0.40	60.7	40/0.20	0.8	10.7	114.0	1710	MMLR63AA003

Type 412
1.1/1.1kV

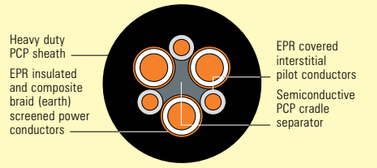


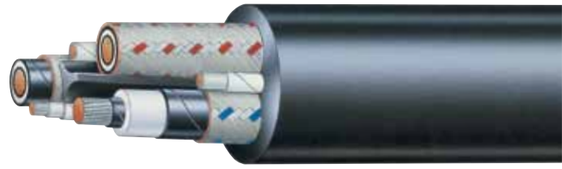
Unscreened cable with green/yellow earths and pliable armour for mechanical protection. Cable may be used in applications where damage is likely and armour can reduce cases of costly downtime. Suitable for use as a feeder cable in sand mining operations.

	Power conductors				Earth conductors			Pliable armour			Sheath				
Nom cond area mm^2	Strand size no/mm	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size no/mm	Nom cond area mm^2	Thick of EPR covering mm	Diameter over bedding mm	Strand size no/mm	Diameter over armour mm	Thickness of inner sheath mm	Thickness of outer sheath mm	Nominal overall diameter mm	Approx mass kg/100m	Product code
Type 412.1 – Class 2															
35	285/0.40	8.5	1.6	11.8	81/0.30	5.7	0.6	30.8	7/0.90	36.2	2.5	4.0	44.6	415	MEMR61AA003
50	380/0.40	10.0	1.7	13.5	120/0.30	8.5	0.8	34.5	7/0.90	39.9	2.5	4.4	49.2	500	MEMR62AA003
70	203/0.67	12.0	1.8	16.0	39/0.67	13.8	0.8	39.8	7/0.90	45.2	2.5	4.8	55.4	655	MEMR63AA003
95	259/0.67	13.2	2.0	17.6	48/0.67	16.9	0.8	43.3	7/0.90	48.7	2.5	5.4	60.1	775	MEMR64AA003
120	336/0.67	15.3	2.1	20.0	60/0.67	21.2	1.0	50.4	7/0.90	55.8	3.5	5.8	68.1	975	MEMR65AA003
150	427/0.67	17.1	2.3	22.2	77/0.67	27.1	1.0	55.1	7/0.90	60.5	3.5	6.3	73.8	1150	MEMR66AA003
185	518/0.67	19.2	2.5	24.7	91/0.67	32.1	1.0	60.5	7/0.90	65.9	3.5	6.8	80.2	1360	MEMR67AA003
240	672/0.67	21.8	2.8	27.9	119/0.67	42.0	1.2	67.5	7/0.90	72.9	3.5	7.5	88.7	1670	MEMR68AA003
300	854/0.67	24.4	3.0	30.9	156/0.67	55.0	1.2	76.1	7/1.25	83.6	4.5	8.2	100.9	2200	MEMR69AA003

*Olex can also supply screened Type 412 for 3.3, 6.6, 11 and 22kV applications. Please contact your Olex representative.

Type 440
1.1 to 22kV

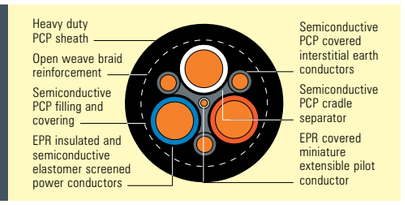




Copper screened cable for power supply to machinery and equipment. Cable includes 3 large pilots and a central semiconductive cradle for support and protection of power cores.

	Power conductor				Core screen		Pilot conductor		Sheath			
Nominal conductor area mm^2	Strand size no/mm	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size no/mm	Area of each screen mm^2	Strand size no/mm	Thickness of EPR covering mm	Thickness mm	Nominal overall diameter mm	Approx mass kg/100m	Product code
Type 440.1 – Class 2												
6	84/0.30	3.4	1.5	6.5	7/0.25	7.2	18/0.30	1.0	3.8	30.0	135	MEOR57AA003
10	77/0.40	4.6	1.5	7.7	7/0.25	8.6	27/0.30	1.0	3.8	32.6	165	MEOR58AA003
16	126/0.40	5.7	1.6	9.0	7/0.25	9.6	42/0.30	1.0	4.0	35.8	205	MEOR59AA003
25	209/0.40	7.2	1.6	10.5	7/0.25	11.3	66/0.30	1.2	4.3	39.7	270	MEOR60AA003
35	285/0.40	8.5	1.6	11.8	7/0.25	12.4	90/0.30	1.2	4.6	43.1	325	MEOR61AA003
50	380/0.40	10.0	1.7	13.5	7/0.25	14.1	120/0.30	1.2	5.0	47.7	405	MEOR62AA003
70	203/0.67	12.0	1.8	16.0	7/0.25	16.5	39/0.67	1.2	5.4	53.9	540	MEOR63AA003
95	259/0.67	13.2	2.0	17.6	7/0.30	21.8	39/0.67	1.2	6.0	59.3	660	MEOR64AA003
120	336/0.67	15.3	2.1	20.0	7/0.30	24.7	42/0.67	1.4	6.4	65.1	805	MEOR65AA003
150	427/0.67	17.1	2.3	22.2	7/0.40	36.1	54/0.67	1.4	6.9	72.1	1020	MEOR66AA003
185	518/0.67	19.2	2.5	24.7	7/0.40	40.5	63/0.67	1.4	7.4	78.6	1200	MEOR67AA003
240	672/0.67	21.8	2.8	27.9	7/0.50	57.7	77/0.67	1.6	8.2	88.6	1550	MEOR68AA003
300	854/0.67	24.4	3.0	30.9	7/0.50	63.2	98/0.67	1.6	8.8	96.3	1870	MEOR69AA003
Type 440.3 – Class 2												
16	126/0.40	5.7	3.0	12.5	7/0.25	13.1	42/0.30	1.4	5.3	46.2	305	MGOR59AA003
25	209/0.40	7.2	3.0	14.0	7/0.25	14.8	66/0.30	1.4	5.6	50.1	380	MGOR60AA003
35	285/0.40	8.5	3.0	15.3	7/0.25	15.8	90/0.30	1.4	5.9	53.5	445	MGOR61AA003
50	380/0.40	10.0	3.0	16.8	7/0.25	17.2	120/0.30	1.4	6.3	57.6	525	MGOR62AA003
70	203/0.67	12.0	3.0	18.8	7/0.25	18.6	39/0.67	1.4	6.6	62.5	660	MGOR63AA003
95	259/0.67	13.2	3.0	20.0	7/0.25	20.3	39/0.67	1.6	7.1	66.2	755	MGOR64AA003
120	336/0.67	15.3	3.0	22.1	7/0.30	27.2	42/0.67	1.6	7.4	72.0	915	MGOR65AA003
150	427/0.67	17.1	3.0	23.9	7/0.40	39.6	54/0.67	1.6	7.8	78.0	1120	MGOR66AA003
185	518/0.67	19.2	3.0	26.0	7/0.40	42.2	63/0.67	1.6	8.2	83.4	1290	MGOR67AA003
240	672/0.67	21.8	3.0	28.6	7/0.40	46.6	77/0.67	1.6	8.8	90.3	1560	MGOR68AA003
300	854/0.67	24.4	3.0	31.2	7/0.50	63.2	98/0.67	1.6	9.4	98.4	1920	MGOR69AA003
Type 440.6 – Class 2												
16	126/0.40	5.7	5.0	16.5	7/0.25	17.2	42/0.30	1.4	6.4	57.3	445	MIOR59AA003
25	209/0.40	7.2	5.0	18.0	7/0.25	18.6	66/0.30	1.6	6.7	61.2	525	MIOR60AA003
35	285/0.40	8.5	5.0	19.3	7/0.25	18.6	90/0.30	1.6	7.0	64.6	600	MIOR61AA003
50	380/0.40	10.0	5.0	20.8	7/0.25	21.3	120/0.30	1.6	7.3	68.5	690	MIOR62AA003
70	203/0.67	12.0	5.0	22.8	7/0.25	23.4	39/0.67	1.6	7.7	73.7	835	MIOR63AA003
95	259/0.67	13.2	5.0	24.0	7/0.30	29.2	39/0.67	1.8	8.1	77.8	965	MIOR64AA003
120	336/0.67	15.3	5.0	26.1	7/0.30	31.7	42/0.67	1.8	8.5	83.1	1120	MIOR65AA003
150	427/0.67	17.1	5.0	27.9	7/0.40	45.7	54/0.67	1.8	8.9	89.1	1350	MIOR66AA003
185	518/0.67	19.2	5.0	30.0	7/0.40	48.4	63/0.67	1.8	9.3	94.5	1530	MIOR67AA003
240	672/0.67	21.8	5.0	32.6	7/0.40	52.8	77/0.67	1.8	9.9	101.4	1810	MIOR68AA003
300	854/0.67	24.4	5.0	35.2	7/0.50	71.5	98/0.67	1.8	10.4	109.3	2190	MIOR69AA003
Type 440.11 – Class 2												
25	209/0.40	7.2	7.6	23.4	7/0.25	23.7	66/0.30	2.0	8.1	75.6	760	MKOR60AA003
35	285/0.40	8.5	7.6	24.7	7/0.30	30.2	90/0.30	2.0	8.4	79.7	870	MKOR61AA003
50	380/0.40	10.0	7.6	26.2	7/0.30	31.7	120/0.30	2.0	8.7	83.6	975	MKOR62AA003
70	203/0.67	12.0	7.6	28.2	7/0.30	34.1	39/0.67	2.0	9.1	88.8	1140	MKOR63AA003
95	259/0.67	13.2	7.6	29.4	7/0.40	47.5	39/0.67	2.2	9.6	93.7	1320	MKOR64AA003
120	336/0.67	15.3	7.6	31.5	7/0.40	51.0	42/0.67	2.2	9.9	98.8	1490	MKOR65AA003
150	427/0.67	17.1	7.6	33.3	7/0.40	53.7	54/0.67	2.2	10.3	103.5	1680	MKOR66AA003
185	518/0.67	19.2	7.6	35.4	7/0.40	57.2	63/0.67	2.2	10.7	108.8	1880	MKOR67AA003
Type 440.22 – Class 2												
35	285/0.40	8.5	10.5	32.6	7/0.40	55.4	90/0.30	2.5	10.0	105.0	1430	MMOR61AA003
50	380/0.40	10.0	10.5	34.1	7/0.40	58.1	120/0.30	2.5	10.3	108.9	1550	MMOR62AA003

