Crovlek®

The Professional Advantage

PROTECTIVE SOLUTIONS AND INSULATING MATERIALS

Croylek®
The Professional Advantage

A company you can talk to
for expert knowledge and guidance.

www.croylek.co.uk

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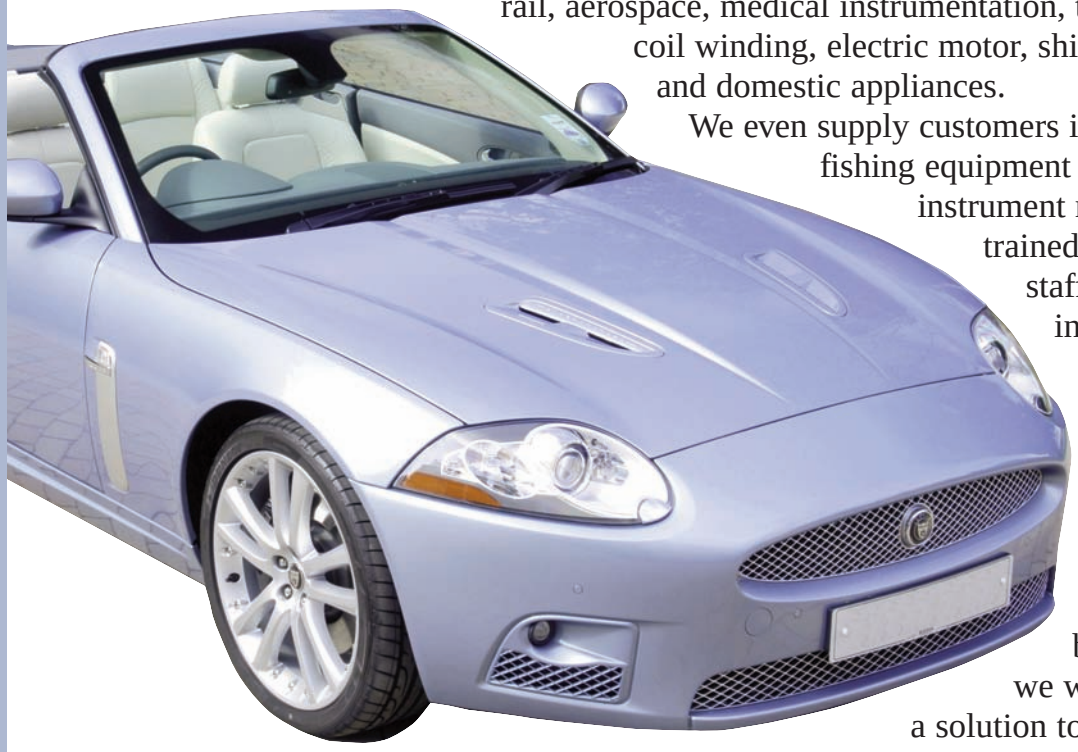
+44 (0)20 8668 1481

APPLICATIONS & INDUSTRIES SERVED

Our customers are as diverse as our product ranges and many of them are high profile brand leaders in their respective fields. Croylek supply solutions to industries such as automotive, rail, aerospace, medical instrumentation, transformers, coil winding, electric motor, shipping, lighting and domestic appliances.



We even supply customers in such fields as fishing equipment and musical instrument manufacture. Our trained and knowledgeable staff can give you information on what protection is best suited for your application. If you are looking for a product or a specific application that you don't see in the brochure call us and we will do our best to find a solution to your needs.

OUR COMMITMENT TO OUR CUSTOMERS

We offer the peace of mind and reassurance that Croylek will always be able to provide our customers with the right solution for their needs.

We pride ourselves in providing the very best quality products to our customers, backed up by the highest level of technical and sales support available. Along with this we keep a tight control over costings and budgets so we can stay competitive in an ever changing global economy.

Croylek will always attempt to work with our clients to provide a working environment that suits their business requirements such as Vendor Managed Inventory, Just In Time Delivery, Kanban, Lean Manufacturing, Component Kitting and Call–Off. This gives our customers the freedom and flexibility to manage their businesses as cost effectively as they can, feeling safe in the knowledge that they will have what they want, when they want it.

Established in 1964, Croylek Limited has proven to be a successful, forward thinking, innovative company with offices in London, Hong Kong and the Middle East.
We look forward to the future working with our clients on new and exciting projects around the world.

LOGISTICS & DELIVERY SERVICE OPTIONS

We offer a wide range of logistics options to our customers to suit all of their delivery and stock holding requirements. In an ever changing business environment we recognise the demands on businesses to reduce costs and minimise stocks and we offer a variety of solutions that enable our customers to achieve this goal.

Standard Product
We hold large stocks of our standard range of items based on carefully analysed historical sales and forecast information and can deliver purchase orders on a next day basis to the UK* if received before 3pm.

Kitting
Many of our customers require a number of items delivered direct to the factory line, ready for use by the operator. We can provide a full kitting service that gives the operators everything they need to complete the job at maximum productivity. Sleeves and cables cut to length, gaskets and insulation parts, tapes and many ancillary items can all be supplied in a complete kit as required.

KanBan
A logistics concept related to just-in-time (JIT) production, Kanban is a signaling system that triggers a need to purchase products and arrange a specified delivery date. We make sure that we always have the required stock available to meet the just-in-time demand of our customers.

Vendor Managed Inventory (VMI)
The process whereby our customer provides us with information about a product and we take full responsibility for maintaining an agreed inventory of that product. We make sure that the customer has the required level of inventory by ensuring that we always stock up to the agreed minimum & maximum stock levels, agree adjustments to stock levels with the customer based on changes in demand and ensure gaps are always filled.

Exports & Overseas Deliveries
With both office and warehouse facilities in Hong Kong & Dubai we are strategically well placed to offer a flexible approach to deliveries for our overseas customers, as well as having extensive knowledge and experience in exporting product from the UK.

*Deliveries to Northern Ireland & northern parts of Scotland may take up to 4 days.

MATERIAL PROCESSING AND CONVERSION

Croylek has an extensive in-house converting and processing facility that gives our customers a wide range of choices and flexible options when considering their order requirements. Our CNC (Computer Numerical Control) machines are controlled by the latest CadCam software and can cut shapes quickly, efficiently and accurately to customer specifications and drawings in materials such as Polyester, Polypropylene and Kapton®, paper and laminate products. In addition, we can also process Nomex®, DMD and NMN, corks, rubbers and foams as well as rigid materials such as SRBP, SRBF & Epoxy Glass. The system is so flexible that customers can send us a drawing by email or fax in the morning and we can produce a sample for approval and send it back by post that same evening.

The benefit to our customers is the flexibility that this technology offers, particularly at the design stage of a project where small drawing changes can be effected easily and quickly and without the need for changes to tooling. Of course as there is no tooling involved the added benefit is that future orders can be supplied again and again without unknown maintenance or replacement costs for tools or stamps and small regular runs can be produced economically.

STANDARDS & APPROVALS

Croylek®
The Professional Advantage

American Society For Testing and Materials

Underwriters Laboratories Inc.®

UNDERWRITERS LABORATORIES

International Organization for Standardization

International Electrical Commission

QUALITY & RELIABILITY

Croylek has a well established Quality Management System, certified since 1998 to internationally recognised standards. We currently hold ISO9001:2000 certification for the following activities ‘Supplier of Electrical Insulation Materials, Mechanical and Thermal protective systems. Converting, Cutting, Slitting and Punching Services’.

In addition, Croylek has attained ‘Quality’ recognition and approvals from world class blue chip organisations and is regularly audited to maintain these standards.

We have a policy of continual improvement with a commitment to Quality Management to ensure we supply competitively priced, quality products, when and where they are required.

INTRODUCTION TO Crovsleeve EXTRUDED SLEEVING

We offer a large range of extruded sleeving available in various polymeric materials.

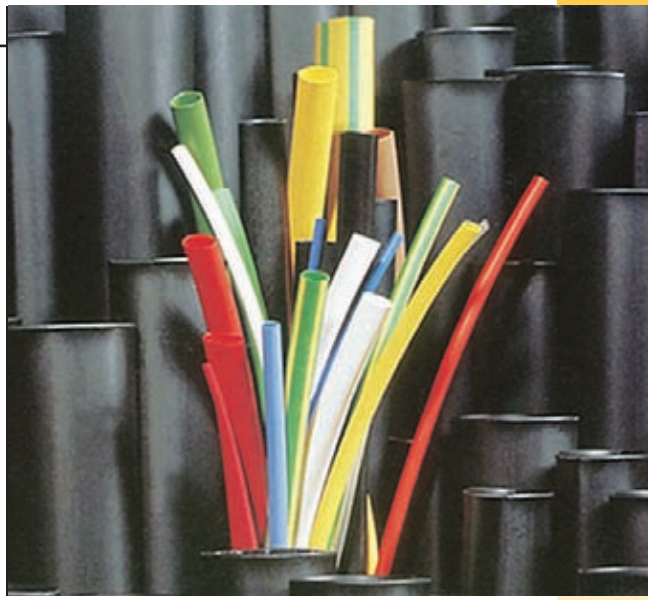
The extrusion process offers the flexibility of a large number of available sizes both in bore and wall thickness, as well as a complete range of colours, without having to impose large minimum order quantities.

All materials are available in coiled format or on bobbins. We offer a cut-to-length service and can produce pieces from as short a length as 3mm. We also produce marker sleeves to order.

Crovsleeve QUICK PRODUCT SELECTOR

	TEMPERATURE ºC	DIELECTRIC STRENGTH	FLEXIBILITY	FLAME RETARDANCY	HALOGEN FREE	TENSILE STRENGTH	ABRASION RESISTANCE
PVC Sleeving	70/85/105	High	Medium	Medium	No	Medium	Medium
Ecolek Sleeving	85	High	Medium	Medium	Yes	Medium	Medium
Neoprene Sleeving	95	Medium	Medium	Medium	No	Low	Low
Silicone Rubber Sleeving	180	Medium	High	High	Yes	Low	Low
PTFE Sleeving	230	High	Medium	High	No	Medium	Medium
PVC Heat Shrink Sleeving	105	High	Medium	Medium	No	Medium	Medium
2 : 1 Polyolefin Heat Shrink Sleeving	135	High	Medium	Medium	Yes	Medium	Medium
3 : 1 Ahesive Lined Polyolefin Sleeving	85	High	Medium	Medium	Yes	Medium	Medium
Kynar Heat Shrink Sleeving	175	High	Medium	High	No	Medium	Medium

PVC SLEEVING



A good general purpose, low cost, flexible material with excellent dielectric properties and available in a large range of sizes and colours.

