BS EN 60702-1, Mineral Insulated Cable (MICC) - Fireproof, PVC or LSZH - 1mm² to 240mm²



Description

Mineral insulated cables are used to provide circuit integrity in areas such as alarm circuits, emergency lighting and sprinkler systems. MICC cables have copper conductors, a solid copper sheath and are usually insulated using magnesium oxide. The features of the cable make them more resistant to fires than plastic insulated cables due to the lack of organic material. It is for this reason that the MICC cables are suitable for using in public areas, high fire risk areas such as power stations and oil refineries.

Key Features

Voltage Rating
500 Volts :Light Duty
750 Volts: Heavy Duty:

Minimum Bending Radius
6 x overall diameter

Temperature Limits
PVC Temperature Range:-20°C to +70°C
LSZH Temperature Range: -20°C TO +80°C

Standards

- BS EN/IEC 60331
- BS EN 60702-1
- BS 6387 CWZ
- BS EN/IEC 60228

Construction

- **Conductor**: Class 1 solid copper
- **Insulation**: Magnesium Oxide
- **Sheath**: Solid Copper Sheath
- **Outer Sheath**: Available in Low Smoke Zero Halogen (LSZH) or Polyvinyl chloride (PVC)
- **Sheath Colour**: Available in Orange, Red, White, Black or Solid Bare Copper

Training & Testing Lab

AN ISO/IEC 17025 ACCREDITED FACILITY

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing.

ISO/IEC 17025 Accredited Testing Laboratory

CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

ecovadis
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

BS EN 60702-1, Mineral Insulated Cable (MICC) - Fireproof, PVC or LSZH - 1mm² to 240mm² - Dimensions

Reference	Conductor Size (mm2)	Size Ref	Overall Diameter Bare(mm)	Overall Diameter Sheathed(mm)	Sheathed(Kg/Km)	Bare(Kg/Km)	Single Hole Clip Reference - Sheathed	Single Hole Clip Reference - Bare	Gland for use with RPS Seals
4L1.0	1	4L1.0	6.3	7.8	187	162	500	30	20
3L1.0	1	3L1.0	5.8	7.3	159	136	500	28	20
2L1.0	1	2L1.0	5.1	6.6	125	104	500	26	20
7H1.5	1.5	7H1.5	10.8	12.5	479	432	245	47	20
4H1.5	1.5	4H1.5	9.1	10.8	345	305	500	43	20
3H1.5	1.5	3H1.5	8.3	10	290	254	500	37	20
2H1.5	1.5	2H1.5	7.9	9.6	272	237	500	37	20
7L1.5	1.5	7L1.5	8.4	10.1	332	295	380	40	25
4L1.5	1.5	4L1.5	7	8.5	230	203	500	34	25
3L1.5	1.5	3L1.5	6.4	7.9	201	176	500	30	20
2L1.5	1.5	2L1.5	5.7	7.2	159	136	500	28	20
4H2.5	2.5	4H2.5	10.1	11.8	428	384	500	47	20
3H2.5	2.5	3H2.5	9.3	11	364	323	500	43	20
2H2.5	2.5	2H2.5	8.7	10.4	314	276	500	40	20
7L2.5	2.5	7L2.5	9.7	11.4	454	411	285	43	25
4L2.5	2.5	4L2.5	8.1	9.8	313	277	500	37	25
3L2.5	2.5	3L2.5	7.9	9	256	223	500	34	25
2L2.5	2.5	2L2.5	6.6	8.1	213	187	500	32	32
4H4.0	4	4H4.0	11.4	13.1	556	507	195	51	32
3H4.0	4	3H4.0	10.4	12.1	460	415	500	47	40
2H4.0	4	2H4.0	9.8	11.5	397	355	500	43	20
2L4.0	4	2L4.0	7.7	9.4	282	248	500	37	20
4H6.0	6	4H6.0	12.7	14.4	698	644	144	54	20
3H6.0	6	3H6.0	11.5	13.2	575	526	184	51	20
2H6.0	6	2H6.0	10.9	12.6	493	446	500	47	25
1H6.0	6	1H6.0	6.4	7.7	213	173	650	34	25
4H10	10	4H10	14.8	16.5	974	911	110	63	32
3H10	10	3H10	13.6	15.3	812	754	130	59	32
2H10	10	2H10	12.7	14.4	673	619	500	54	40
1H10	10	1H10	7.3	9	273	240	510	34	20
4H16	16	4H16	17.3	19.6	1386	1286	89	75	20
3H16	16	3H16	15.6	17.9	1124	1034	100	71	20
2H16	16	2H16	14.7	16.4	912	850	112	63	25
1H16	16	1H16	8.3	10	361	326	400	37	25
4H25	25	4H25	20.1	22.9	1947	1805	60	88	32
3H25	25	3H25	18.2	20.5	1549	1444	70	79	20
2H25	25	2H25	17.1	19.4	1277	1178	80	75	20