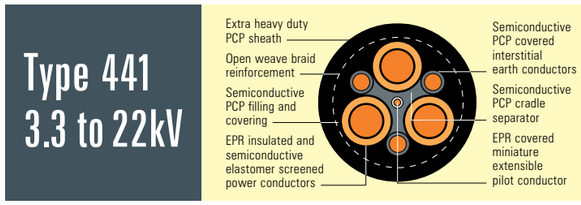
Type 441 1.1/1.1kV



Semiconductive screened cable for many uses, suitable for trailing and also suitable for reeling applications. Cables noted 1.1/1.1kV are Class 2 cables. All Type 441 cables have one central pilot and a semiconductive cradle supporting and protecting the power cores, which makes these cables less likely to be damaged from crushing and squashing.

	Power conductor				Earth conductors			Pilot conductors		Sheath			
Nominal conductor area	Strand size	Nominal conductor diameter	Insulation thickness	Nominal diameter over insulation	Strand size	Nominal conductor area	Thickness of SC PCP covering	Strand size	Thickness of EPR covering	Thickness including SC PCP layer	Nominal overall diameter	Approx mass	Product code
mm^2	no/mm	mm	mm	mm	mm	mm^2	mm	no/mm	mm	mm	mm	kg/100m	
Type 441.1 – Class 2													
6	84/0.30	3.4	1.5	6.5	33/0.30	2.3	0.8	24/0.20	0.8	3.8	28.5	110	MEPR57AA003
10	77/0.40	4.6	1.5	7.7	51/0.30	3.6	0.8	24/0.20	0.8	3.8	31.1	135	MEPR58AA003
16	126/0.40	5.7	1.6	9.0	81/0.30	5.7	1.0	24/0.20	0.8	3.9	34.1	175	MEPR59AA003
25	209/0.40	7.2	1.6	10.5	81/0.30	5.7	1.0	24/0.20	0.8	4.2	37.9	230	MEPR60AA003
35	285/0.40	8.5	1.6	11.8	81/0.30	5.7	1.0	24/0.20	0.8	4.4	41.2	275	MEPR61AA003
50	380/0.40	10.0	1.7	13.5	120/0.30	8.5	1.0	40/0.20	0.8	4.9	45.9	350	MEPR62AA003
70	203/0.67	12.0	1.8	16.0	39/0.67	13.8	1.0	40/0.20	0.8	5.3	52.2	480	MEPR63AA003
95	259/0.67	13.2	2.0	17.6	48/0.67	16.9	1.0	40/0.20	0.8	5.8	56.7	580	MEPR64AA003
120	336/0.67	15.3	2.1	20.0	60/0.67	21.2	1.0	40/0.20	0.8	6.3	62.7	725	MEPR65AA003
150	427/0.67	17.1	2.3	22.2	77/0.67	27.1	1.2	40/0.20	0.8	6.7	68.3	880	MEPR66AA003
185	518/0.67	19.2	2.5	24.7	91/0.67	32.1	1.2	40/0.20	0.8	7.3	74.9	1050	MEPR67AA003
240	672/0.67	21.8	2.8	27.9	119/0.67	42.0	1.2	40/0.20	0.8	8.0	83.3	1330	MEPR68AA003
300	854/0.67	24.4	3.0	30.9	156/0.67	55.0	1.4	40/0.20	0.8	8.7	91.2	1630	MEPR69AA003

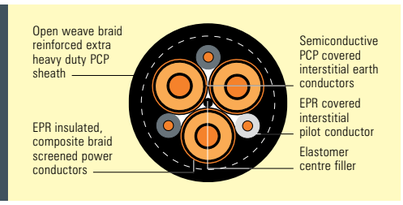
Type 441 3.3 to 22kV



Semiconductive screened cable for many uses, suitable for trailing applications for draglines, shovels, and drills and also suitable for reeling applications. Cables rated 3.3 to 22kV are Class 1 cables. All Type 441 cables have one central pilot and a semiconductive cradle supporting and protecting the power cores, which makes these cables less likely to be damaged from crushing and squashing.