APPLICATIONS

- Wire harnessing
- Electrical insulation
- Flexible conduit
- General protection

CHARACTERISTICS

- Very flexible
- Good dielectric strength
- Generally good chemical resistance
- Fungus resistant
- Low water absorption

APPROVALS

This is available in UL approved versions.

SPECIFICATIONS

Standard sizes and colours listed, call for information on ordering custom colours and sizes.

	STD	85T	105T
Product Code	101	103	105
Temperature Range - ºC	-20 to +70	-20 to +85	-20 to +105
Elongation at Break - %	250	250	250
Dielectric Strength - kV/mm	25	25	25
Tensile Strength - MPa	18	18	18

STANDARD COLOURS
Black
Red
Brown
Yellow
Green
Orange
Blue
White
Green / Yellow

STANDARD SIZES		
BORE (MM)	WALL (MM)	REEL SIZE (M)
0.5	0.5	100
1	0.5	100
1.5	0.5	100
2	0.5	100
2.5	0.5	100
3	0.5	100
3.5	0.5	100
4	0.5	100
4.5	0.5	100
5	0.5	100
6	0.5	100
7	0.5	100
8	0.5	100
9	0.5	100
10	0.5	100
11	0.5	100
12	0.5	100
13	0.5	100
14	0.5	100
15	0.5	100
20	1.0	100
21	1.0	100

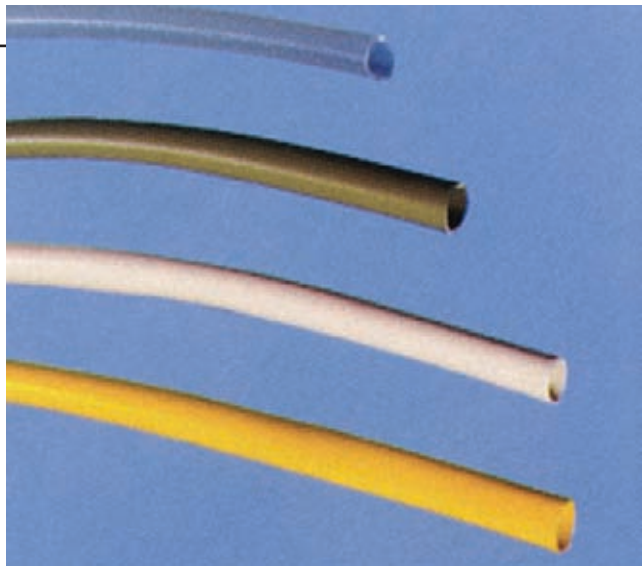
ECOLEK SLEEVING

APPLICATIONS

- Wire harnessing
- Electrical insulation
- Flexible conduit
- General protection

CHARACTERISTICS

- Flexible
- UV resistant
- Good chemical resistance
- Zero halogen
- LSF (Low Smoke and Fume)



There has been general movement away from PVC materials in several industries due to problems with halogens, particularly in a fire hazard situation. This pressure has led to the development of Ecolek sleeving, which is a low smoke and fume, zero halogen, PVC replacement material. It is a thermoplastic that is both halogen-free and fire retardant but in many other aspects displays similar properties as PVC, has a similar look and feel, and can be used in the same applications.

SPECIFICATIONS

Standard sizes and colours listed, call for information on ordering custom colours and sizes.

PRIMARY PROPERTIES	NOMINAL VALUE	TEST METHOD
Tensile Strength - MPa	11.5	IEC 60811-1-1
Elongation at Break - %	180	IEC 60811-1-1
Oxygen Index - %	40	ISO 4589-2
Density - g/cc	1.58	ASTM D-792
Mooney Viscosity (1+4 mins, 140ºC)	50	ASTM D-1646
Melt Flow Rate (21.6 kg, 150ºC) - g/10 mins	1.5	ISO 1133

MECHANICAL PROPERTIES	NOMINAL VALUE	TEST METHOD
Tear Strength - N/mm	5	BS 6469:99.1
Tensile Strength after 7 days at 100ºC	14.5	IEC 60811-1-2
Variation - %	+26	
Elongation at Break after 7 days at 100ºC - %	130	IEC 60811-1-2
Variation - %	-28	

Further specifications such as Thermo-mechanical Properties, Fire & Smoke Test Properties, Oil Resistance Properties and Electrical Properties can be obtained from our technical sheet available as a download from our web site.

www.croylek.co.uk

STANDARD SIZES		
BORE (MM)	WALL (MM)	REEL SIZE (M)
0.5	0.5	100
1	0.5	100
1.5	0.5	100
2	0.5	100
2.5	0.5	100
3	0.5	100
3.5	0.5	100
4	0.5	100
4.5	0.5	100
5	0.5	100
6	0.5	100
7	0.5	100
8	0.5	100
9	0.5	100
10	0.5	100
11	0.5	100
12	0.5	100
13	0.5	100
14	0.5	100
15	0.5	100
20	1.0	100
21	1.0	100

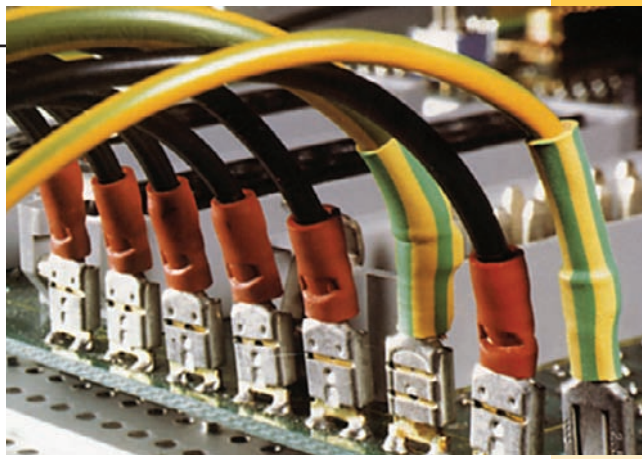
NEOPRENE SLEEVING

APPLICATIONS

- Cable marking
- Terminal insulation
- General protection

CHARACTERISTICS

- Very flexible
- Expandable
- Resistant to petrol, oil and ozone



Neoprene is a robust rubber sleeve with good flexibility and stretch properties.

SPECIFICATIONS

Standard sizes and colours listed, call for information on ordering custom colours and sizes. Standard cut to length sizes.

	STD
Product Code	140
Temperature Range - ºC	-30 to +130
Elongation at Break - %	>600
Dielectric Strength - kV/mm	18
Tensile Strength - MPa	18

STANDARD COLOURS
Black
Red
Yellow
Green
Blue

Not all sizes and colours are held in stock, but are available on request.

Standard Wall size is between 0.5mm and 2mm

STANDARD SIZES	
BORE (MM)	REEL SIZE
1	Due to the nature of the material there is no specific coil length, please call the sales office for availability.
1.2	
1.5	
2	
3	
5	
8	
10	
12	

SILICONE RUBBER SLEEVING

Crov®sleeve

APPLICATIONS

- Harnessing
- Electrical insulation
- Marker sleeves
- Peristaltic pump tubing

CHARACTERISTICS

- High operating temperature
- Extremely flexible
- Ozone resistant
- UV resistant
- Fungus resistant

Silicone elastomer sleeving is used for its high temperature resistance, flexibility and elastic characteristics. The material is post-cured to give it added stability and is available in a number of different hardnesses.

SPECIFICATIONS

Standard sizes and colours listed, call for information on ordering custom colours and sizes.

	0.2 MM WALL	0.3 MM WALL	0.5 MM WALL
Product Code	120	122	124
Temperature Range - ºC	-60 to +180	-60 to +180	-60 to +180
Elongation at Break - %	250	250	250
Dielectric Strength - kV/mm	20	20	20
Tensile Strength - kg/cm²	60	60	60

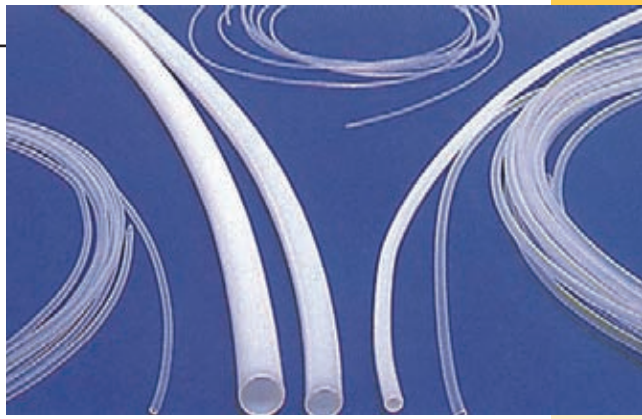
STANDARD COLOURS
Black
Red
Brown
Yellow
Green
Blue
Orange
Grey

Not all sizes and colours are kept in stock.

STANDARD SIZES		
BORE (MM)	WALL (MM)	REEL SIZE (M)
0.5	0.2	100
0.7	0.2	100
1	0.2	100
0.5	0.3	100
0.7	0.3	100
1	0.3	100
1.5	0.3	100
2	0.3	100
2.5	0.3	100
0.5	0.5	100
0.7	0.5	100
1	0.5	100
1.5	0.5	100
2	0.5	100
2.5	0.5	100
3	0.5	100
4	0.5	100
5	0.5	100
6	0.5	100

PTFE SLEEVING

Crov®sleeve



APPLICATIONS

- Electrical insulation
- Cryogenics
- Aerospace
- Cable marking
- Thermocouples

CHARACTERISTICS

- Very low coefficient of friction
- Anti-stick
- Flexible
- High chemical resistance
- Extreme low temperature capabilities
- Non flammable
- Hydrophobic
- Unaffected by oxygen, ozone and UV

PTFE is an extremely stable material which can be used at continuous temperatures up to 260ºC. Being virtually inert and having good electrical properties, it is particularly useful in demanding applications.

