

MINERAL INSULATED COPPER CABLE SYSTEMS

MICC Cable

The Only True Fire Survival Cable

Mineral Insulated Copper Cable (MICC), also known as pyro cable can withstand temperatures in excess of 1000°C and still operate at its rated voltage. This provides circuit integrity to safety critical applications such as emergency lighting and fire alarm systems. The complete range is LPCB approved and available in light-duty and twisted conductor ranges, with a voltage rating of 500V, and a heavy-duty range with a voltage rating of 750V.

In addition to safety critical applications, these high temperature MICC cables are ideally suited for specific applications, such as instrumentation for nuclear reactors, industries processing or handling flammable liquids and where the power/control cables would be at risk of damage in the event of a fire.

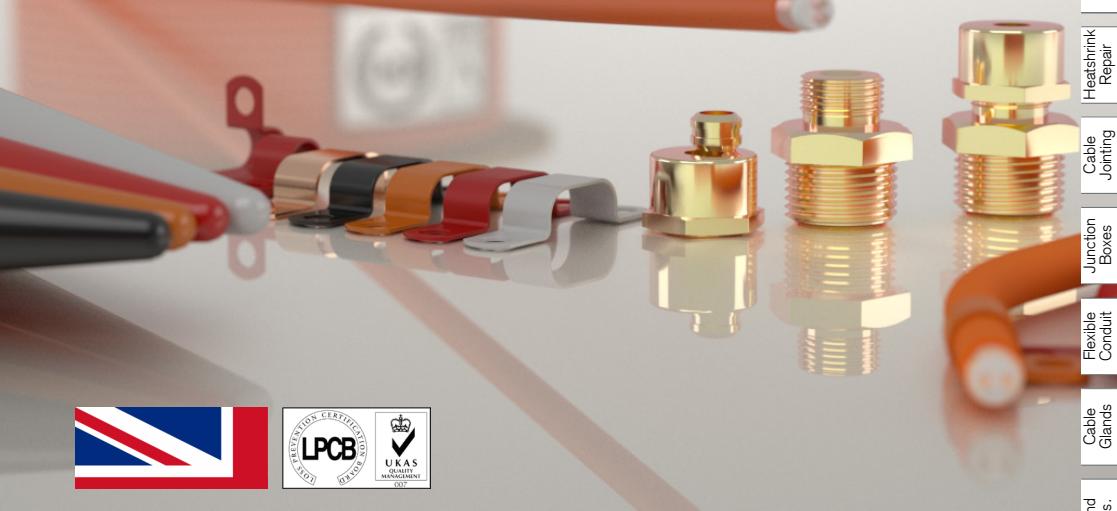


MICC Cable: Mineral Insulated Cable is totally Inorganic and Silicone free in construction. The main construction consists of solid copper conductors (cores), highly compressed magnesium oxide (MgO) insulation and a solid copper sheath. This unique construction gives melting points of 1083°C and 2800°C for the copper and insulation respectively. This provides fire survival whilst continuing to safely carry a load for 3 hours at 950°C and for short periods of time in temperatures in excess of 1000°C.

MICC cables can also be considered to be non-aging as copper and MgO will not deteriorate with age in most situations. Cables normally need to be replaced as the polymers used for insulation breakdown causing the insulation resistance (IR) to fall thus creating an unsafe system. The total life cycle costs of MICC cables in a building with a typical 40 - 50 year design expectancy would be considerably less than those using an XLPE steel wire armoured LSZH fire retardant cable, thus off-setting any initial capital expenditure.

For the majority of modern installations, bare copper sheathed cable will suffice requiring no additional outer covering. In this state the cable is resistant to oil, water and many other gases and liquids. Where the natural corrosion resistance of the copper sheath is not sufficient, it can be augmented with an additional LSZH (low smoke zero halogen) outer covering. This outer covering can also be used for coloured circuit identification or visual appearance.