	Power conductor				Earth conductors			Pilot conductor		Sheath			
Nominal conductor area	Strand size	Nominal conductor diameter	Insulation thickness	Nominal diameter over insulation	Strand size	Nominal conductor area	Thickness of SC PCP covering	Strand size	Thickness of EPR covering	Thickness including SC PCP layer	Nominal overall diameter	Approx mass	Product code
mm^2	no/mm	mm	mm	mm	no/mm	mm^2	mm	no/mm	mm	mm	mm	kg/100m	
Type 441.3 – Class 1													
16	126/0.40	5.7	2.2	12.4	81/0.30	5.7	1.0	24/0.20	0.8	4.6	43.0	240	MGPR59AA003
25	209/0.40	7.2	2.2	13.9	81/0.30	5.7	1.0	24/0.20	0.8	4.9	46.9	305	MGPR60AA003
35	285/0.40	8.5	2.2	15.2	81/0.30	5.7	1.0	24/0.20	0.8	5.2	50.3	360	MGPR61AA003
50	380/0.40	10.0	2.4	17.1	120/0.30	8.5	1.0	40/0.20	0.8	5.7	55.5	445	MGPR62AA003
70	203/0.67	12.0	2.4	19.1	39/0.67	13.8	1.0	40/0.20	0.8	6.0	60.4	570	MGPR63AA003
95	259/0.67	13.2	2.4	20.3	48/0.67	16.9	1.2	40/0.20	0.8	6.4	63.6	660	MGPR64AA003
120	336/0.67	15.3	2.4	22.4	60/0.67	21.2	1.2	40/0.20	0.8	6.5	68.6	795	MGPR65AA003
150	427/0.67	17.1	2.4	24.2	77/0.67	27.1	1.2	40/0.20	0.8	6.6	72.7	930	MGPR66AA003
185	518/0.67	19.2	2.4	26.3	91/0.67	32.1	1.4	40/0.20	0.8	6.7	77.4	1080	MGPR67AA003
240	672/0.67	21.8	2.4	28.9	119/0.67	42.0	1.4	40/0.20	0.8	6.9	83.4	1310	MGPR68AA003
300	854/0.67	24.4	2.4	31.5	156/0.67	55.0	1.4	40/0.20	0.8	7.0	89.2	1570	MGPR69AA003
Type 441.6 – Class 1													
16	126/0.40	5.7	3.0	14.0	81/0.30	5.7	1.0	24/0.20	0.8	5.0	47.4	285	MIPR59AA003
25	209/0.40	7.2	3.0	15.5	81/0.30	5.7	1.0	24/0.20	0.8	5.3	51.2	350	MIPR60AA003
35	285/0.40	8.5	3.0	16.8	81/0.30	5.7	1.0	24/0.20	0.8	5.6	54.6	405	MIPR61AA003
50	380/0.40	10.0	3.0	18.3	120/0.30	8.5	1.2	40/0.20	0.8	6.0	58.7	485	MIPR62AA003
70	203/0.67	12.0	3.0	20.3	39/0.67	13.8	1.2	40/0.20	0.8	6.3	63.7	615	MIPR63AA003
95	259/0.67	13.2	3.0	21.5	48/0.67	16.9	1.2	40/0.20	0.8	6.4	66.5	700	MIPR64AA003
120	336/0.67	15.3	3.0	23.6	60/0.67	21.2	1.2	40/0.20	0.8	6.6	71.4	835	MIPR65AA003
150	427/0.67	17.1	3.0	25.4	77/0.67	27.1	1.2	40/0.20	0.8	6.7	75.5	975	MIPR66AA003
185	518/0.67	19.2	3.0	27.5	91/0.67	32.1	1.4	40/0.20	0.8	6.8	80.3	1130	MIPR67AA003
240	672/0.67	21.8	3.0	30.1	119/0.67	42.0	1.4	40/0.20	0.8	7.0	86.2	1360	MIPR68AA003
300	854/0.67	24.4	3.0	32.7	156/0.67	55.0	1.4	40/0.20	0.8	7.1	92.0	1620	MIPR69AA003
Type 441.11 – Class 1													
25	209/0.40	7.2	5.0	19.6	81/0.30	5.7	1.2	24/0.20	0.8	6.3	62.2	480	MKPR60AA003
35	285/0.40	8.5	5.0	20.9	81/0.30	5.7	1.4	24/0.20	0.8	6.4	65.2	540	MKPR61AA003
50	380/0.40	10.0	5.0	22.4	120/0.30	8.5	1.4	40/0.20	0.8	6.5	68.6	615	MKPR62AA003
70	203/0.67	12.0	5.0	24.4	39/0.67	13.8	1.4	40/0.20	0.8	6.6	73.1	745	MKPR63AA003
95	259/0.67	13.2	5.0	25.6	48/0.67	16.9	1.4	40/0.20	0.8	6.8	76.2	845	MKPR64AA003
120	336/0.67	15.3	5.0	27.7	60/0.67	21.2	1.4	40/0.20	0.8	6.9	80.9	985	MKPR65AA003
150	427/0.67	17.1	5.0	29.5	77/0.67	27.1	1.4	40/0.20	0.8	7.0	85.0	1130	MKPR66AA003
185	518/0.67	19.2	5.0	31.6	91/0.67	32.1	1.4	40/0.20	0.8	7.1	89.6	1290	MKPR67AA003
240	672/0.67	21.8	5.0	34.2	119/0.67	42.0	1.4	40/0.20	0.8	7.3	95.7	1540	MKPR68AA003
Type 441.22 – Class 1													
35	285/0.40	8.5	7.6	26.3	81/0.30	5.7	1.8	24/0.20	0.8	6.9	77.9	730	MMPR61AA003
50	380/0.40	10.0	7.6	27.8	120/0.30	8.5	1.8	40/0.20	0.8	7.0	81.4	815	MMPR62AA003
70	203/0.67	12.0	7.6	29.8	39/0.67	13.8	1.8	40/0.20	0.8	7.1	85.8	955	MMPR63AA003
95	259/0.67	13.2	7.6	31.0	48/0.67	16.9	1.8	40/0.20	0.8	7.2	88.6	1060	MMPR64AA003
120	336/0.67	15.3	7.6	33.1	60/0.67	21.2	1.8	40/0.20	0.8	7.3	93.4	1210	MMPR65AA003
150	427/0.67	17.1	7.6	34.9	77/0.67	27.1	1.8	40/0.20	0.8	7.4	97.5	1370	MMPR66AA003
185	518/0.67	19.2	7.6	37.0	91/0.67	32.1	1.8	40/0.20	0.8	7.6	102.4	1540	MMPR67AA003

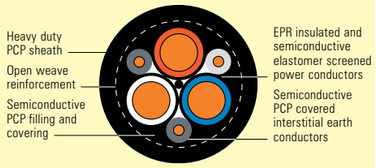
Type 450
3.3 to 33kV



Copper screened cable with 2 earths and 1 pilot core (each earth and pilot are the same size) in the outer interstices. This cable is suitable for supply of power to a wide range of applications, from dragline cable to slow reeling applications, where copper screened cable is required but light weight and smaller dimensions are also desired.

	Power conductors				Core screen		Pilot/Earth conductors		Sheath			
Nominal conductor area mm^2	Strand size no/mm	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size no/mm	Area of each screen mm^2	Strand size no/mm	Thickness elastomer covering mm	Thickness mm	Nominal overall diameter mm	Approx mass kg/100m	Product code
Type 450.3 – Class 1												
16	126/0.40	5.7	2.2	12.4	128/0.25	6.3	120/0.30	1.4	4.5	42.8	265	MGRR59AA003
25	209/0.40	7.2	2.2	13.9	118/0.30	8.3	120/0.30	1.4	4.8	46.9	335	MGRR60AA003
35	285/0.40	8.5	2.2	15.2	127/0.30	9.0	120/0.30	1.4	5.1	50.3	390	MGRR61AA003
50	380/0.40	10.0	2.4	17.1	141/0.30	10.0	183/0.30	1.4	5.6	55.5	485	MGRR62AA003
70	203/0.67	12.0	2.4	19.1	117/0.40	14.7	54/0.67	1.4	6.0	61.1	635	MGRR63AA003
95	259/0.67	13.2	2.4	20.3	123/0.40	15.5	70/0.67	1.6	6.3	64.3	730	MGRR64AA003
120	336/0.67	15.3	2.4	22.4	135/0.40	17.0	84/0.67	1.6	6.4	69.0	865	MGRR65AA003
150	427/0.67	17.1	2.4	24.2	144/0.40	18.1	112/0.67	1.6	6.6	73.3	1020	MGRR66AA003
185	518/0.67	19.2	2.4	26.3	144/0.40	18.1	132/0.67	1.6	6.7	78.1	1170	MGRR67AA003
240	672/0.67	21.8	2.4	28.9	136/0.50	26.7	168/0.67	1.6	6.9	84.5	1440	MGRR68AA003
300	854/0.67	24.4	2.4	31.5	144/0.50	28.3	228/0.67	1.6	7.0	90.4	1740	MGRR69AA003
Type 450.6 – Class 1												
16	126/0.40	5.7	3.0	14.0	118/0.30	8.3	120/0.30	1.4	5.0	47.6	315	MIRR59AA003
25	209/0.40	7.2	3.0	15.5	129/0.30	9.1	120/0.30	1.6	5.2	51.2	380	MIRR60AA003
35	285/0.40	8.5	3.0	16.8	139/0.30	9.8	120/0.30	1.6	5.5	54.7	440	MIRR61AA003
50	380/0.40	10.0	3.0	18.3	149/0.30	10.5	183/0.30	1.6	5.9	58.8	530	MIRR62AA003
70	203/0.67	12.0	3.0	20.3	123/0.40	15.5	54/0.67	1.6	6.3	64.3	680	MIRR63AA003
95	259/0.67	13.2	3.0	21.5	130/0.40	16.3	70/0.67	1.8	6.4	67.1	770	MIRR64AA003
120	336/0.67	15.3	3.0	23.6	141/0.40	17.7	84/0.67	1.8	6.5	71.9	910	MIRR65AA003
150	427/0.67	17.1	3.0	25.4	144/0.40	18.1	112/0.67	1.8	6.6	76.0	1070	MIRR66AA003
185	518/0.67	19.2	3.0	27.5	144/0.40	18.1	132/0.67	1.8	6.8	80.9	1220	MIRR67AA003
240	672/0.67	21.8	3.0	30.1	141/0.50	27.7	168/0.67	1.8	7.0	87.4	1500	MIRR68AA003
300	854/0.67	24.4	3.0	32.7	144/0.50	28.3	228/0.67	1.8	7.1	93.2	1790	MIRR69AA003
Type 450.11 – Class 1												
25	209/0.40	7.2	5.0	19.6	120/0.40	15.1	120/0.30	2.0	6.3	62.8	540	MKRR60AA003
35	285/0.40	8.5	5.0	20.9	127/0.40	16.0	120/0.30	2.0	6.4	65.8	600	MKRR61AA003
50	380/0.40	10.0	5.0	22.4	135/0.40	17.0	183/0.30	2.0	6.5	69.3	690	MKRR62AA003
70	203/0.67	12.0	5.0	24.4	144/0.40	18.1	54/0.67	2.0	6.6	73.8	825	MKRR63AA003
95	259/0.67	13.2	5.0	25.6	144/0.40	18.1	70/0.67	2.2	6.7	76.6	925	MKRR64AA003
120	336/0.67	15.3	5.0	27.7	144/0.40	18.1	84/0.67	2.2	6.9	81.6	1080	MKRR65AA003
150	427/0.67	17.1	5.0	29.5	139/0.50	27.3	112/0.67	2.2	7.0	86.1	1260	MKRR66AA003
185	518/0.67	19.2	5.0	31.6	144/0.50	28.3	132/0.67	2.2	7.1	90.8	1430	MKRR67AA003
240	627/0.67	21.8	5.0	34.2	144/0.50	28.3	168/0.67	2.2	7.3	96.8	1690	MKRR68AA003
300	854/0.67	24.4	5.0	36.8	144/0.50	28.3	228/0.67	2.2	7.4	102.7	2000	MKRR69AA003
Type 450.22 – Class 1												
35	285/0.40	8.5	7.6	26.3	144/0.40	18.1	120/0.30	2.5	6.8	78.4	805	MMRR61AA003
50	380/0.40	10.0	7.6	27.8	144/0.40	18.1	183/0.30	2.5	6.9	81.8	900	MMRR62AA003
70	203/0.67	12.0	7.6	29.8	140/0.50	27.5	54/0.67	2.5	7.0	86.8	1070	MMRR63AA003
95	259/0.67	13.2	7.6	31.0	144/0.50	28.3	70/0.67	2.5	7.2	89.8	1180	MMRR64AA003
120	336/0.67	15.3	7.6	33.1	144/0.50	28.3	84/0.67	2.5	7.3	94.5	1350	MMRR65AA003
150	427/0.67	17.1	7.6	34.9	144/0.50	28.3	112/0.67	2.5	7.4	98.6	1520	MMRR66AA003
185	518/0.67	19.2	7.6	37.0	144/0.50	28.3	132/0.67	2.5	7.5	103.4	1700	MMRR67AA003
240	627/0.67	21.8	7.6	39.6	144/0.50	28.3	168/0.67	2.5	7.7	109.4	1980	MMRR68AA003
300	854/0.67	24.4	7.6	42.2	144/0.50	28.3	228/0.67	2.5	7.9	115.4	2310	MMRR69AA003
Type 450.33 – Class 1												
50	380/0.40	10.0	10.5	34.1	144/0.50	28.3	183/0.30	2.5	7.4	96.9	1220	MORR62AA003
70	203/0.67	12.0	10.5	36.1	144/0.50	28.3	54/0.67	2.5	7.5	101.4	1380	MORR63AA003
95	259/0.67	13.2	10.5	37.3	144/0.50	28.3	70/0.67	2.5	7.7	104.4	1500	MORR64AA003
120	336/0.67	15.3	10.5	39.4	144/0.50	28.3	84/0.67	2.5	7.8	109.2	1680	MORR65AA003
150	427/0.67	17.1	10.5	41.2	144/0.50	28.3	119/0.67	2.5	7.9	113.3	1870	MORR66AA003
185	518/0.67	19.2	10.5	43.3	144/0.50	28.3	132/0.67	2.5	8.0	118.0	2060	MORR67AA003
240	627/0.67	21.8	10.5	45.9	144/0.50	28.3	168/0.67	2.5	8.2	124.0	2360	MORR68AA003
300	854/0.67	24.4	10.5	48.5	144/0.50	28.3	228/0.67	2.5	8.4	130.1	2710	MORR69AA003