APPROVALS

BS2848 Type 6 Class 250T

SPECIFICATIONS

Sleeving may contain tape joints.
A Thin Wall (STW) and Heavy Wall (HW) are also available.

	STD
Product Code	170
Operating Temperature - ºC	260
Elongation at Break - %	350
Dielectric Strength - kV/mm	50 - 80
Tensile Strength - MPa	33

STANDARD COLOURS
A full range of colours available.

STANDARD WALL SLEEVING (TW) SIZES

PART CODE	INSIDE DIAMETER (MM)	WALL (MM)	MOQ (M)	PACKAGE
TW0	8.53	0.38	100	Coil
TW1	7.62	0.38	100	Coil
TW2	6.81	0.38	100	Coil
TW3	6.07	0.38	100	50m Coil
TW4	5.44	0.38	100	50m Coil
TW5	4.83	0.38	100	50m Coil
TW6	4.29	0.38	100	50m Coil
TW7	3.84	0.38	100	100m Coil
TW8	3.43	0.38	100	100m Coil
TW9	3.02	0.38	150	150m Reel
TW10	2.72	0.30	200	200m Reel
TW11	2.44	0.30	250	250m Reel
TW12	2.16	0.30	250	250m Reel
TW13	1.93	0.30	250	250m Reel
TW14	1.73	0.30	500	500m Reel
TW15	1.57	0.30	500	500m Reel
TW16	1.42	0.30	500	500m Reel
TW17	1.27	0.30	500	500m Reel
TW18	1.14	0.30	500	500m Reel
TW19	1.02	0.30	500	500m Reel
TW20	0.89	0.30	500	500m Reel
TW22	0.71	0.25	500	500m Reel
TW24	0.58	0.25	500	500m Reel
TW26	0.51	0.25	1000	500m Reel
TW28	0.41	0.23	1000	500m Reel
TW30	0.33	0.20	1000	500m Reel

PVC HEAT SHRINK SLEEVING

Crovsleeve®

APPLICATIONS

- Component protection
- Joint covering
- Electrical insulation

CHARACTERISTICS

- Flexible
- Good dielectric strength
- Fungus resistant

APPROVALS

This product meets the general requirements of UL224.

A good general purpose heat shrink material offering low cost and ease of use.

SPECIFICATIONS

Standard sizes and colours listed, call for information on ordering custom colours and sizes.

	STD
Product Code	160
Temperature Range - ºC	-30 to +105
Elongation at Break - %	220
Dielectric Strength - kV/mm	15
Tensile Strength - MPa	19

STANDARD COLOURS
Black
Red
Yellow
Blue

STANDARD SIZES			
SUPPLIED DIA (MM)	RECOVERED DIA (MM)	RECOVERED WALL (MM)	REEL SIZE (M)
1.2	0.6	0.40	250
1.6	0.8	0.40	250
2.4	1.2	0.43	250
3.2	1.6	0.43	250
3.5	1.6	0.43	250
4.8	2.4	0.48	250
6.4	3.2	0.60	250
7.0	3.2	0.60	250
7.5	3.7	0.60	250
9.5	4.8	0.60	125
12.7	6.4	0.65	100
16.0	8.0	0.80	100
19.0	9.5	0.80	100
25.4	12.7	1.00	100
32.0	16.0	1.05	50
38.0	19.0	1.05	50
52.0	35.0	1.05	25
76.2	45.0	1.25	10

2 : 1 POLYOLEFIN HEAT SHRINK SLEEVING

Crovsleeve®

APPLICATIONS

- Joint covering
- Component protection
- Insulation

CHARACTERISTICS

- Tough
- Flexible
- Good dielectric strength
- Flame retardant
- Zero halogen (only certain grades)

APPROVALS

UL 224

MIL 23053/5

Polyolefin heat shrinks are the most widely used form, giving good temperature and chemical resistance as well as being tough and easy to use.

SPECIFICATIONS

Other shrink ratios are available as well as many other types. Please speak to the sales office for further information.

	STD
Product Code	162
Temperature Range - ºC	-55 to +135
Elongation at Break - %	400
Dielectric Strength - kV/mm	25
Tensile Strength - MPa	13

STANDARD COLOURS
Black

Other colours available on request.

STANDARD SIZES					
SIZE (INCHES)	SIZE (MM)	MINIMUM ID SUPPLIED (MM)	MAXIMUM ID RECOVERED (MM)	RECOVERED WALL THICKNESS (MM)	REEL SIZE (M)
3/64	1.2	1.20	0.60	0.41	200
1/16	1.6	1.60	0.80	0.43	200
3/32	2.4	2.40	1.20	0.51	200
1/8	3.2	3.20	1.60	0.51	200
3/16	4.8	4.80	2.40	0.51	200
1/4	6.4	6.40	3.20	0.65	100
3/8	9.5	9.50	4.70	0.65	100
1/2	12.7	12.7	6.40	0.65	50
3/4	19.1	19.1	9.50	0.77	50
1	25.4	25.4	12.70	0.89	50
1 1/2	38.1	38.1	19.10	1.00	25
2	50.8	50.8	25.40	1.10	12.5

3 : 1 ADHESIVE LINED POLYOLEFIN SLEEVING

APPLICATIONS

- Component protection
- Joint covering
- Sealing

CHARACTERISTICS

- Flexible
- Offers environmental protection
- Self extinguishing

APPROVALS

MIL 23053/4 Class 3

This material is a dual wall construction which offers a permanent, flexible, water-proof barrier.

SPECIFICATIONS

Standard sizes and colours listed, call for information on ordering custom colours and sizes.

	STD
Product Code	163
Temperature Range - ºC	-55 to +85
Elongation at Break - %	300
Dielectric Strength - kV/mm	15
Tensile Strength - MPa	10

STANDARD COLOURS
Black
Transparent

SPECIFICATIONS:
AMS-DTL-23053/4 Class 3 (Colours only)
UL E35586 (Colours only)

STANDARD SIZES

SIZE (INCHES)	SIZE (MM)	MINIMUM ID SUPPLIED (MM)	MAXIMUM ID RECOVERED (MM)	RECOVERED WALL THICKNESS (MM)	REEL SIZE (M)
1/8	3	3.0	1.0	1.00	150
3/16	4.8	4.8	1.6	1.00	75
1/4	6	6.0	2.0	1.10	100
3/8	9	9.0	3.0	1.40	50
1/2	12	12.0	4.0	1.78	60
3/4	18	19.0	6.0	2.25	25
1	24	24.0	8.0	2.54	60
1 1/2	39	40.0	13.0	2.54	30

KYNAR® HEAT SHRINK SLEEVING

APPLICATIONS

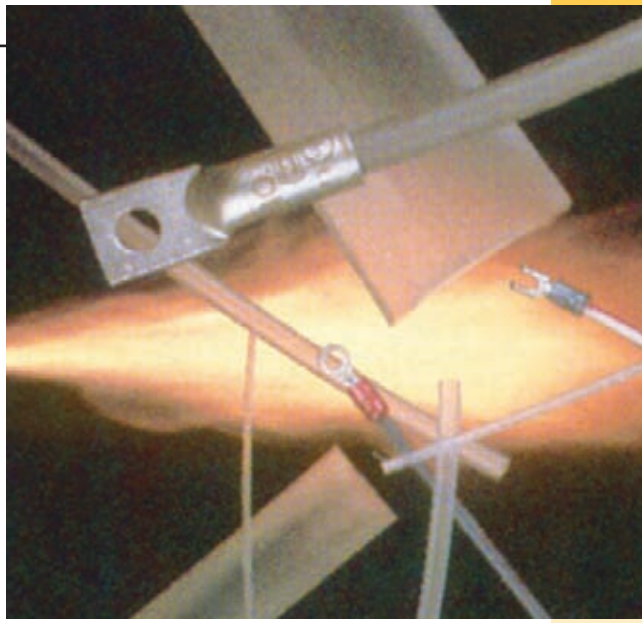
- Component protection
- Wire strain relief
- Good mechanical protection
- Electrical insulation

CHARACTERISTICS

- Excellent chemical resistance
- High temperature resistance
- Good mechanical resistance
- Self extinguishing

APPROVALS

MIL 23053/8 Class 1



Kynar offers excellent cut through and abrasion resistance and comes in a semi-rigid form. As it's a fluoropolymer it offers long service life and very good chemical resistance.

SPECIFICATIONS

Standard sizes and colours listed, call for information on ordering custom colours and sizes.

	STD
Product Code	164
Temperature Range - ºC	-55 to +175
Dielectric Strength - kV/mm	25

STANDARD COLOURS
Clear

Other colours available on request.
Also available in 1.2 metre lengths.

SPECIFICATIONS:
MIL-DTL-23053/8

STANDARD SIZES					
SIZE (INCHES)	SIZE (MM)	MINIMUM ID SUPPLIED (MM)	MAXIMUM ID RECOVERED (MM)	RECOVERED WALL THICKNESS (MM)	REEL SIZE (M)
3/64	1.2	1.20	0.60	0.25	300
1/16	1.6	1.60	0.80	0.25	300
3/32	2.4	2.40	1.20	0.25	150
1/8	3.2	3.20	1.60	0.25	150
3/16	4.8	4.80	2.40	0.25	150
1/4	6.4	6.40	3.20	0.30	75
3/8	9.5	9.50	4.70	0.30	75
1/2	12.7	12.70	6.40	0.30	75
3/4	19.1	19.10	9.50	0.43	60
1	25.4	25.40	12.70	0.48	60

INTRODUCTION TO Crovsleeve® BRAIDED SLEEVING

Braided sleeving is generally used for its superior strength and durability. We are able to offer an extensive range of these products and use various base materials including polyester, nylon, glass, quartz, Nomex® and PPS in a large range of braid patterns and coating methods.