MICC FIRE SURVIVAL CABLE



Light Duty MICC Cable

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Twisted & Heavy Duty MICC

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Ident & Wring Term
Copper Lugs
Heatshrink Repair
Cable Jointing
Junction Boxes
Flexible Conduit
Cable Glands
Gland Accs.
Cable Cleats
Earthing Lighting
MICC Cable
Cable Ties & Acc
Tooling & Cable Prep
Fixing & Security

MICC | LIGHT DUTY MICC CABLE

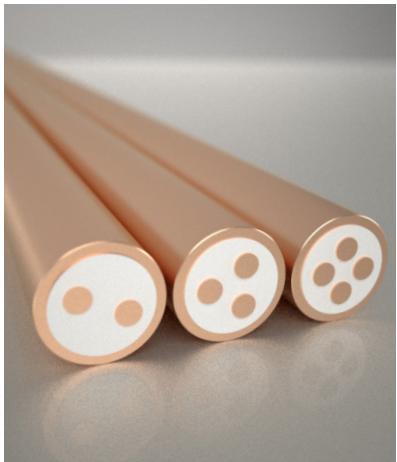
MINERAL INSULATED COPPER CABLE - LIGHT DUTY

MICC Cables

Mineral Insulated Copper Cable

Mineral Insulated Cable (MICC) has been in use commercially since 1937, the fact that it is still widely used today is evidence that it has not been bettered by any other cable system. Soft skinned polymeric cables are a compromise in safety, fire performance and longevity when comparisons are made to MICC cables. Any cable system that relies on polymers for conductor insulation will burn and will be very likely to fail in a real fire situation, MICC cable does not rely on polymers for insulation.

- Solid Copper Conductors
- Magnesium Oxide Insulation (MgO)
- Solid Copper Sheath
- LSZH Outer Sheath (Optional)



Why Mineral Insulated Cable?

Fire Resistant

Will neither burn nor support combustion.

High Mechanical Strength

Withstands considerable stresses such as bending, twisting and flattening, even in a fire situation.

High Operational Temperatures

Continuous operating temperature up to 250°C and for shorter periods up to 1083°C, the melting point of copper.

Earth Continuity

Our cables do not require a separate earth continuity conductor as the outer copper sheath serves this purpose providing excellent low resistance earth continuity.

Inherent Flame-proof Barrier

With a non-flammable copper sheath the highly compacted insulation will resist the transmission of vapours, gases and flames between items of equipment connected by the cable.

Pliable

Mineral insulated cable is fully annealed and consequently extremely ductile and easily manipulated to follow existing wiring routes and irregular shapes.

Non-Ageing

Mineral insulated cable is permanent and does not weaken or degrade with age offering longer and safer life spans.

Small Overall Diameter

Our cables have a smaller diameter than soft skinned fire resistant cables of equivalent ratings.

Air tight

Impervious to water, oil and gas.

Accessories

To complement the cable Remora has developed a complete range of accessories including glands, seals and fixings. Please see MICC Accessories section from page 238.



Ident & Wiring Term	Copper Lugs	Heatshrink Repair	Cable Jointing	Junction Boxes	Flexible Conduit	Cable Glands	Gland Accs.	Cable Cleats	Earthing	Lightning	MICC Cable	Cable Ties & Acc	Trolling & Cable Prep	Fixing & Security
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MICC | HEAVY DUTY MICC CABLE

MINERAL INSULATED COPPER CABLE - TWISTED & HEAVY DUTY

MICC Twisted Conductor Cable

Our Twisted Conductor Cables are designed for use where enhanced fire survival is required such as fire alarm and detection systems. Other applications include fire telephone systems, CCTV and public address systems. Our Twisted Conductor Cables have reduced electromagnetic interference and signal corruption, reducing system malfunction and improved electrostatic screening.