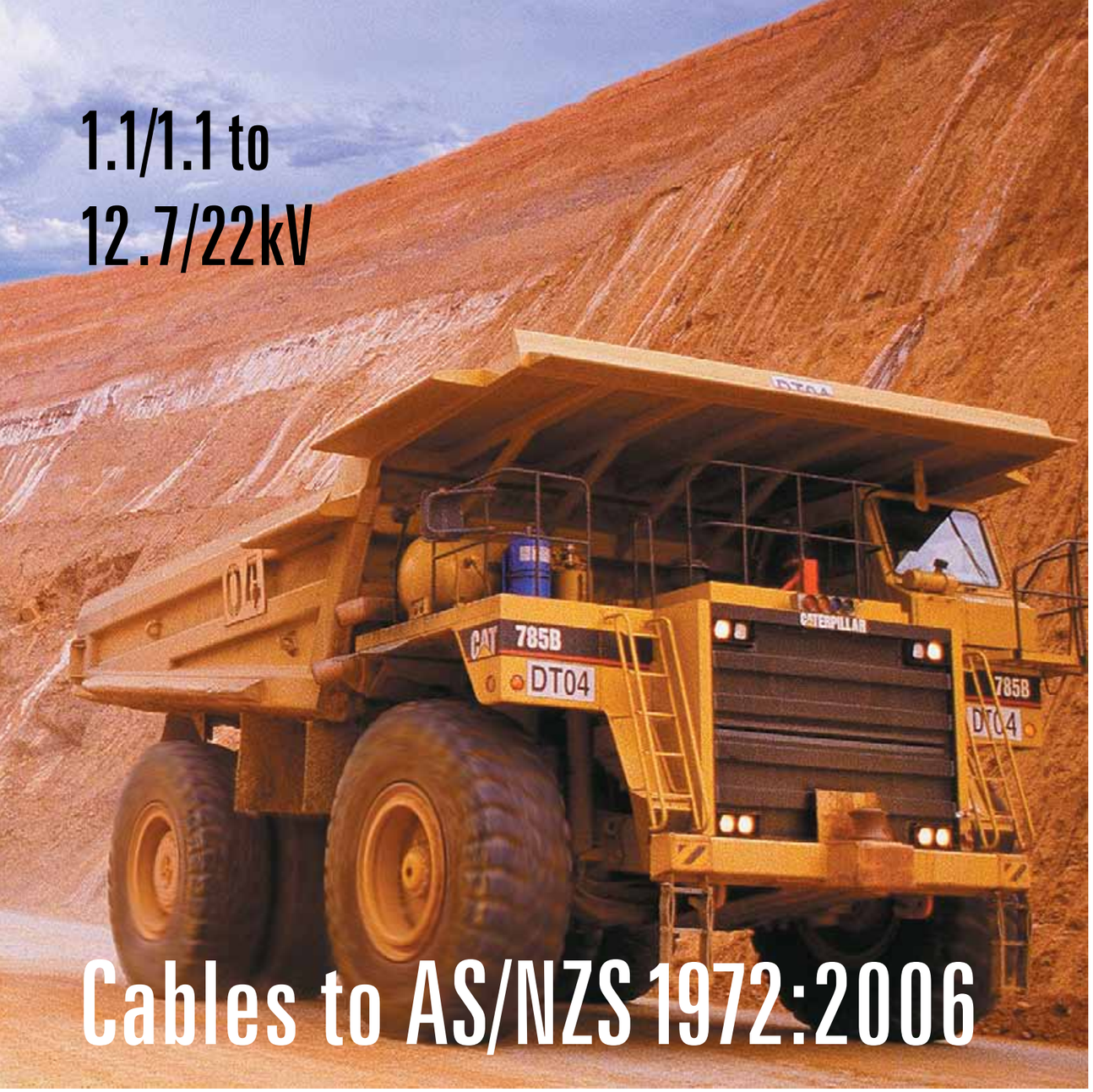
Type 455
3.3 to 33kV



Semiconductive screened cable designed with reduced insulation and sheath thickness, no cradle, 2 earth and 1 pilot core (each earth and pilot are the same size) in the outer interstices. This cable is suitable for reeling and trailing applications where minimal diameter and mass is desired. Particularly suited to stacker-reclaimer applications.