All the glass products are produced in a humidity controlled environment and are sintered to eliminate barbs and give superior performance.

The use of various braiding techniques means we can offer most ranges in standard braid versions, anti-fray, non-fray knit braid and expandable versions.

We are also able to offer all these materials cut to the required length.

Crovsleeve® QUICK PRODUCT SELECTOR

	TEMPERATURE °C	DIELECTRIC STRENGTH	FLEXIBILITY	FLAME RETARDANCY	HALOGEN FREE	TENSILE STRENGTH	ABRASION RESISTANCE
VAC10 1kV Acrylic Glass Sleeving	155	Low	Medium	Medium	No	Medium	Medium
VAC30 VAC80 3kV & 8kV Acrylic Glass Sleeving	155	High	Medium	Medium	No	High	Medium
VSR10 Glass Braided Sleeving	300	Low	High	High	Yes	High	Medium
GUF40 Polyacrylate Glass Braided Sleeving	155	High	Medium	Medium	No	Medium	Medium
VSC Silicone Rubber Coated Glass Sleeving	200	High	High	High	Yes	Medium	Medium
Conform Sleeving	200	Medium	High	High	Yes	Medium	Medium
Expandable Polyester Monofilament Sleeving	150	N/A	High	Medium	Yes	Medium	High
Supersleeve	150	Low	High	High	Yes	Medium	Medium
Self Closing Sleeves	200	N/A	Medium	Medium	Yes	Medium	High

VAC10
1 kV ACRYLIC GLASS SLEEVING

APPLICATIONS

- Harnessing
- Mechanical protection
- Electrical insulation

CHARACTERISTICS

- Flexible
- Good temperature resistance
- Resilient
- Good chemical resistance

Often called heat resisting fibreglass sleeving, this is saturated with acrylic varnish making a tough and flexible insulation material.

SPECIFICATIONS

Not all sizes and colours are held in stock, so please contact the sales office before ordering.

	1kV
Product Code	200
Temperature Range - ºC	-25 to +155
Elongation at Break - %	9.95
Dielectric Strength - kV/mm	1
Tensile Strength - MPa	21.90

STANDARD COLOURS
Natural
Black
Red
Brown
Yellow
Green
Blue

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
0.5	400
1	400
1.5	200
2	200
3	200
4	200
5	100
6	100
7	100
8	100
9	100
10	100
12	100
14	50
16	50

VAC30 VAC80
3 kV & 8 kV ACRYLIC GLASS SLEEVING

This is the most commonly used fibreglass sleeving for insulation purposes, having good electrical and mechanical properties.

APPLICATIONS

- Wire harnessing
- Electrical insulation
- Motor insulation

CHARACTERISTICS

- Flexible
- Good mechanical strength
- Good dielectric strength
- Good temperature resistance

APPROVALS

Passes UL 1441 flame test in horizontal position.

SPECIFICATIONS

Not all sizes and colours are held in stock. Please check with the sales office before ordering.

	3 kV	8 kV
Product Code	210	212
Temperature Range - ºC	-25 to +155	-25 to +155
Elongation at Break - %	13.13	10.13
Dielectric Strength - kV/mm	3	8
Tensile Strength - MPa	1.869,52	2.322,78

STANDARD COLOURS
Natural
Black
Red
Brown
Yellow
Green
Blue

STANDARD SIZES		
SIZE (MM)	REEL SIZE 3 KV (M)	REEL SIZE 8 KV (M)
0.5	400	400
1	400	400
1.5	300	300
2	200	200
2.5	200	200
3	200	200
3.5	200	200
4	200	200
4.5	100	-
5	100	100
6	100	100
7	100	100
8	100	100
9	100	100
10	100	100
12	50	50
14	50	50
16	50	50

VSR 10 GLASS BRAIDED SLEEVING

A highly flexible braided glass sleeving offering excellent handling properties, together with high temperature capabilities.

APPLICATIONS

- Harnessing
- Electrical insulation
- Flexible conduit
- General protection

CHARACTERISTICS

- Excellent temperature resistance
- Highly flexible
- Highly resilient
- Low smoke and fume, zero halogen
- Good fray resistance
- Oxygen Index 64.5%

APPROVALS

UL recognised – File No E151092
IEC 60684 UL 1441
LUL Rail Industry Approvals

SPECIFICATIONS

Please note that not all sizes are available in stock, so please check with our sales office before ordering.

	STD
Product Code	230
Temperature Range - ºC	-40 to +300
Elongation at Break - %	7.71
Dielectric Strength - kV/mm	1k
Tensile Strength - MPa	864.19
Abrasion Resistance - cycles minimum	25,000

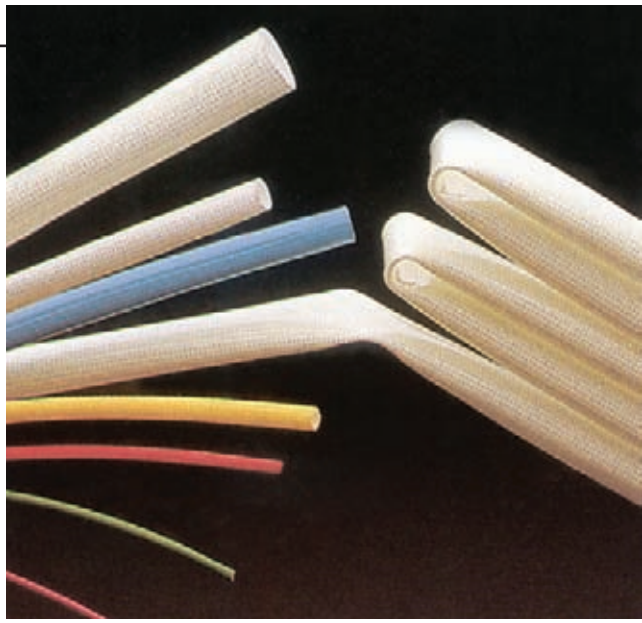
STANDARD COLOURS
Natural
Other colours available on request.

This product is also available as standard in an expandable version.

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
0.5	400
1	300
1.5	300
2	300
3	300
4	300
5	200
6	200
7	200
8	200
10	200
12	100
16	100
20	100
25	50
30	50

GUF40 POLYACRYLATE GLASS BRAIDED SLEEVING

Crov®sleeve



APPLICATIONS

- Electrical insulation

CHARACTERISTICS

- Good chemical resistance
- Good compatibility with impregnating and finishing varnishes

APPROVALS

UL approved

This material is produced using the latest UV cure technologies which creates an excellent homogeneous durable coating, giving this material high dielectric strength and making it easier to handle.

SPECIFICATIONS

Not all sizes and colours are held in stock. Please check with the sales office before ordering.
Also available as GUF80 which is an 8kV version.

	STD
Product Code	230
Temperature Range - ºC	-25 to +155
Elongation at Break - %	11.46
Dielectric Strength - kV/mm	4
Tensile Strength - MPa	1.565,20

STANDARD COLOURS
Natural
Black

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
1	300
1.5	300
2	300
2.5	200
3	200
3.5	200
4	200
5	200
6	100
7	100
8	100
10	100
16	50
20	25

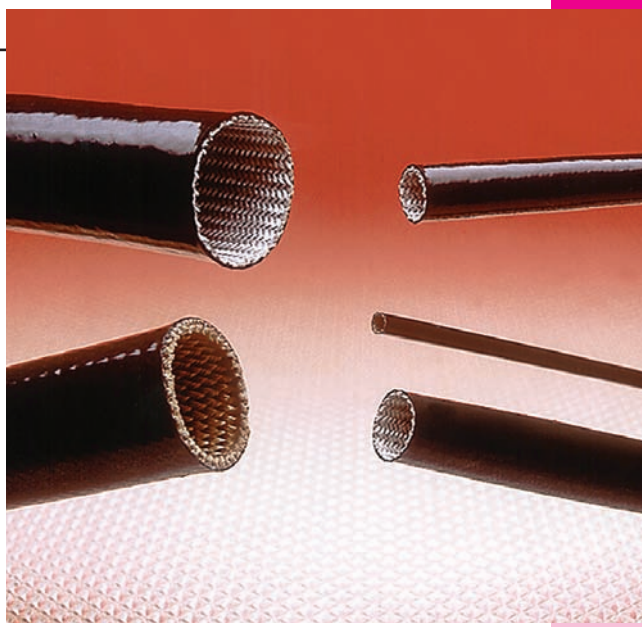
VSC SILICONE RUBBER COATED GLASS SLEEVING

APPLICATIONS

- Harnessing
- Electrical insulation
- Terminal protection

CHARACTERISTICS

- Good dielectric strength
- Good mechanical resistance
- Highly flexible
- Flame retardant



This sleeving gives both the benefits of an extruded silicone rubber as well as a fibreglass sleeving, giving good strength and flexibility as well as excellent dielectric strength at high temperature.

SPECIFICATIONS

Not all sizes and colours are held in stock. Please check with the sales office before ordering. The VSC40 is not currently held in stock so please contact the sales office for further details.

