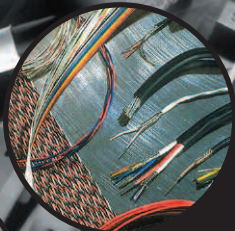
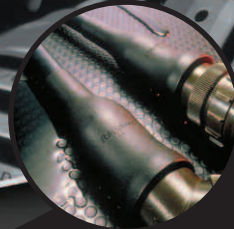




Product Guide



**A Stocking Distributor
of High Performance
Electrical Interconnect &
Electro-Mechanical Products.**

**Specialist Knowledge
within the Aerospace, Defence,
Naval Marine, Energy & Industrial Sectors.**



Heat-shrinkable Tubing

Using radiation cross-linking technology, a wide range of heat-shrinkable tubing products are available in many colours & sizes, to meet both commercial and military market requirements.

- Materials include radiation cross-linked Polyolefins, Fluoropolymers & Elastomers, plus PVC & Silicone
- Flame retardant & low smoke/halogen free materials to meet a range of industry standards
- Shrink ratios from 2:1 to 4:1
- Operating temperature range from -75°C to +250°C
- Thin-wall, adhesive lined, highly flexible & semi-rigid options available
- Performance characteristics include chemical & fluid resistance, environmental protection, mechanical vibration, abrasion resistance, electrical insulation & strain relief
- A range of non-shrinkable tubing is also available



Wire & Cable

An extensive portfolio of wire & cable products is available in a wide range of conductor sizes, constructions & colours, many available from stock.

- The product range covers primary wire, airframe wire, screened & jacketed cables, co-axial, power & custom cables
- Characteristics include small diameter, lightweight, chemical & fluid resistance, low smoke/zero halogen, highly flexible with excellent electrical & mechanical performance
- Operating temperature range from -75°C to +260°C
- Insulation materials include XL-ETFE, XL-PVDF/PE, PTFE & hybrid constructions
- Range of conductor materials including tin, silver & nickel plated copper
- Industry standard approvals applicable to Aerospace, Military, Marine, Rail & other high performance markets



Multi-Core Cables

To complement a range of standard constructions, IS-Rayfast also offer custom design multi-core cables for a wide range of demanding applications. Be it prototype, pre-production or full production quantities, we can meet your demand. For Prototype build, we can offer a hand-build service, taking stock components and

laying up a full multi-core cable, with screening options and heat-shrinkable jacket solutions.

- Very small MOQ's & short lead-times
- Continuous lengths of 20m (depending upon construction)

To meet requirements of a pre-production build we can offer a machine laid cable with screening braid & heat-shrink jacket solution.

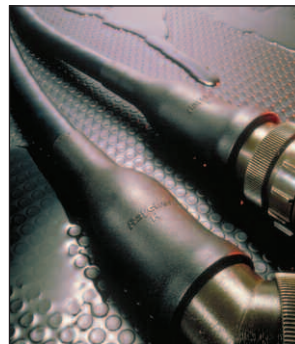
- Again utilising our extensive stock portfolio & flexible manufacturing process, small MOQ's & short lead times are achieved
- Continuous lengths of 90m (depending upon construction)



Where full Production quantities are required, a fully machine made multi-core cable with an appropriate extruded jacket can be offered.

Typical Performance Requirements for Multi-Core Cables:

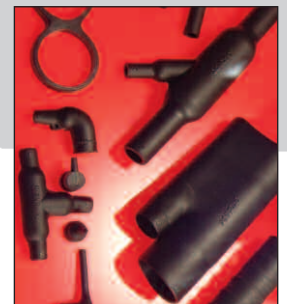
- Extreme Temperatures
- Lightweight & High Flexibility/Flex-life
- Low Smoke & Zero-halogen
- Chemical, Fluid & Abrasion Resistance
- Specific screening performance (including Tempest level)
- Data transmission



Heat-shrinkable Moulded Parts & Shapes

Using heat-shrink technology, moulded parts & shapes are available in a wide range of configurations, sizes & materials, from miniature, lightweight, space-saving straight boots, through to large multi-way harness transitions.