	Power conductor				Pilot/Earth conductors		Sheath			
Nominal conductor area mm^2	Strand size no/mm	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size no/mm	Thickness of elastomer covering mm	Thickness of sheath mm	Nominal overall diameter mm	Approx mass kg/100m	Product code
Type 455.3 – Class 1										
16	126/0.40	5.7	2.2	12.4	120/0.30	1.4	4.2	39.4	225	MGUR59AA003
25	209/0.40	7.2	2.2	13.9	120/0.30	1.4	4.5	43.3	280	MGUR60AA003
35	285/0.40	8.5	2.2	15.2	120/0.30	1.4	4.8	46.7	335	MGUR61AA003
50	380/0.40	10.0	2.4	17.1	183/0.30	1.4	5.3	51.9	425	MGUR62AA003
70	203/0.67	12.0	2.4	19.1	54/0.67	1.4	5.7	57.0	555	MGUR63AA003
95	259/0.67	13.2	2.4	20.3	70/0.67	1.6	6.1	60.5	645	MGUR64AA003
120	336/0.67	15.3	2.4	22.4	84/0.67	1.6	6.4	65.6	785	MGUR65AA003
150	427/0.67	17.1	2.4	24.2	112/0.67	1.6	6.5	69.7	930	MGUR66AA003
185	518/0.67	19.2	2.4	26.3	132/0.67	1.6	6.6	74.5	1070	MGUR67AA003
240	672/0.67	21.8	2.4	28.9	168/0.67	1.6	6.8	80.5	1310	MGUR68AA003
300	854/0.67	24.4	2.4	31.5	228/0.67	1.6	6.9	86.3	1600	MGUR69AA003
Type 455.6 – Class 1										
16	126/0.40	5.7	3.0	14.0	120/0.30	1.4	4.7	43.9	265	MIUR59AA003
25	209/0.40	7.2	3.0	15.5	120/0.30	1.6	5.0	47.8	330	MIUR60AA003
35	285/0.40	8.5	3.0	16.8	120/0.30	1.6	5.3	51.3	385	MIUR61AA003
50	380/0.40	10.0	3.0	18.3	183/0.30	1.6	5.6	55.1	465	MIUR62AA003
70	203/0.67	12.0	3.0	20.3	54/0.67	1.6	6.0	60.3	595	MIUR63AA003
95	259/0.67	13.2	3.0	21.5	70/0.67	1.8	6.3	63.5	690	MIUR64AA003
120	336/0.67	15.3	3.0	23.6	84/0.67	1.8	6.5	68.5	825	MIUR65AA003
150	427/0.67	17.1	3.0	25.4	112/0.67	1.8	6.6	72.6	975	MIUR66AA003
185	518/0.67	19.2	3.0	27.5	132/0.67	1.8	6.7	77.3	1120	MIUR67AA003
240	672/0.67	21.8	3.0	30.1	168/0.67	1.8	6.9	83.3	1360	MIUR68AA003
300	854/0.67	24.4	3.0	32.7	228/0.67	1.8	7.0	89.1	1650	MIUR69AA003
Type 455.11 – Class 1										
25	209/0.40	7.2	5.0	19.6	120/0.30	2.0	6.1	59.0	460	MKUR60AA003
35	285/0.40	8.5	5.0	20.9	120/0.30	2.0	6.3	62.2	525	MKUR61AA003
50	380/0.40	10.0	5.0	22.4	183/0.30	2.0	6.4	65.6	605	MKUR62AA003
70	203/0.67	12.0	5.0	24.4	54/0.67	2.0	6.5	70.2	740	MKUR63AA003
95	259/0.67	13.2	5.0	25.6	70/0.67	2.2	6.7	73.2	835	MKUR64AA003
120	336/0.67	15.3	5.0	27.7	84/0.67	2.2	6.8	77.9	980	MKUR65AA003
150	427/0.67	17.1	5.0	29.5	112/0.67	2.2	6.9	82.0	1140	MKUR66AA003
185	518/0.67	19.2	5.0	31.6	132/0.67	2.2	7.0	86.8	1300	MKUR67AA003
240	672/0.67	21.8	5.0	34.2	168/0.67	2.2	7.2	92.8	1550	MKUR68AA003
Type 455.22 – Class 1										
35	285/0.40	8.5	7.6	26.3	120/0.30	2.5	6.7	74.7	715	MMUR61AA003
50	380/0.40	10.0	7.6	27.8	183/0.30	2.5	6.8	78.2	810	MMUR62AA003
70	203/0.67	12.0	7.6	29.8	54/0.67	2.5	7.0	82.9	955	MMUR63AA003
95	259/0.67	13.2	7.6	31.0	70/0.67	2.5	7.1	85.7	1060	MMUR64AA003
120	336/0.67	15.3	7.6	33.1	84/0.67	2.5	7.2	90.5	1220	MMUR65AA003
150	427/0.67	17.1	7.6	34.9	112/0.67	2.5	7.3	94.6	1390	MMUR66AA003
185	518/0.67	19.2	7.6	37.0	132/0.67	2.5	7.4	99.3	1560	MMUR67AA003
Type 455.33 – Class 1										
50	380/0.40	10.0	10.5	34.1	183/0.30	2.5	7.3	92.8	1090	MOUR62AA003
70	203/0.67	12.0	10.5	36.1	54/0.67	2.5	7.4	97.4	1250	MOUR63AA003
95	259/0.67	13.2	10.5	37.3	70/0.67	2.5	7.6	100.4	1370	MOUR64AA003
120	336/0.67	15.3	10.5	39.4	84/0.67	2.5	7.7	105.1	1540	MOUR65AA003
150	427/0.67	17.1	10.5	41.2	112/0.67	2.5	7.8	109.2	1720	MOUR66AA003

Nexans
Olex

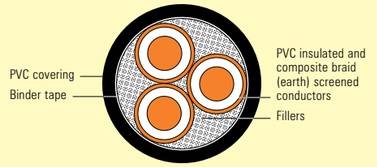


1.1/1.1 to 12.7/22kV

Cables to AS/NZS 1972:2006

Construction The armoured high voltage, feeder and machine cables manufactured to AS/NZS 1972 are primarily designed from use in specific applications in underground coal mines but many of these are suitable for other above ground or general mining applications. Cables designed for single point suspension are also available.

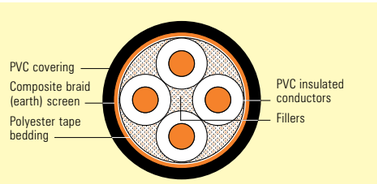
Type 1 1.1/1.1 Individually screened



Tinned copper conductors with PVC insulation and PVC sheath. Cables may be either individually or collectively copper screened and are used for wiring of machines, or between machines and equipment where PVC is suitable. These cables do not contain pilot cores.

	Main conductors					Core screen		Sheath				
Nominal conductor area mm²	Strand size no/mm	Number of cores	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size mm	Total combined screen area mm²	Thickness mm	Cable diameter minimum mm	Cable diameter maximum mm	Approx mass kg/100m	Product code
Type 1 – Individually Screened												
1.5	30/0.25	3	1.5	0.8	3.2	0.20	3.5	0.8	9.7	10.4	16	MCBR54AA003
1.5	30/0.25	4	1.5	0.8	3.2	0.20	4.6	0.8	10.7	11.4	21	MCBR54AA004
10	77/0.40	3	4.6	1.0	6.7	0.20	6.8	1.0	18.1	19.0	59	MCBR58AA003
10	77/0.40	4	4.6	1.0	6.7	0.20	9.0	1.0	20.0	21.0	75	MCBR58AA004
16	126/0.40	3	5.7	1.0	7.8	0.20	7.9	1.3	21.0	22.1	84	MCBR59AA003
16	126/0.40	4	5.7	1.0	7.8	0.20	10.6	1.3	23.1	24.2	110	MCBR59AA004

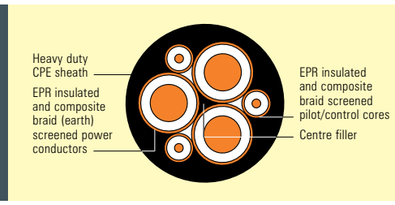
Type 1 1.1/1.1 Collectively screened



	Main conductors					Core screen		Sheath				
Nominal conductor area mm²	Strand size no/mm	Number of cores	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size mm	Total screen area mm²	Thickness mm	Cable diameter minimum mm	Cable diameter maximum mm	Approx mass kg/100m	Product code
Type 1 – Collectively Screened												
1.5	30/0.25	2	1.5	0.8	3.2	0.20	2.3	0.8	8.8	9.5	12	MCAR54AA002
1.5	30/0.25	3	1.5	0.8	3.2	0.20	2.5	0.8	9.3	10.0	15	MCAR54AA003
1.5	30/0.25	4	1.5	0.8	3.2	0.20	2.6	0.8	10.1	10.8	18	MCAR54AA004
1.5	30/0.25	6	1.5	0.8	3.2	0.20	3.4	0.8	12.2	13.0	25	MCAR54AA006

Type 2S 1.1/1.1kV & 3.3/3.3kV

Individually screened

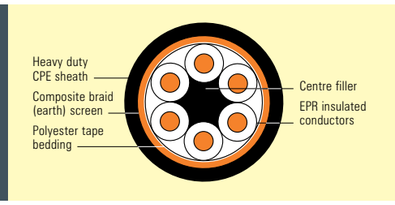


Tinned copper conductors with EPR insulation and CPE (or CSP or PCP) sheath. Cable may be either individually or collectively copper screened and are used for wiring of machines or between machines and equipment where a rubber cable is desired. These cables are also used for longwall lighting circuits, and may contain pilot and control cores or twisted pair and screened cores.