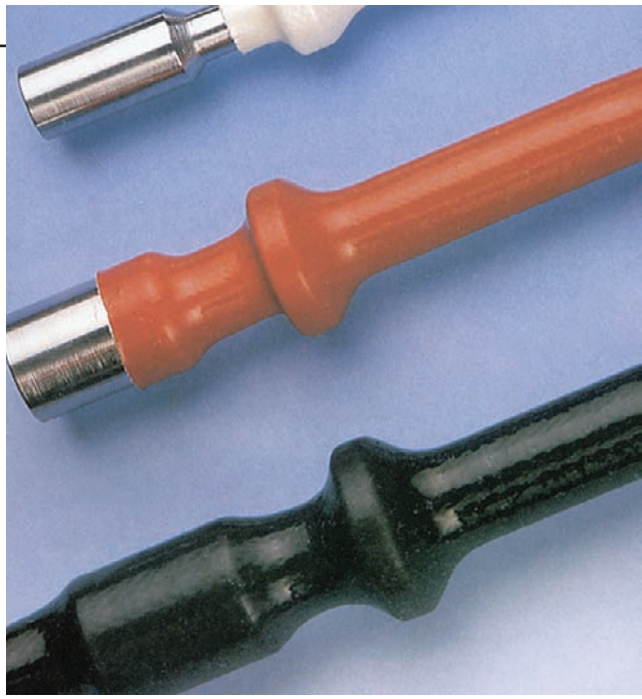
	VSC25	VSC40	VSC75
Product Code	251		252
Temperature Range - ºC	-70 to +200	-70 to +200	-60 to +200
Elongation at Break - %	13.92	12.19	7.96
Dielectric Strength - kV/mm	2.5	4.0	7.5
Tensile Strength - MPa	1.485,05	1.394,16	1.983,68

STANDARD COLOURS
Black
Red/Brown

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
1	200
1.5	200
2	200
2.5	200
3	200
4	200
5	200
6	100
7	100
8	100
10	100
12	50
14	50
16	50
20	50
25	50

CONFORM SLEEVING

EXPANDABLE SILICONE RUBBER GLASS BRAIDED



APPLICATIONS

- Harnessing
- Protection of components
- Terminal protection

CHARACTERISTICS

- Good dielectric strength
- Highly flexible
- Expandable
- Good mechanical resistance
- Flame retardant

APPROVALS

'A' version has UL recognition file number E121222

This unique material has the ability to expand over awkward shapes and conform itself to the profile of the part it is covering. Often used as an alternative to heat shrink, it has a high temperature resistance and requires no additional processes.

SPECIFICATIONS

Not all sizes are held in stock. Please check with the sales office before ordering. The 'A' is not held in stock, and therefore would be subject to a minimum order quantity and lead-time.

	CONFORM 'A'	CONFORM 'B'
Product Code		270
Temperature Range - ºC	-70 to +200	-70 to +200
Elongation at Break - %	6,04	9,37
Dielectric Strength - kV/mm	8kV normal or expanded	4kV normal 2.5kV expanded
Tensile Strength - MPa	2.388,70	2.860,51
Expansion Ratio	1:2	1:1.6

STANDARD COLOURS
Black

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
2	200
3	200
4	200
5	100
6	100
8	100
10	100
12	50
14	50
16	50
18	50
20	50
25	50

EXPANDABLE POLYESTER MONOFILAMENT SLEEVING

Crov®sleeve

APPLICATIONS

- Harnessing
- Stress relief

CHARACTERISTICS

- Extremely flexible
- Highly expandable
- Good mechanical resistance
- Self extinguishing

APPROVALS

Complies with UL Standard 224

This material is widely used in the harness and protection industry, being flexible and easy to use, giving good protection to a cable bundle and excellent abrasion resistance.

SPECIFICATIONS

All sizes and colours are held in stock.

	STD
Product Code	240
Temperature Range - ºC	-50 to +150
Elongation at Break - %	58.98
Dielectric Strength	N/A
Tensile Strength	280 daN for nominal 6mm diameter sleeving

STANDARD COLOURS
Black
Grey

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
3	200
4	200
5	200
6	200
8	200
10	200
12	200
15	100
20	100
25	100
30	100
40	50
50	50

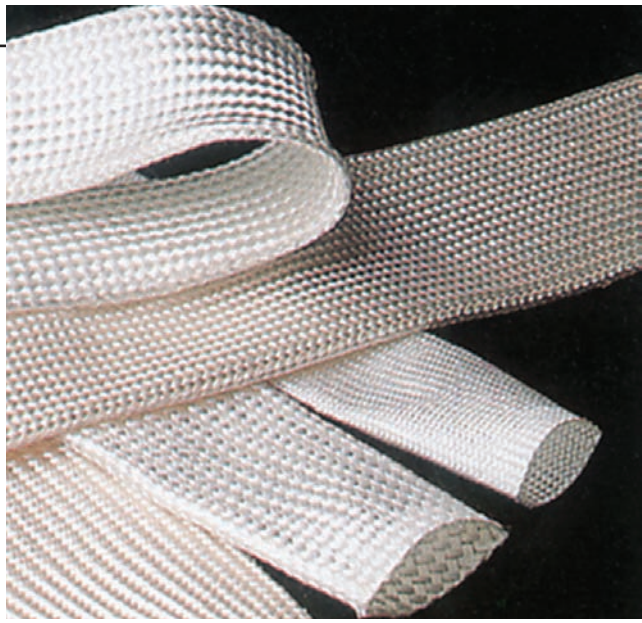
SUPERSLEEVE

APPLICATIONS

- Thermal insulation
- Mechanical protection for harnesses
- Hydraulic and fuel conduits
- Exhaust systems

CHARACTERISTICS

- Extremely high temperature
- Expandable
- Good fray resistance
- Good retention of mechanical properties



This patented specially treated knit braid sleeving is available in glass and silica versions and displays greatly superior temperature capabilities while maintaining its overall strength.

SPECIFICATIONS

Available in any required size.

	SUPERSLEEVE 600	SUPERSLEEVE 1100
Temperature Range - ºC	-70 to +650	-70 to +950
Elongation at Break - %	18	10
Dielectric Strength - kV/mm	1	2
Tensile Strength - MPa	864	456
Abrasion Resistance - cycles minimum	25,000	10,000

STANDARD COLOURS
Natural

SELF CLOSING SLEEVES

Crov®sleeve

APPLICATIONS

- Harness bundling
- Abrasion protection
- Noise reduction
- Thermal barrier

TYPES AVAILABLE

- Polyester
- Meta–aramid
- Easy bend
- Screened
- Low smoke, high oxygen index

A range of self closing harness protection sleeves that are simple to fit and offer exceptional properties, such as abrasion resistance, flame retardancy and thermal stability. The product offers a 50% overlap with excellent closure memory and can be used as part of the original harness construction or in a retro–fit situation.

SPECIFICATIONS

Not all sizes are held in stock, so please check with the sales office. Other dimensions supplied on request.

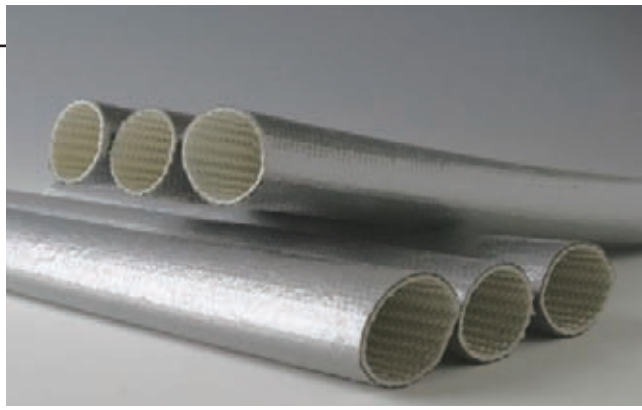
	STD
Product Code	242
Temperature Range - ºC	-50 to +200
Elongation at Break - %	46,03
Dielectric Strength - kV/mm	N/A
Tensile Strength - MPa	22.51

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
4	200
7	200
10	150
14	125
20	75
26	75
32	50

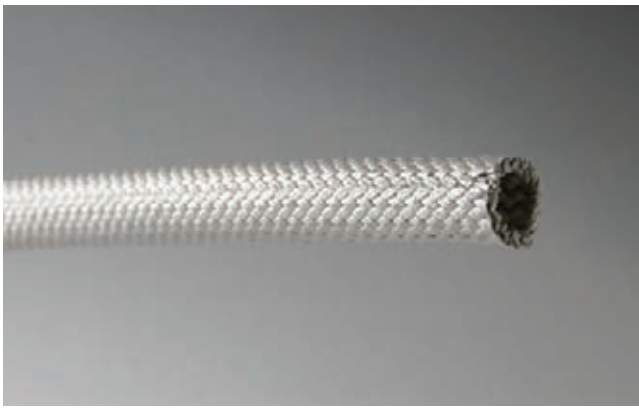
RANGE OF APPLICATION				
SIZE (MM)	75% OVERLAP	50% OVERLAP	25% OVERLAP	WIDTH (MM)
4	4	6	8	37 ±5
7	7	10	12	53 ±5
10	10	12	15	63 ±5
14	14	17	21	84 ±8
20	20	23	28	114 ±8
26	26	28	34	135 ±8
32	32	36	44	175 ±10

SLEEVING
SPECIAL TYPES

Croysleeve®

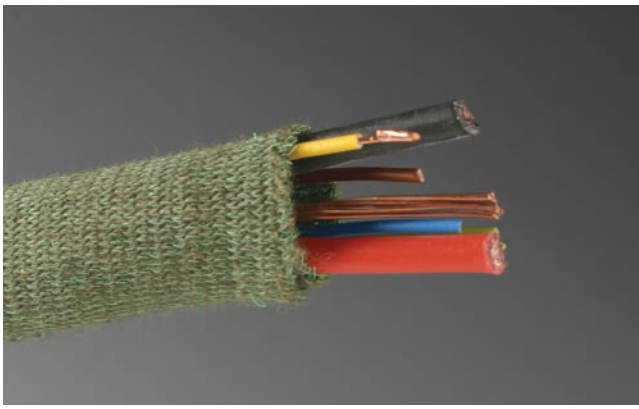


SCREENED SLEEVE
A large number of our braided sleeves are available in a screened or aluminized version. These can be used for EMI shielding, heat reflection and higher thermal stability. This is achieved with an aluminized coating or with an aluminium foil screened layer.

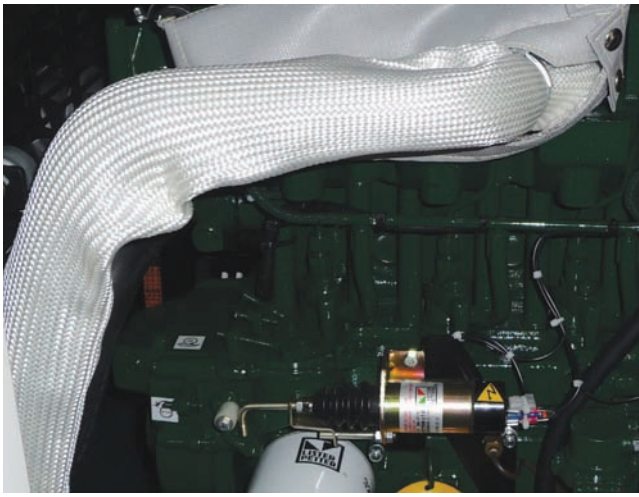


RODENT PROTECTION
By means of a special coating we can make most of the sleeves anti-rodent, which is particularly useful for outdoor applications.