- Provides environmental protection & strain relief for cable terminations and harness breakouts
- Fluid resistance, high temperature, low smoke/zero halogen, NBC resistance & general purpose grade materials available
- Adhesive coated variants for convenience of installation & to provide environmental sealing
- Electrically screened parts also stocked
- Material selection enables full integration & compatibility with other harness components, to produce electrical harness systems for use in the most extreme environments
- Operating temperature range from -75°C to +200°C





Identification Systems

Solutions available for identification and traceability of wire, harnesses, box assemblies, control panels and components in commercial or demanding environments.



- The range covers a multitude of styles: heat-shrinkable, tie-on, wrap-around, self adhesive or mechanically fixed labels
- Typical product performance characteristics include high/low temperature, zero halogen, low smoke & toxicity materials, as well as chemical, abrasion & UV resistance
- Fixed & variable text, logos, standard bar codes & 2D matrix codes accommodated
- Hardware & software offered for on-site printing (including free installation, training & technical support)
- Can be used with range of high performance thermal transfer & industrial dot-matrix printers
- International standards such as UL, CSA & Mil-Spec.

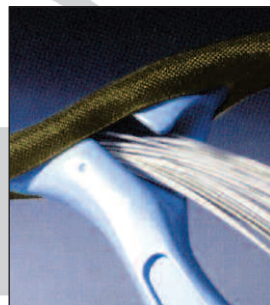
IS-Rayfast also offer a full identification printing service through 'The Bureau', offering the latest in printing technology from standard marker systems to full thermal printed images, logos & text labels.



Protective Sleeving & Edge Protection Products

A range of protective sleeving & edge protection products are available from world leading manufacturers, providing protection for cable harnesses, hoses & pipes. Applications range from commercial to high performance, demanding environments.

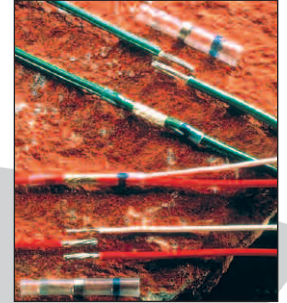
- Wide variety of easy to install constructions including wrap-around, expandable, heat-shrinkable, spiral binding & metal braids
- Thermal, abrasion, electrical EMC/EMI, chemical & noise protection products available
- Materials include Nomex, polyester, PPS & silicone coated glass fibre
- Edge protection products range from commercial grades through to Mil Spec. approved aerospace products
- Temperature capabilities range from -54°C to +1100°C



Interconnect & Termination Devices

Interconnect & termination devices offer a single step, easy to use method of producing high quality wire & cable splices and terminations using heat-shrink technology in conjunction with solder & crimp systems.

- Applications include wire to wire splicing, sealed terminals & disconnects, shield terminations, coaxial cable terminations & cable to cable splicing
- Operating temperature ranges from -55°C to +260°C
- Convenient one piece devices in a range of sizes for ease of installation
- Provides environmental sealing, strain relief & electrical protection
- Solder devices incorporate a fluxed solder preform essential for a controlled soldering process
- Product range covers Commercial, Military, Aerospace & Mil-Marine markets



Switches

An extensive product line including Pushbutton, Rocker, Toggle/Trim, Limit, Rotary, Basic and other high performance speciality switches & hand grips.



Solutions for the toughest & most demanding applications including Military, Aerospace, Marine, Specialist Vehicle & Medical markets.

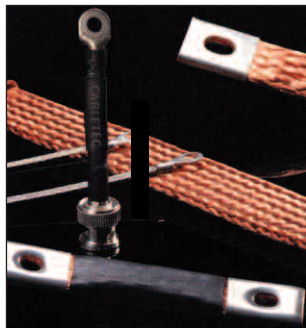
- Range of environmental sealing ratings up to IP68
- Choice of case styles, printed logos & custom design options
- Hall Effect technology (digital & analogue output options up to 10 million cycle life)
- Positive tactile feel

High Performance Relays & Contactors

A wide range of relays and contactors for harsh environments and demanding applications where reliability & performance are critical, in markets such as Aerospace, Electric & Hybrid Vehicles, Military, Marine and Space:

- Hermetically sealed TO-5 and .100 Grid SPDT & DPDT Signal Relays, up to 1 Amp switching, with MIL-PRF-39016 & Mil-PRF-28776 qualifications
- 5 - 75 Amp Mid-Range relays Hermetically sealed and qualified to MIL-PRF-83536 and MIL-PRF-6106
- Crystal Can relays in 1/5, 1/2 or full size, various mounting and terminal choices, MIL-PRF-39016 & MIL-R-5757 qualified
- Time Delay Relays, Fixed or Adjustable, COTS & MIL-PRF-83726 qualified, electro-mechanical or solid state output
- Solid State Relays MIL-PRF-28750
- Lightweight DC relays and contactors 270/540vdc, many other high voltage & high current types, DC and AC variants





Earth Bond Leads

IS-Rayfast offer a range of bonding leads to protect electrical & electronic equipment, by providing a connection to ground, limiting static/voltage build up & protection against lightning strike.

- Materials include bare copper, plated copper, stainless steel & aluminium
- Flat, round, rope or layered braid constructions

- Sizes from 1.5mm² to 100mm²
- Optimised flexibility, weight & electrical characteristics
- Crimped, pressed ferrule, quick release or swaged terminations
- Choice of insulation materials & identification options



Adhesives, Fillers, Coatings & Ceramics

Epoxies capable of performing up to +360°C & high temperature ceramic adhesives, fillers & coatings capable of performing up to +2980°C.

- Performance characteristics include extreme temperature operation, electrical/thermally conductivity & chemical resistance

- Bonds an extensive range of materials including metals, ceramics, plastics & glass
- Various viscosities including liquids, putties & pastes
- Fast & room temperature cure systems
- Superflexible, high temperature epoxy for stress-free potting & bonding
- Castable & machinable ceramics

Also available are a range of high temperature ceramic, glass, Teflon® and silicon tapes & cloths, capable of performing between +540°C and +1,820°C.



Cable Management Systems

Complementing our portfolio, a vast range of professional cable management accessories are also available.

- Products include cable ties, push fit & adhesive backed tie mounts & clips, amongst others
- Products are available in a range of materials (from Nylon to 316 grade Stainless Steel), styles, sizes & colours

- Temperature capabilities range from -80°C to +538°C



Lacing Tapes & Cords

A wide range of high performance lacing tapes, cords & braiding yarns are offered.

- Lacing tapes meet the industry standard CID A-A-52080-4 (MIL-T- 43435) requirements
- Five material types offered depending upon performance requirements: Nylon, Polyester, Teflon®, Fibreglass & Nomex®

- Wide range of sizes, colours & material coatings/finishes
- Operating temperature range from -177°C to +427°C



Connector Adaptors & Accessories

High quality circular connector adaptors, suitable for a range of applications & demanding environments are offered.

- Compatible with a wide range of industry standard connector types
- Various materials & plating options to suit operating environment

- Circular adaptors include fixed & spin-coupling with shielded, Tinel-Lock®, bandstrap & Hexashield® screen terminations
- TCFS cable feedthroughs & KTKK assemblies for ease of installation are offered from an extensive range of stock for the Mil-Marine market



Application Equipment

Application equipment from leading manufacturers & component suppliers are also available to aid the installation of individual components. Equipment covers, heat guns & reflectors, wire cutters & strippers, crimp tools, calibration gauges & cable tie installation tools.

Value Added Services

In addition to our extensive product portfolio, we also offer a range of value added services, these include:

Spooling, Cutting, Kitting, Printing

For further information please contact IS-Rayfast.

Customer Services

IS-Rayfast operates a Quality Management System which complies with the requirements of ISO9001:2000 and AS9120:2005, as well as complying with supplier approval requirements for many of the world's leading manufacturers.

Customer services are focussed on meeting our customers requirements by offering: market specific business co-ordinators, technical support, efficient enquiry & quotation response, flexible MOQ's & pack sizes, next day delivery on stock items, over 5,000 product lines, an extensive "off the shelf" stock portfolio & extended warehouse hours.

Suppliers

- Birch Valley Plastics
- Breyden
- Cotronics
- Device Technologies
- Federal Mogul
- Glenair
- Gudebrod
- Grange Tubes
- Ideal Industries
- Lapp Muller
- NKK
- Otto
- Panduit
- TE Connectivity
- WL Gore



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