	Main conductors					Core screen		Pilot conductors			Sheath					
Nominal conductor area mm²	Strand size no/mm	Number of cores	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size mm	Total combined screen area mm²	Strand size no/mm	Thickness of EPR covering mm	Number of pilots	Thickness mm	Cable diameter minimum mm	Cable diameter maximum mm	Approx mass kg/100m	Product code
Type 2S – 1.1/1kV Individually screened															
10	77/0.40	3	4.6	1.2	7.1	0.2	7.9	–	–	3	1.8	21.6	22.5	69	MCFR58AA003
10	77/0.40	4	4.6	1.2	7.1	0.2	7.9	–	–	4	1.8	22.5	23.5	93	MCFR58AA004
16	126/0.40	2	5.7	1.2	8.2	0.2	9.0	–	–	2	1.8	21.5	22.5	81	MCFR59AA002
16	126/0.40	3	5.7	1.2	8.2	0.2	9.0	–	–	3	1.8	22.9	23.9	100	MCFR59AA003
16	126/0.40	4	5.7	1.2	8.2	0.2	9.0	–	–	4	1.8	26.2	27.3	135	MCFR59AA004
10	77/0.40	3	4.6	1.2	7.1	0.2	7.9	30/0.20	1.0	3	1.8	22.0	23.0	87	MCGR58AA003
16	126/0.40	2	5.7	1.2	8.2	0.2	9.0	30/0.20	1.0	2	1.8	22.2	23.2	88	MCGR59AA002
16	126/0.40	3	5.7	1.2	8.2	0.2	9.0	30/0.20	1.0	3	1.8	27.2	28.2	130	MCGR59AA003
25	209/0.40	3	7.2	1.4	10.1	0.2	11.3	30/0.20	1.0	3	1.8	28.6	29.7	165	MCGR60AA003
35	285/0.40	3	8.5	1.4	11.4	0.2	12.4	30/0.20	1.0	3	1.8	31.0	32.1	200	MCGR61AA003
50	380/0.40	3	10.0	1.6	13.3	0.25	17.5	30/0.20	1.0	3	1.9	35.4	36.7	260	MCGR62AA003
Type 2S – 3.3/3.3kV Individually screened															
10	77/0.40	3	4.6	3.0	10.8	0.2	11.3	30/0.25	1.0	3	1.8	28.3	29.5	130	MCJR58AA003
16	126/0.40	3	5.7	3.0	11.9	0.2	12.4	30/0.25	1.0	3	1.8	30.7	31.9	160	MCJR59AA003
25	209/0.40	3	7.2	3.0	13.4	0.2	13.6	30/0.25	1.0	3	1.9	34.1	35.4	210	MCJR60AA003
35	285/0.40	3	8.5	3.0	14.7	0.2	15.3	30/0.25	1.0	3	2.0	37.1	38.5	250	MCJR61AA003
50	380/0.40	3	10.0	3.0	16.2	0.2	17.0	30/0.25	1.0	3	2.1	40.5	42.0	305	MCJR62AA003
70	203/0.67	3	12.0	3.0	18.5	0.3	30.5	30/0.25	1.0	3	2.2	46.0	47.6	415	MCJR63AA003
95	259/0.67	3	13.2	3.0	19.7	0.3	30.5	30/0.25	1.0	3	2.3	48.7	50.5	490	MCJR64AA003
120	336/0.67	3	15.3	3.0	21.8	0.4	47.5	30/0.25	1.0	3	2.5	54.0	55.9	620	MCJR65AA003

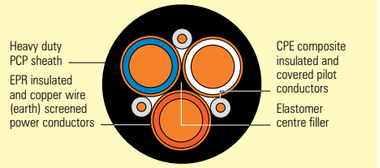
Type 2S 1.1/1.1kV

Collectively screened



	Main conductors					Overall screen		Sheath				
Nominal conductor area mm²	Strand size no/mm	Number of cores	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size mm	Total screen area mm²	Thickness mm	Cable diameter minimum mm	Cable diameter maximum mm	Approx mass kg/100m	Product code
Type 2S – 1.1/1kV Collectively screened												
1.5	30/0.25	2	1.5	1.0	3.5	0.20	2.6	1.8	11.5	12.3	17	MCER54AA002
1.5	30/0.25	4	1.5	1.0	3.5	0.20	3.0	1.8	13.3	13.8	26	MCER54AA004
1.5	30/0.25	6	1.5	1.0	3.5	0.20	3.8	1.8	15.4	16.3	35	MCER54AA006

Type A & B 1.1/1.1kV

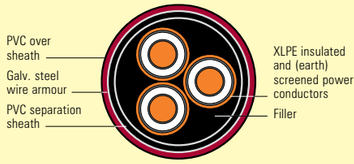


Copper wire screened EPR insulated and PCP sheathed cable for use as 1.1kV cable to distribute power within the mine. Suitable for use in underground coal mines. Option of 3 pilots by selecting the Type A cable.

	Power conductors				Core screen		Pilot conductor (Type A only)		Sheath			
Nominal conductor area mm²	Strand size no/mm	Nominal conductor diameter mm	Insulation thickness mm	Nominal diameter over insulation mm	Strand size no/mm	Area of each screen mm²	Strand size no/mm	Thickness of CPE covering mm	Thickness of sheath mm	Nominal overall diameter mm	Approx mass kg/100m	Product code*
Type A & B												
16	7/1.70	4.9	1.4	7.9	48/0.40	6.0	24/0.20	1.6	2.5	24.6	120	MDAP65AA003
25	19/1.35	6.6	1.4	9.5	57/0.40	7.2	32/0.20	1.8	2.5	28.0	170	MDAP67AA003
35	19/1.53	7.4	1.5	10.5	63/0.40	7.9	30/0.25	1.8	2.5	30.4	205	MDAP68AA003
50	19/1.78	8.6	1.7	12.2	72/0.40	9.0	50/0.25	2.0	3.0	34.9	270	MDAP69AA003
70	19/2.14	10.4	1.8	14.1	67/0.50	13.2	80/0.25	2.0	3.3	40.2	370	MDAP70AA003
95	19/2.52	12.2	2.0	16.4	77/0.50	15.1	80/0.25	2.0	3.8	46.1	490	MDAP71AA003
120	37/2.03	13.8	2.2	18.3	65/0.67	22.9	80/0.25	2.0	3.8	51.1	615	MDAP73AA003
150	37/2.25	15.3	2.3	20.0	70/0.67	24.7	80/0.25	2.0	4.4	56.0	740	MDAP74AA003
185	37/2.52	17.1	2.5	22.3	78/0.67	27.5	80/0.25	2.0	5.1	62.3	915	MDAP75AA003
240	61/2.25	19.6	2.7	25.2	45/1.35	64.4	80/0.25	2.0	5.7	72.9	1290	MDAP76AA003

*Note: Type A has Product Code starting with 'MDA'. Type B has Product Code starting with 'MDB'.

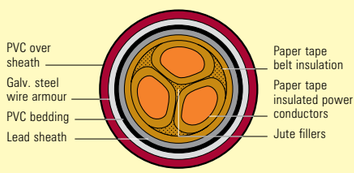
XLPE Ins 6.35/11 & 12.7/22kV



Plain copper stranded conductors, XLPE insulated and plain copper wire individually screened, with PVC bedding, steel wire armour, and red PVC outer sheath to AS/NZS 1429.1. Cables are used as HV feeder cables in fixed conditions.