META–ARAMID
A selection of sleeves using meta–aramid is produced with particular attention to aerospace applications and approvals. These are available in standard, self-closing and expandable versions.



BESPOKE SOLUTIONS
Very often our customers have a specific requirement which needs a special solution. With our excellent R & D facilities we are often able to provide a cost-effective solution within a reasonable timescale to meet these needs.



INTRODUCTION TO Crov®tape ADHESIVE TAPES

All of our adhesive tapes are available with three different adhesive systems: rubber thermosetting, acrylic and silicone bases, and in a number of different tack strengths.

All substrates are available in a number of thicknesses and, in many cases, a variety of colours. Substrates available include paper, cotton, polyester, glass, Nomex® and Kapton®.

We are also able to offer most tapes as converted piece parts such as washers, masking dots and quick release pads and are also able to slit the majority of tapes to any width required.

Crov®tape QUICK PRODUCT SELECTOR

	TEMPERATURE °C	DIELECTRIC STRENGTH	ADHESION TO STEEL	FLAME RETARDANCY	HALOGEN FREE	TENSILE STRENGTH
Adhesive PVC Tape	70	Medium	Medium	Low	No	Low
High Temperature Adhesive Crepe Tape	105	Low	Low	Low	Yes	Low
Yellow Adhesive Polyester Tape	130	High	Medium	Medium	Yes	Medium
Blue Polyester Tape	150	High	Low	Medium	Yes	Medium
Glass Reinforced Polyester Adhesive Tape	130	High	High	Medium	Yes	High
Double Sided Tapes	Properties vary depending on type					
Adhesive Polyfleece Tape	130	Medium	Medium	Low	Yes	Medium
Adhesive Acetate Cloth Tape	120	Low	Medium	Low	No	High
Adhesive Glass Tape	130 - 180	Low	Medium	High	Yes	High
Adhesive Kapton® Tape	180	High	Medium	High	Yes	Medium
PTFE Tapes	260	High	Medium	High	No	Low

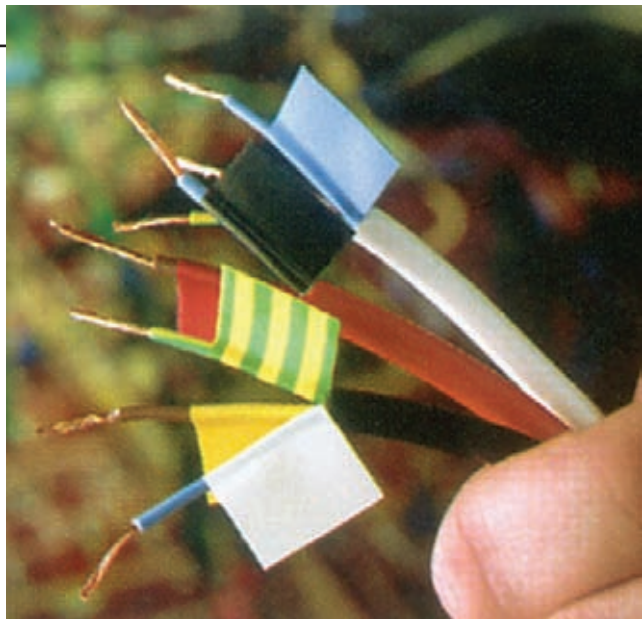
ADHESIVE PVC TAPE

APPLICATIONS

- Electrical insulation
- Harnessing
- Hold down

CHARACTERISTICS

- Highly flexible
- Highly conformable
- Good dielectric strength



A general purpose PVC electrical tape for use in numerous applications. We can also offer a number of higher specification versions for more demanding applications.

SPECIFICATIONS

Tapes available; 19mm, 25mm and 38mm in various colours, other sizes and colours are available on request.

	AVERAGE
Product Code	340
Temperature Range - ºC	-5 to +70
Total Thickness - mm	0.18 +/-2mm
Adhesive Thickness - mm	0.029
Elongation at Break - %	36
Dielectric Strength - kV/mm	8
Tensile Strength - N/25mm	36

STANDARD COLOURS
Black
Red
Green
Blue

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
12	33
19	33
25	33
38	33

HIGH TEMPERATURE ADHESIVE CREPE TAPE

APPLICATIONS

- High temperature masking
- Hold down
- Outer wrap

CHARACTERISTICS

- Good temperature resistance
- Good aesthetic qualities

This very high quality crepe paper tape is designed for high temperature applications and also, due to its thickness, gives excellent coverage.

SPECIFICATIONS

Tapes available in the specified widths.
Other sizes are available on request.

	STD
Product Code	350
Temperature Range - ºC	-10 to +105 (180 short term)
Total Thickness - mm	0.190
Adhesive Thickness - mm	-
Elongation at Break - %	15
Dielectric Strength - kV/mm	105
Tensile Strength - N/cm	50

STANDARD COLOURS
Natural Buff

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
6	50
7	50
9	50
11	50
12	50
13	50
14	50
15	50
17	50
19	50
20	50
22	50
24	50
25	50
27	50
28	50
30	50
32	50
35	50
38	50
45	50
50	50
55	50

YELLOW ADHESIVE POLYESTER TAPE

A thermosetting rubber adhesive yellow polyester tape offering excellent handling properties, high dielectric strength and good value. An acrylic adhesive version is also available.

APPLICATIONS

- Electrical insulation
- Fixing
- Stress relief
- Wire harnessing
- Hold down

CHARACTERISTICS

- Good temperature resistance
- High dielectric strength
- Thermosetting adhesive
- Highly conformable

APPROVALS

UL – File No E82910(M)

SPECIFICATIONS

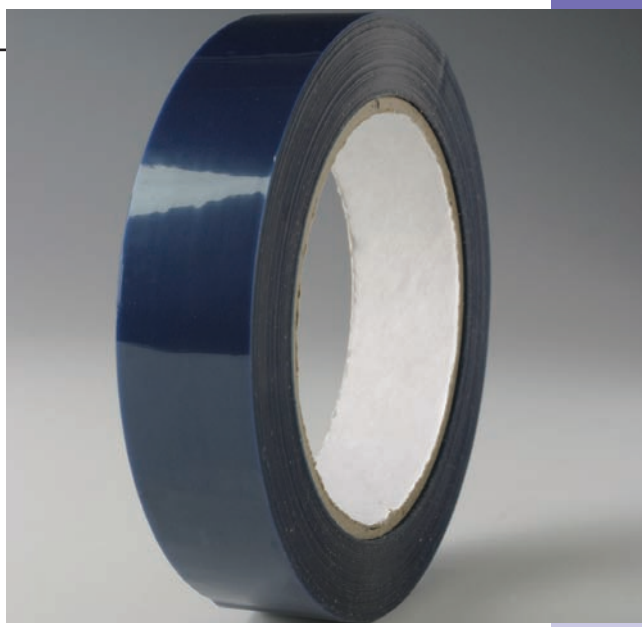
Yellow is the most commonly used colour, custom colours are available. Tapes available on 66m reels, size from 3mm upwards can be cut to width in house and this is available on request.

	AVERAGE
Product Code	300
Operating Temperature - ºC	130
Total Thickness - mm	50
Adhesive Thickness - mm	0.029
Elongation at Break - %	130
Dielectric Strength - kV/mm	4
Tensile Strength - N/25mm	112

STANDARD COLOURS
Yellow

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
6	66
12	66
19	66
25	66

BLUE POLYESTER TAPE

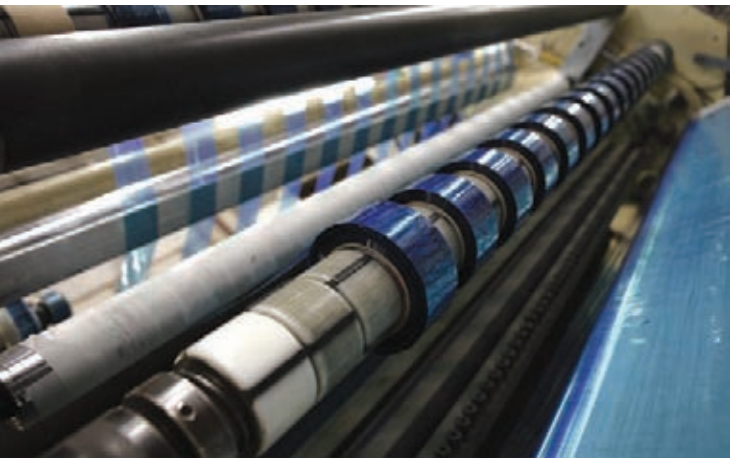


APPLICATIONS

- High temperature masking
- Mould taping
- Temporary fixing

CHARACTERISTICS

- Good temperature resistance
- Good chemical resistance
- Clean, easy–peel after application



This is a polyester tape that uses a pressure sensitive silicone adhesive system which allows for easy, clean removal.

SPECIFICATIONS

Tapes available from 3mm and above, these can be cut to width this is available on request.