Standards: BS EN 60702-1:2002

Cable Type: Fire Survival Cable - Fire Resistant exceeding 3 hours @ 950°C

Temperature Range: -40°C to 250°C

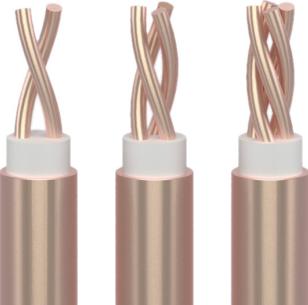
Conductors: Plain Annealed Copper (Cu-ETP-2)

Insulation: Compressed Magnesium Oxide (MgO)

Sheath: Copper (Cu-DHP)

Sheath (optional): Coloured LSZH polymer

Colour: Bare Copper, Black, Orange, Red, White



Cable Size Reference	Conductors	Conductor Resistance (Ohms/km)	Max Sheath Resistance @20°C (Ohm/km)	CAP/C/C @10kHz	IND-LOOP @10kHz	Character IMP	Diameter Over Sheath	Diameter Over LSZH	Conductor Area	Frequency of twist (per meter)
MICC2T1.5	2	12.1	3.35	164	243	436	5.7	7.2	1.5	20
MICC2T2.5	2	7.4	2.53	170	270	410	4.9	6.6	8.1	2.5
MICC3T1.5	3	12.1	2.67	160	260	450	5.0	6.4	7.9	1.5
MICC4T1.5	4	12.1	2.33	180-216	290	520	4.8	7.0	8.5	20

MICC Cables

HDMineral Insulated Copper Cable

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MICC Fire Survival Cable (Heavy Duty 750v) See Right..

Remora Mineral Insulated Cable is a copper sheathed cable, designed to safely transmit power and control signals of critical equipment.

Standards: BS EN 60702-1:2002

Cable Type: Fire Survival Cable - Fire Resistant exceeding 3 hours @ 950°C

Temperature Range: -40°C to 250°C

Conductors: Plain Annealed Copper (Cu-ETP-2)

Insulation: Compressed Magnesium Oxide (MgO)

Sheath: Copper (Cu-DHP)

Sheath (optional): Coloured LSZH polymer

Colour: Bare Copper, Black, Orange, Red, White



MICC Tooling

To complement our MICC cable range Remora has developed a complete range of tooling manufactured in the UK. These tools are specifically designed to be robust and to give long life performance.



ZSJ Joystripper

The Joystripper is designed for stripping the sheath on popular cables sizes.

Suits Cable Sizes; 2L1, 2L1.5, 2L2.5, 3L1, 3L1.5, 4L, 4L1.5

Code	Description
ZSJ	Joystripper tool
ZSJB	Joystripper replacement blade (sold individually)



ZSUS & ZSU Rotary Stripper

The Rotary stripper can be used on all cable sizes throughout the MICC range.

Code	Description
ZSUS	The rotary stripper can be used on all mineral cables up to 8.0mm diameter
ZSUSB	5 x replacement blades for rotary stripper ZSUS
ZSU	The rotary stripper can be used on all mineral cable above 8.5mm diameter
ZSUB	5 x replacement blades for rotary stripper ZSU



ZR Ringing Tool

When using side cutters or a stripping rod to strip the cable sheath, a ringing tool is used to score a light groove around the cable to neatly terminate the stripping action.

Code	Description
ZR	Ring tool



ZPM Pot Wrench

A Pot Wrench is used in conjunction with the appropriate RGM Glands to ensure quick and accurate screwing of the brass pot.

Code	Description
ZPM20	M20 gland potting wrench
ZPM25	M25 gland potting wrench
ZPM32	M32 gland potting wrench
ZPM40	M40 gland potting wrench





ZRP Wrench

The ZRP Wrench is a quick and easy tool for screwing on brass seal pots.

*20mm pots only.

Code	Description
ZRP	M20 pot wrench



ZDC Crimper

Hand Crimper tool is a robust long life product that applies three point crimping action to the brass pot seal, securely locking the cap into position.

Code	Description
ZDC20	M20 Hand Crimping Tool
ZDC25	M25 Hand Crimping Tool



ZDD Plate Crimper

The ZDD Plate Crimper tool locks the stub cap into the pot by creating three crimped indentations. This is a low cost tool with a life of approximately 100 operations.

Code	Description
ZDD32	M32 gland economy crimper
ZDD40	M40 gland economy crimper



MICC Bending Lever

To assist in the dressing of cables or when using the larger cables. The bending lever will help save time.

Code	Description
ZBLA	Bending lever for cables 10-16mmOD
ZBLB	Bending lever for cables 16-27mmOD