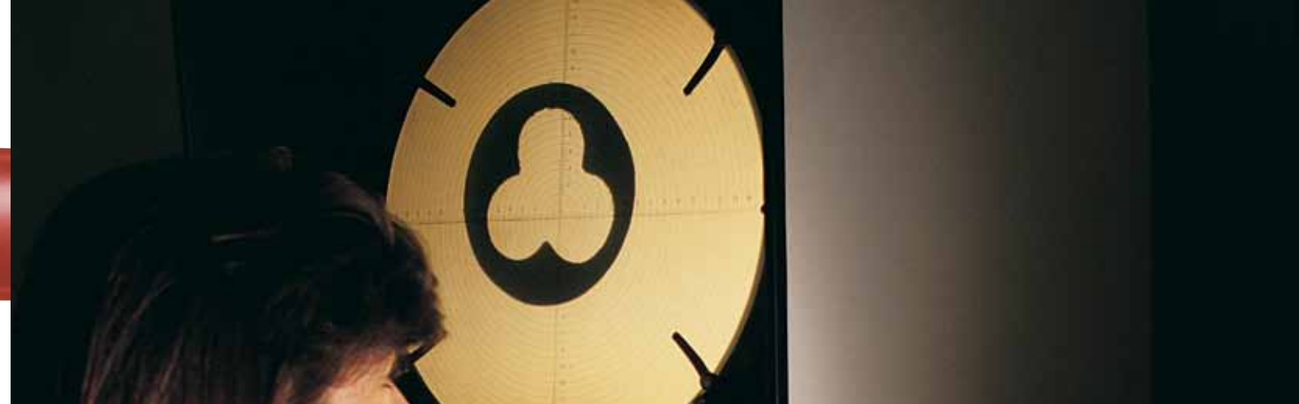
	Power conductor			Core screen			Armour			Sheath							
Nom cond area	Nom cond diam	Ins thick	Nominal diameter over insulation	Number & diameter of screen wires	Area of each screen	Diam over wire screen	Diam over bedding	Wire diam	Diam over amour	Thick	Nom overall diam	Approx mass	Max DC resist @20°C	Max AC resist @90°C	Cont current carrying capacity Unenclosed Spaced	Unenclosed Touching	Product code
mm^2	mm	mm	mm	no/mm	mm^2	mm	mm	mm	mm	mm	mm	kg/100m	ohm/km	ohm/km	Amperes		
Type XLPE 6.35/11kV																	
16	4.8	3.4	12.4	10/0.85	5.7	15.9	37.6	2.00	41.6	2.4	46.6	330	1.15	1.47	110	105	XJJP15AA003
25	5.8	3.4	13.4	10/0.85	5.7	16.9	39.9	2.50	44.9	2.5	50.1	415	0.727	0.927	145	140	XJJP17AA003
35	6.8	3.4	14.8	11/0.85	6.2	18.1	42.4	2.50	47.4	2.6	52.8	475	0.524	0.668	175	165	XJJP18AA003
50	8.0	3.4	16.0	15/0.85	8.5	19.3	45.1	2.50	50.1	2.7	55.7	540	0.387	0.494	210	195	XJJP19AA003
70	9.6	3.4	17.6	21/0.85	11.9	20.9	48.8	2.50	53.8	2.8	59.6	645	0.268	0.342	260	240	XJJP20AA003
95	11.5	3.4	19.4	29/0.85	16.5	22.7	52.8	2.50	57.8	2.9	63.9	775	0.193	0.247	310	290	XJJP22AA003
120	13.1	3.4	21.0	36/0.85	20.4	24.3	56.4	2.50	61.4	3.1	67.9	905	0.153	0.196	360	335	XJJP23AA003
150	14.5	3.4	22.4	44/0.85	25.0	25.7	59.9	2.50	64.9	3.2	71.5	1030	0.124	0.161	405	375	XJJP24EZ003
185	16.1	3.4	24.1	22/1.35	31.5	28.4	65.5	3.15	71.8	3.3	78.6	1280	0.0991	0.129	465	430	XJJP25EZ003
240	18.5	3.4	26.5	29/1.35	41.5	30.8	71.1	3.15	77.4	3.5	84.7	1550	0.0754	0.0988	535	495	XJJP26EZ003
300	20.7	3.4	28.9	37/1.35	53.0	33.2	76.4	3.15	82.7	3.7	90.4	1820	0.0601	0.0798	600	550	XJJP27EZ003
Type XLPE 12.7/22kV																	
35	6.8	5.5	19.1	14/0.85	7.9	22.4	52.1	2.5	57.1	2.9	63.2	600	0.524	0.672	180	170	XLJP18AA003
50	8.0	5.5	20.3	15/0.85	8.5	23.6	54.8	2.5	59.8	3.0	66.0	665	0.387	0.496	210	200	XLJP19AA003
70	9.6	5.5	21.9	21/0.85	11.9	25.2	58.5	2.5	63.5	3.1	69.9	775	0.268	0.344	260	245	XLJP20AA003
95	11.5	5.5	23.8	29/0.85	16.5	27.1	62.6	2.5	67.6	3.3	74.4	920	0.193	0.248	315	295	XLJP22AA003
120	13.1	5.5	25.3	36/0.85	20.4	28.6	66.2	3.15	72.5	3.4	79.5	1140	0.153	0.197	365	340	XLJP23AA003
150	14.5	5.5	26.8	44/0.85	25.0	30.1	69.6	3.15	75.9	3.5	83.1	1280	0.124	0.160	410	380	XLJP24EZ003
185	16.1	5.5	28.4	22/1.35	31.5	32.7	75.2	3.15	81.5	3.7	89.1	1450	0.0991	0.128	465	435	XLJP25EZ003
240	18.5	5.5	30.8	29/1.35	41.5	35.1	80.6	3.15	86.9	3.9	95.0	1720	0.0754	0.0985	540	500	XLJP26EZ003
300	20.7	5.5	33.2	37/1.35	53.0	37.7	86.4	3.15	92.7	4.1	101.1	2010	0.0601	0.0795	600	555	XLJP27EZ003

Paper Insulated 11/11kV



Plain copper stranded (sector shaped) conductors, paper insulated and belted, with lead sheath, PVC bedding, steel wire armour and red PVC outer sheath to AS/NZS1026. Cables are used as HV feeder cables in fixed conditions.

	Min thickness of insulation between		Lead sheath		Armour			PVC sheath							
Power cond area	Cond	Cond and lead sheath	Thickness	Diam over sheath	Diameter over PVC bedding	Nominal wire diameter	Diam over armour	Thickness	Nonimal overall diam	Approx mass	Max DC resist @20°C	Max AC resist @65°C	Cont current carrying capacity Unenclosed Spaced	Unenclosed Touching	Product code
mm^2	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/100m	Ohm/km	kg/100m	Amperes		
Type PILC															
50	5.6	5.4	1.8	37.0	39.9	2.5	44.9	2.5	50.1	725	0.387	0.456	110	105	KNFP19GB003
70	5.6	5.4	1.9	40.2	43.1	2.5	48.1	2.6	53.5	855	0.316	0.316	135	125	KNFP20GB003
95	5.6	5.4	2.0	43.5	46.8	2.5	51.8	2.6	57.2	1000	0.193	0.228	155	150	KNFP22GB003
120	5.6	5.4	2.0	46.2	49.5	2.5	54.5	2.7	60.1	1120	0.153	0.182	175	165	KNFP23GB003
150	5.6	5.4	2.1	48.9	52.2	2.5	57.2	2.8	63.0	1260	0.124	0.148	210	200	KNFP24GB003
185	5.6	5.4	2.3	52.4	55.7	3.15	62.0	2.9	68.0	1540	0.0991	0.119	240	230	KNFP25GB003
240	5.6	5.4	2.4	56.9	60.6	3.15	66.9	3.0	73.1	1820	0.0754	0.0919	290	275	KNFP26GB003
300	5.6	5.4	2.6	61.3	65.0	3.15	71.3	3.2	77.9	2120	0.0601	0.0748	320	300	KNFP27GB003
400	5.6	5.4	2.7	66.4	70.1	3.15	76.4	3.4	83.5	2500	0.0470	0.0606	365	345	KNFP28GB003



Technical Data

This section provides cable data and recommendations supplementary to the information given in preceding sections except where otherwise qualified, apply to all types of reeling and trailing cables covered by this catalogue.

Nexans Olex

Supplementary Reeling & Trailing cable data

Table 4.1 Dimensions and performance characteristics of power conductors in Reeling and Trailing cables.

Nominal conductor area mm^2	Strand size no/mm	Nominal conductor diameter mm	Max. DC resistance at 20°C Ohm/km	Max. AC resistance at 90°C[1] Ohm/km	Nominal 3-phase voltage drop[1] mV/A.m	Nominal reactance[1] Ohm/km
1.5	30/0.25	1.6	14.0	17.4	30.1	0.17
2.5	50/0.25	2.0	8.37	10.5	18.2	0.15
6	84/0.30	3.5	3.39	4.33	7.5	0.14
10	77/0.40	4.6	2.02	2.58	4.5	0.13
16	126/0.40	5.7	1.24	1.57	2.7	0.12
25	209/0.40	7.6	0.746	0.936	1.6	0.11
35	285/0.40	8.8	0.547	0.675	1.2	0.10
50	380/0.40	10.1	0.410	0.523	0.92	0.10
70	203/0.67	12.1	0.271	0.346	0.62	0.097
70	570/0.40	12.4	0.271	0.346	0.62	0.096
95	259/0.67	13.3	0.212	0.270	0.50	0.095
95	475/0.50	14.5	0.208	0.266	0.49	0.093
120	336/0.67	15.4	0.164	0.209	0.40	0.092
120	608/0.50	16.2	0.162	0.208	0.39	0.091
150	427/0.67	17.2	0.129	0.166	0.33	0.091
150	777/0.50	18.1	0.127	0.163	0.32	0.089
185	518/0.67	19.3	0.106	0.137	0.28	0.089
240	672/0.67	23.0	0.0818	0.107	0.24	0.087
300	854/0.67	24.5	0.0644	0.0847	0.21	0.086

Table 4.2 Reeling and Trailing cable continuous current carrying capacity, Amperes.[2]

Power conductor nominal area mm^2	Protected from sun Cable voltage rating 1.1/1.1kV	3.3/3.3kV–33/33kV	Exposed to sun Cable voltage rating 1.1/1.1kV	3.3/3.3–33/33kV
1.5	23	–	18	–
2.5	30	–	23	–
6	49	–	38	–
10	66	–	51	–
16	88	89	67	66
25	120	120	90	89
35	145	145	110	105
50	170	170	125	125
70	220	220	160	155
95	250	250	185	180
120	295	295	210	210
150	340	340	245	240
185	385	385	270	265
240	455	450	315	310
300	515	510	355	350

1. The AC characteristics are valid for up to 1.1/1.1kV operating voltage and can be used as a guide for higher operating voltages.