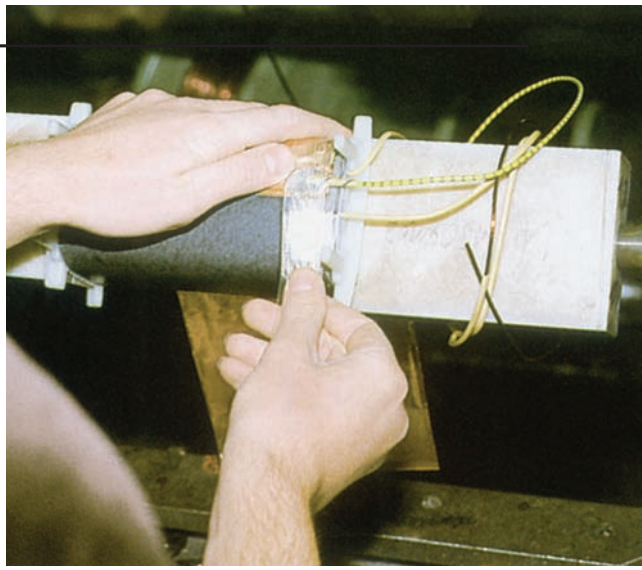
	AVERAGE
Product Code	306
Temperature Range - ºC	-50 to +150
Total Thickness - mm	0.037
Adhesive Thickness - mm	0.025
Elongation at Break - %	100
Tensile Strength - N/cm	100

STANDARD COLOURS
Blue

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
19	66

GLASS REINFORCED POLYESTER ADHESIVE TAPE

Croytape®



APPLICATIONS

- Electrical insulation
- Outer wrap
- Wire harnessing

CHARACTERISTICS

- Good temperature resistance
- High tensile strength
- Thermosetting

APPROVALS

UL – File No E82910(M)

This tape is for use in locations where both temperature and high mechanical strength are required. The material has high impact and tensile strength in both directions.

SPECIFICATIONS

Available in any width.

	AVERAGE
Product Code	314
Operating Temperature - ºC	130
Total Thickness - mm	0.17
Adhesive Thickness - mm	0.05
Elongation at Break - %	8
Dielectric Strength - kV/mm	5
Tensile Strength - N/25mm	200

STANDARD COLOURS
Natural (Clear)

DOUBLE SIDED TAPES

APPLICATIONS

- Fixing
- Sealing
- Noise and vibration damping
- Positioning of components
- Interlayer insulation

CHARACTERISTICS

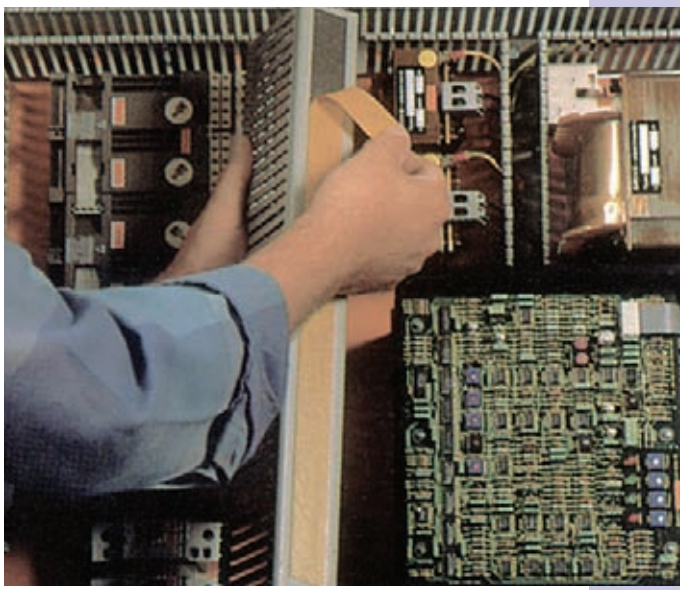
- Highly conformable
- Good dielectric strength
- Good temperature resistance
- Easy to use

These tapes have a wide range of uses and we offer various substrates including paper, polyester and foam.

SPECIFICATIONS

Various properties are available with operating temperatures up to 180ºC. Various combinations of electrical and mechanical properties can be achieved, including different adhesive tack strengths.

We have a large range of these tapes and can offer them in a number of different forms from standard double sided tapes with release liner to pads and tagged tapes which eases handling of these items. Available in any width.



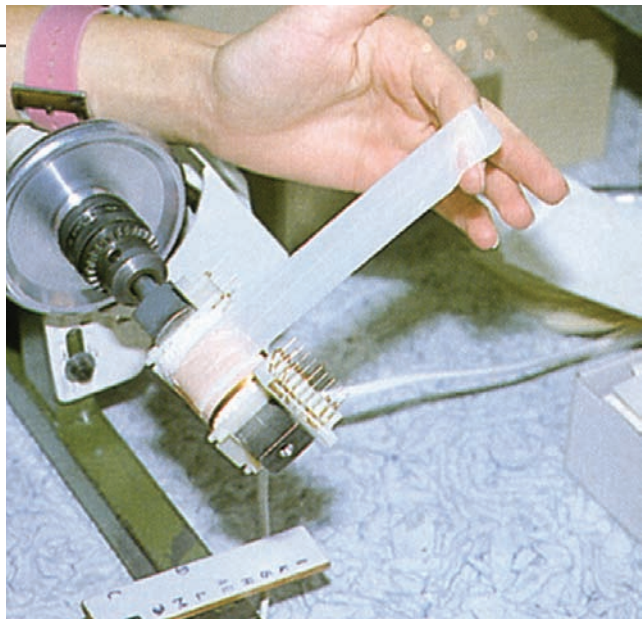
ADHESIVE POLYFLEECE TAPE

APPLICATIONS

- Electrical insulation
- Phase insulation
- Outer wraps
- Hold down

CHARACTERISTICS

- Good puncture resistance
- High dielectric strength
- Good mechanical strength



This is a composite material designed to offer good mechanical and dielectric strength, together with puncture and abrasion resistance and the ability to absorb varnishes and resins.

SPECIFICATIONS

Tapes available in 12mm, 19mm & 25mm.
Other sizes are available on request.

	STD
Product Code	394
Operating Temperature - ºC	130
Total Thickness - mm	0.23
Adhesive Thickness - mm	0.165
Elongation at Break - %	20%
Dielectric Strength - kV/mm	7
Tensile Strength - N/cm	65

STANDARD COLOURS
Natural Cream

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
12	50
19	50
25	50

ADHESIVE ACETATE CLOTH TAPE

APPLICATIONS

- Insulation wrap
- Hold down
- End turn and interface insulation

CHARACTERISTICS

- Excellent conformability
- Good aesthetic qualities
- High tensile strength
- Thermosetting
- Good varnish support

This classical tape gives superior finishes to most products and has excellent handling capabilities.

SPECIFICATIONS

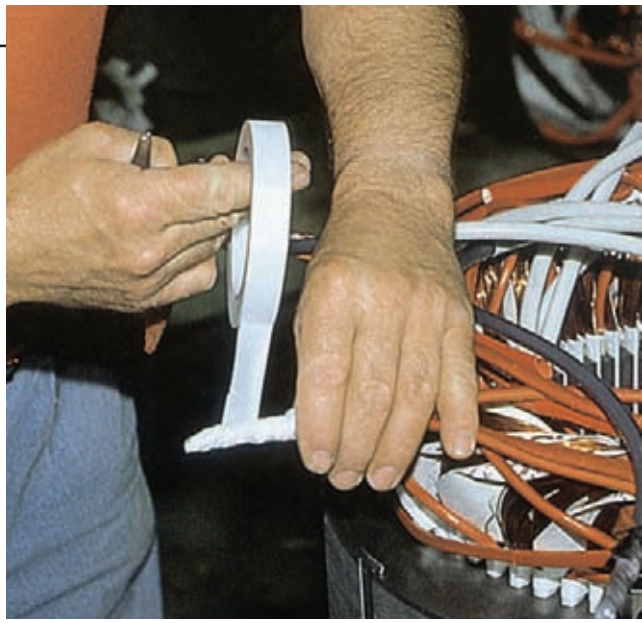
Tapes available in the specified widths.
Other sizes are available on request.

	AVERAGE
Product Code	320
Temperature Range - ºC	-10 to +120
Total Thickness - mm	0.200
Adhesive Thickness - mm	0.155
Elongation at Break - %	22
Dielectric Strength - kV/mm	2.5
Tensile Strength - N/cm	50

STANDARD COLOURS
Black
White

STANDARD SIZES	
SIZE (MM)	REEL SIZE (M)
6	55
10	50
12	55
15	55
19	55
25	55
50	55

ADHESIVE GLASS TAPE



These strong, flexible, high temperature tapes are widely used for both their thermal and mechanical ability. Designed to resist edge fraying, the materials are very good over long term ageing.

APPLICATIONS

- Electrical insulation
- Harnessing
- Stress relief
- Interlayer insulation
- Hold down

CHARACTERISTICS

- Good temperature resistance
- High abrasion resistance
- Good mechanical resistance
- Highly conformable
- Varnish absorbent
- Thermosetting adhesive
- High tensile strength

APPROVALS

Class B - MIL-I-15126F. Type GFT. UL recognised.
Class F - MIL-I-15126F, Type GFT. UL recognised.
Class H - MIL-T-19166C. UL recognised.
Guide No.0AN 22. File No.E20780.

This product is flame retardant.

SPECIFICATIONS

Tapes available in widths 12mm, 15mm, 19mm, 25mm, 38mm & 50mm. Other sizes are available on request.

	CLASS B	CLASS F	CLASS H
Product Code	330	331	332
Operating Temperature - ºC	130	155	180
Total Thickness - mm	0.18	0.19	0.18
Adhesive Thickness - mm	0.05	-	0.05
Elongation at Break - %	8	6%	8
Dielectric Strength - kV/mm	2.5	2.5	3
Tensile Strength - N/25mm	756	850	756

STANDARD COLOURS
Black (available on request)
White

STANDARD SIZES		
PRODUCT	SIZE (MM)	REEL SIZE (M)
CLASS B	12	55
	15	55
	19	55
	38	55
	50	55
CLASS F	12	55
	15	55
	19	55
	38	55
	50	55
CLASS H	12	33
	15	33
	19	33
	50	33

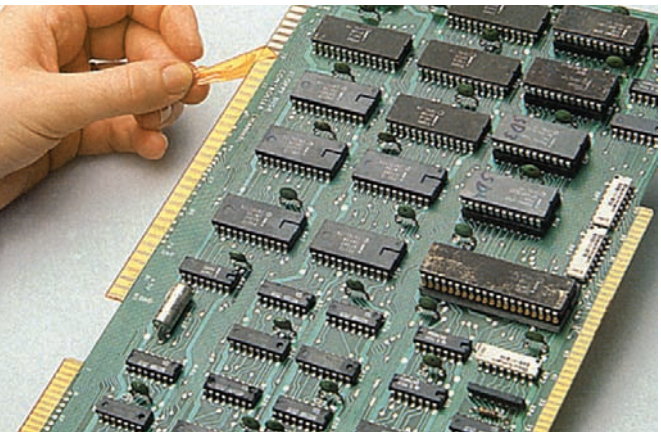
ADHESIVE KAPTON® TAPE

APPLICATIONS

- Electrical insulation
- High temperature masking

CHARACTERISTICS

- High temperature resistance
- High mechanical resistance
- Highly conformable



This tape is used for particularly demanding applications where high temperature and high dielectrics are required, together with excellent chemical resistance.