Reference	Conductor Size (mm2)	Size Ref	Overall Diameter Bare(mm)	Overall Diameter Sheathed(mm)	Sheathed(Kg/Km)	Bare(Kg/Km)	Single Hole Clip Reference - Sheathed	Single Hole Clip Reference - Bare	Gland for use with RPS Seals
1H25	25	1H25	9.6	11.3	499	457	275	43	20
1H35	35	1H35	10.7	12.4	632	585	222	47	25
1H50	50	1H50	12.1	13.8	810	758	170	54	25
1H70	70	1H70	13.7	15.4	1075	1016	190	59	25
1H95	95	1H95	15.4	17.7	1413	1324	155	67	32
1H120	120	1H120	16.8	19.1	1709	1612	135	75	40
1H150	150	1H150	18.4	20.7	2055	1945	110	79	71
1H240	240	1H240	23.3	26.1	3213	3050	67	101	88

Mineral insulated cables bare and not exposed to touch or contact with combustible materials Reproduced from BS7671:2018 Wiring Regulations

TABLE 4G2A

CURRENT-CARRYING CAPACITY (Amps)

Ambient temperature: 30 °C
Sheath operating temperature: 105 °C

Conductor cross sectional area	Reference Method C (clipped direct)			Reference Methods E, F and G (in free air or on a perforated cable tray etc, horizontal or vertical) Single-phase				
	Single-phase AC or DC	Three-phase AC		Single-phase AC or DC	Three-phase AC			
	Two-core cable or 2 x Single core cables	3 x single core cables in trefoil cleat or 1 x 3 or 4 core cable	3 x single core cables flat and touching, horizontal or vertical	Two-core cable or 2 x Single core cables	3 x single core cables in trefoil cleat or 1 x 3 or 4 core cable	3 x single core cables flat and touching, horizontal or vertical	4 x single core cables flat and spaced	
							vertical	horizontal
mm^2	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
Light duty 500V								
1	22.0	19	21	24.0	21.0	23	26	29
1.5	28	24	27	31	26	29	33	37
2.5	38	33	36	41	35	39	43	49
4	51	44	47	54	46	51	56	64
Heavy duty 750V								
1	24.0	20	24	26	22.0	25	28	32
1.5	31	26	30	33	28	32	35	40
2.5	42	35	41	45	38	43	47	54
4	55	47	53	60	50	56	61	70
6	70	59	67	76	64	71	78	89
10	96	81	91	104	87	96	105	120
16	127	107	119	137	115	127	137	157
25	166	140	154	179	150	164	178	204
35	203	171	187	220	184	200	216	248
50	251	212	230	272	228	247	266	304
70	307	260	280	333	279	300	323	370
95	369	312	334	400	335	359	385	441
120	424	359	383	460	385	411	441	505
150	485	410	435	526	441	469	498	565
185	550	465	492	596	500	530	557	629
240	643	544	572	697	584	617	624	704

NOTES:
1. For single-core cables, the sheaths of the circuit are assumed to be connected together at both ends.
2. No rating factor for grouping need be applied.
3. Where a conductor operates at a temperature exceeding 70 °C it should be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.5).

Mineral insulated cables bare and not exposed to touch or contact with combustible materials Reproduced from BS7671:2018 Wiring Regulations

TABLE4G2B

VOLTAGE DROP (per ampere per metre):

Sheath operating temperature 70 °C

Conductor cross-sectional area	Single-phase AC or DC						Three-phase AC											
	2 single-core cables touching			1 x 2 core cable			1 x 3 core or 4 core cable			3 single-core cables in trefoil formation			3 single-core cables flat and touching			3 x single-core cables flat and spaced by one cable diameter*		
(mm2)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
1	47			47			40			40			40			40		
1.5	31			31			27			27			27			27		
2.5	19			19			16			16			16			16		
4	12			12			10			10			10			10		
6	7.8			7.8			6.8			6.8			6.8			6.8		
10	4.7			4.7			4.1			4.1			4.1			4.1		
16	3.0			3.0			2.6			2.6			2.6			2.6		
	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
25	1.85	0.18	1.85	1.85	0.15	1.85	1.60	0.13	1.60	1.60	0.16	1.65	1.60	0.23	1.65	1.60	0.31	1.65
35	1.35	0.18	1.35							1.15	0.16	1.20	1.15	0.23	1.20	1.20	0.30	1.25
50	1.00	0.17	1.00							0.87	0.15	0.88	0.88	0.22	0.91	0.90	0.29	0.95
70	0.69	0.17	0.71							0.60	0.15	0.62	0.61	0.22	0.65	0.63	0.29	0.70
95	0.51	0.16	0.54							0.45	0.14	0.47	0.46	0.21	0.50	0.48	0.28	0.56
120	0.41	0.16	0.44							0.36	0.14	0.38	0.37	0.21	0.42	0.39	0.28	0.48
150	0.33	0.16	0.36							0.29	0.14	0.32	0.31	0.20	0.37	0.34	0.27	0.43
185	0.27	0.15	0.31							0.23	0.13	0.27	0.26	0.20	0.33	0.29	0.26	0.39
240	0.21	0.15	0.26							0.18	0.13	0.22	0.22	0.20	0.29	0.26	0.25	0.36

NOTE: * Spacings larger than one cable diameter will result in a larger voltage drop.

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