2. Where cable is wound on a drum, the current carrying capacity given in the table shall be reduced by multiplying with the following factors:

(i) Cylindrical drum

Number of layers of cable on drum	1	2	3	4
De-rating factor	0.85	0.65	0.45	0.35

(ii) Radial drum

	Ventilated	Unventilated
De-rating factor	0.85	0.75

3. The current ratings given in Table 4.2 have been generally calculated in accordance with IEC Publication 60287 and are based on an ambient temperature of 40°C and, in the case of cables exposed to the sun, a sunlight intensity of 1000 W/m^2.

Recommended limits to Reeling and Trailing cable operation

Although Olex cables perform satisfactorily under more severe conditions, in the interests of ensuring good service life and reliability it is recommended that the following limits be observed:

Temperature

Maximum continuous conductor temperature: 90°C

Minimum continuous conductor temperature: –25°C

Tension

Maximum continuous working tension: 0.02kN/mm^2 of total cross-sectional area of main conductors*

Barrel size for reels

Often cables are reeled for storage or relocation and therefore are not energised while on the reel. The minimum diameter of the barrel of the reel, in multiples of cable overall diameter, shall be no less than:

1kV cables	12D
Reeling and Trailing, 3.3kV & above	15D
HV XLPE cables, up to 70mm^2	15D
HV XLPE cables, above 70mm^2	18D
11/11kV PILC	18D

Bending radii and changes in direction

Reeling and trailing cable bending radii, in multiples of cable overall diameter, shall be not less than:

Situation	Cables rated 1.1/1.1kV	Cables rated 3.3/3.3kV and above
Fixed installation	4	6
Free flexing (not under tension)	6	10
Permanently repeating reeling	10	12
At rotating deflection sheaves or rollers	15	20
Energy chain	10	12

Change in the cable axial direction when related to the cable drum axis, i.e. change from right angle to that parallel to the drum axis (or similar) should be avoided. Where unavoidable, the straight section of cable between the deflection sheave or roller where change in axial direction takes place and the preceding bending point, shall be not less than 20 times the overall diameter of the cable. Same minimum straight section applies where cable is subjected to an 'S' bend.

HV Cables XLPE and PILC armoured, bending radii is given below:

Cable	During installation	Installed
XLPE/SWA/PVC	18D	12D
PILC/SWA/PVC	18D	12D

Principal elastomeric materials used in Reeling and Trailing cables

Semiconductive cradle, earth covering and screen for core assembly

The semiconductive elastomer used in the manufacture of the reeling and trailing cable cradle, the interstitial earth conductor covering (other than for Type 412) and the screen for core assembly (Types 241, 245, 275 and 441 only) is a compound based on polychloroprene (PCP) which, unlike in the case of the semiconductive materials in many imported cables, does not propagate flame and is oil and wear resistant.

Table 4.3 Typical properties of Olex semiconductive Polychloroprene (PCP)

Test (except for D, per AS/NZS 1802/AS/NZS 2802)	Typical achieved	Specified value
A Mechanical tests without ageing		
1 Tensile strength (MPa)	14	≥ 8.5
2 Elongation at rupture (percent)	450	≥ 200
3 Permanent set (percent)	5	≤ 20
B Mechanical tests after ageing in air oven		
1 Tensile strength (MPa)	8.9	≥ 6.2
2 Elongation at rupture (percent)	165	≥ 50
C Volume resistivity at 23°C (Ω.m)	0.05	≤ 1.0
D Oxygen index	26	–

*Any reduced size conductors (e.g. any interstitial conductors), and screens do not effectively contribute to the strength of the cable and hence should not be included in the calculation.

Principal elastomeric materials used in Reeling and Trailing cables

Insulation

The elastomer used for the insulation of all reeling and trailing cables to AS/NZS 1802 and AS/NZS 2802 is a compound based on ethylene propylene rubber (EPR) known in the Australian Standards as R-EP-90 or, in the case of Class 1 cables to AS/NZS 2802, as XR-EP-90, the latter being an electrically superior grade material when compared with R-EP-90 and mechanically different.

Table 4.4 Typical properties of Olex Ethylene Propylene Rubber (EPR) insulation

Test (per AS/NZS 1802/AS/NZS 2802)	R-EP-90 Typical achieved	Specified value	XR-EP-90 Typical achieved	Specified value
A Mechanical tests without ageing				
1 Tensile strength (MPa)	9.5	≥ 4.2	12	≥ 8.5
2 Elongation at rupture (percent)	400	≥ 200	300	≥ 200
B Mechanical tests after ageing in air oven				
1 Tensile strength (percentage of values found in unaged specimens)	100	≥ 70	95	≥ 75
2 Elongation at rupture (percentage of values found in unaged specimens)	90	≥ 70	85	≥ 75
C Hot set test				
a Elongation under load (percent)	10	≤ 175	20	≤ 175
b Residual elongation after cooling (percent)	0	≤ 15	0	≤ 15
D Electrical characteristics		≤ 1.1/1.1kV ≥ 3.3/3.3kV		
1 Insulation resistance constant (ki) at room temperature (GΩ.m)	6500	≥ 1500 ≥ 4000	60000	≥ 4000
2 Insulation resistance constant (ki) at 90°C (GΩ.m)	80	≥ 1.5 ≥ 4.0	1600	≥ 4.0

Sheath

The elastomer used for the sheathing (inner and outer) of all reeling and trailing cables to AS/NZS 1802 and AS/NZS 2802 is a compound based on heavy/extra heavy duty polychloroprene (PCP). For all cables, in addition to the requirements specified in AS/NZS 1802, the PCP compound meets the most stringent requirements applicable for XHD-85-PCP specified for Class 1 cables in AS/NZS 2802. Black PCP sheath is recommended.

Table 4.5 Typical properties of Olex PCP sheath

Test (except for D and E, per AS/NZS 1802/AS/NZS 2802)	Typical Achieved All Black PCP sheaths	Specified Value GP-85-PCP	HD-85-PCP	XHD-85-PCP
A Mechanical tests without ageing				
1 Tensile strength (MPa)	16	≥ 8.5	≥ 11	≥ 12.5
2 Elongation at rupture (percent)	550	≥ 250	≥ 250	≥ 300
3 Tear resistance (N/mm)	12	–	≥ 5	≥ 7
B Mechanical tests after ageing in air oven				
1 Tensile strength (MPa)	11	≥ 6.2	≥ 8.5	≥ 8.5
2 Elongation at rupture (percent)	300	≥ 125	≥ 125	≥ 150
C Oil immersion test				
1 Tensile strength (percentage of values found in unaged specimens)	80	≥ 60	≥ 60	≥ 60
2 Elongation at rupture (percentage of values found in unaged specimens)	95	≥ 60	≥ 60	≥ 60
D Hardness (IRHD)	71	–	–	–
E Oxygen index	32	–	–	–

At Olex, the future always looks incredibly bright. That's because we spend most of our time there. Over the decades, Olex has consistently led the cable market in technological innovation. For more than 60 years Olex has stood for the highest quality and the most innovative technology, from design, through manufacture to installation and service. The following range of standards approved cables is proudly designed and produced in Australia by Olex: Versolex® and Flexolex™ Flexible Power Cables, Instrolex™ Instrumentation Cables, Envirolex™ PVC Free Cables, Mining Cables, Varolex® EMC Cables, Aerial Cables, High Voltage Power Cables, Pyrolex™ Ceramifiable® Fire Rated Cables, Low Voltage Building Wires, Airport Lighting Cables and Lead Covered Power Cables. For the latest product information see

www.olex.com.au

Olex Australia Pty Limited A.B.N. 61 087 542 863 Printed in Australia 7/2012 Disegno OLC124821

Nexans Olex

Australia Head Office 207 Sunshine Road Tottenham
Victoria 3012 Australia Phone 613 9281 4444
Cable Sales Phone 1300 CABLES

New Zealand Paraite Road Bell Block
New Plymouth New Zealand Phone 646 755 9800
www.olex.co.nz

For more information see

www.olex.com.au

AUSTRALIAN MADE




LOW VOLTAGE INDUSTRIAL HIGH VOLTAGE FIRE RATED DATA/COMMS MINING

Nexans
Olex