SPECIFICATIONS

Tapes available from 5mm, 6mm, 7mm, 8mm, 25mm, 38mm & 40mm in thickness of 0.025mm and 12mm, 19mm and 50mm in thickness of 0.030mm. Other sizes available on request.

	STD
Product Code	307
Temperature Range - ºC	-40 to +180
Total Thickness - mm	0.70
Adhesive Thickness - mm	0.45
Elongation at Break - %	50
Dielectric Strength - kV/mm	303
Tensile Strength - N/25mm	135

Dielectric Strength changes according to thickness.

STANDARD COLOURS
Amber

STANDARD SIZES		
THICKNESS	SIZE (MM)	REEL SIZE (M)
0.025MM	5	33
	6	33
	7	33
	8	33
	25	33
	38	33
	40	33
0.030MM	12	33
	19	33
	50	33

PTFE TAPES

APPLICATIONS

- Electrical insulation
- High temperature applications
- Cryogenic and low temperature
- Low friction
- Impregnation masking

CHARACTERISTICS

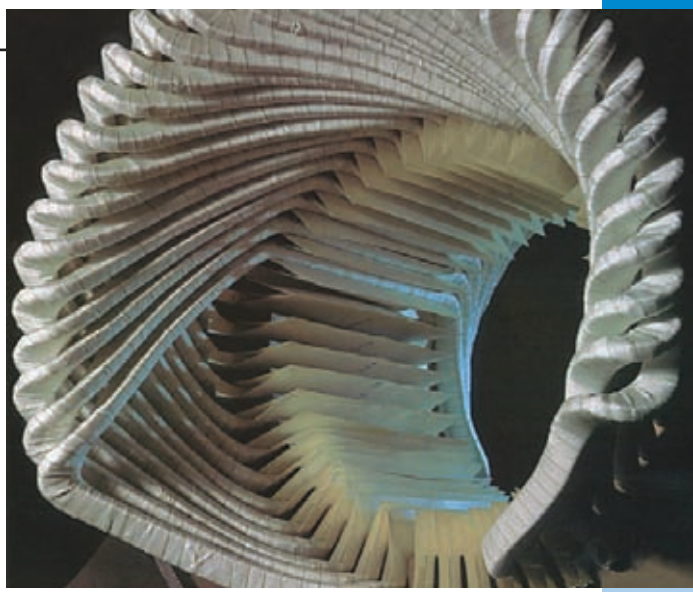
- High temperature resistance
- Low temperature resistance
- Very high chemical resistance
- Anti–stick properties
- Excellent stability

We have a large range of PTFE tapes, including PTFE coated glass, skived PTFE, impervious and permeable varieties.

SPECIFICATIONS

Available in a full range of widths and thicknesses, and in adhesive and non–adhesive versions.
For other properties contact our Sales Team for a data sheet for the specific product you are interested in.

INTRODUCTION TO Crovtape WOVEN AND NON ADHESIVE TAPES



These materials include traditional natural products such as cottons and papers, together with modern polymeric materials and electrical grade glass.

The woven materials offer their own unique properties and have a wide variety of applications, and are particularly suitable for use with varnishes and impregnation systems.

We are able to offer the majority of products in any width required and all standard widths are held as off-the-shelf items.

Crovtape QUICK PRODUCT SELECTOR

	TEMPERATURE ºC	DIELECTRIC STRENGTH	FLAME RETARDANCY	HALOGEN FREE	TENSILE STRENGTH	ABRASION RESISTANCE
Cotton Tapes	90	Low	Low	Yes	Medium	Low
Woven Terylene Tape	150	Low	Low	Yes	Medium	Medium
Spun Polyester Tape	150	Low	Low	Yes	Medium	Medium
Woven Glass Fibre Tape	400	Low	High	Yes	High	Medium
Varnished Cotton Tape	105	High	Low	Dependant on Type	Medium	Medium
Varnished Terylene Tape	120	High	Low		Medium	Medium
Varnished Glass Fabric Tape	180	High	Medium		High	Medium
PVC Self Bonding Tape	90	High	Medium	No	Low	Low
Tying Tape	130	N/A	Low	Yes	High	High
Polyglas Banding Tape	200	N/A	Medium	Yes	High	High
Copper Screening Tape	150	Medium	High	Yes	Medium	Medium

COTTON TAPES

APPLICATIONS

- Coil insulation
- Outer wrap
- Coil cell manufacture
- Good varnish support

CHARACTERISTICS

- Highly absorbent
- Good tensile strength

Cotton tapes are traditionally used for their excellent absorption characteristics with varnish and resins, and have been used in electrical equipment for many years.

SPECIFICATIONS

Other widths are available on request.
Please contact our sales office for a quotation.

	STD
Operating Temperature - ºC	90
Thickness - mm	0.25 to 0.45
Tensile Strength - N/25mm	250-300

STANDARD COLOURS
White

STANDARD SIZES		
WIDTH (MM)	INDIAN COTTON REEL SIZE (M)	EGYPTIAN COTTON REEL SIZE (M)
13	50	50
19	50	50
25	50	50
30	-	50
38	50	-
50	50	-

WOVEN TERYLENE TAPE

APPLICATIONS

- Wrapping coils
- Tying
- Rotating machines

CHARACTERISTICS

- Good tensile strength
- Compatible with impregnation
- Shrinkable

This tape has high tensile qualities and exhibits excellent handling characteristics.

SPECIFICATIONS

Standard reel sizes are 50 metres.
Available in any width from 6mm.

	STD
Operating Temperature - ºC	150
Thickness - mm	0.13
Tensile Strength - N/25mm	160

STANDARD COLOURS
Natural

STANDARD SIZES	
WIDTH (MM)	REEL SIZE (M)
6	50
13	50
20	50
25	50
30	50
40	50

SPUN POLYESTER TAPE

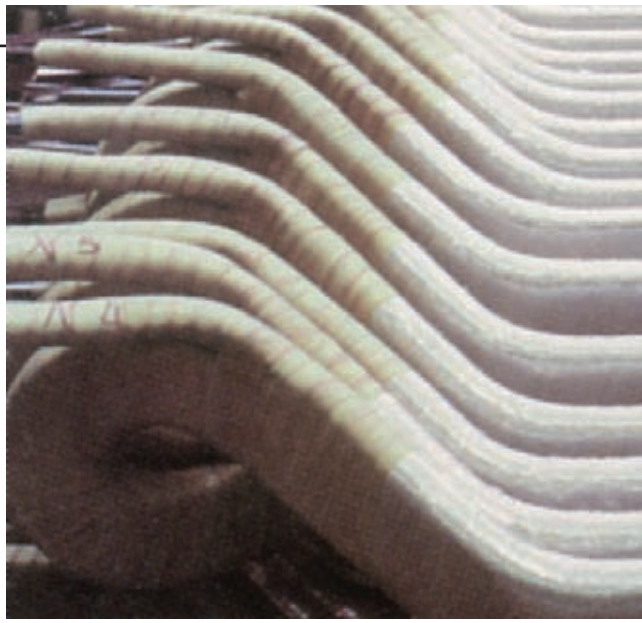
Croytape®

APPLICATIONS

- Wrapping coils
- Finishing tape
- Coil cell manufacture

CHARACTERISTICS

- Good aesthetic qualities
- Highly absorbent



This is a woven tape with a non-twisted assembled polyester yarn which adds swelling to the tape, making it conformable to uneven surfaces.

SPECIFICATIONS

Not all widths are held in stock, so please check with the sales office before ordering.

	STD
Operating Temperature - ºC	150
Thickness - mm	0.40
Tensile Strength - daN	30

STANDARD COLOURS
White (other colours are available on request in the normal widths)

STANDARD SIZES	
WIDTH (MM)	REEL SIZE (M)
6	50
12	50
19	50
25	50
38	50
50	50

WOVEN GLASS FIBRE TAPE

APPLICATIONS

- Coil wrapping
- Rotating machines

CHARACTERISTICS

- High temperature resistance
- High tensile strength
- Good support of impregnation systems

APPROVALS

To British Specification BS 3779:1985

This material is used for high temperature applications, mainly in the rotating machine industry.

SPECIFICATIONS

Available in standard sizes of 6, 13, 20, 25, 40 and 50mm
Not all widths and thicknesses are held in stock, so please contact the sales office before ordering.

Operating Temperature - ºC	400	400	400	400	400
Thickness - mm	0.09	0.13	0.18	0.23	0.40
Minimum Tensile Strength in Wrap Direction N/mm Width	25	30	40	45	70

STANDARD COLOURS
White

VARNISHED TAPE

COTTON TAPE

APPLICATIONS

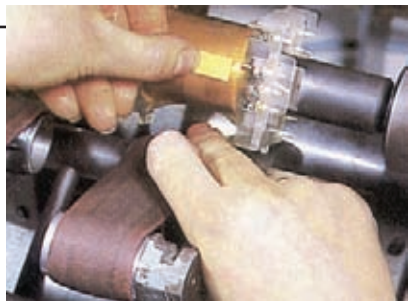
- Cable insulation
- Conductor wrapping
- Connection wrapping
- Armature protection caps
- Interlayer coil insulation
- Oil filled environments

CHARACTERISTICS

- Extremely flexible
- Good electrical properties
- Resistance to most chemicals

This tape is produced by impregnation of a fine quality plain weave cotton, normally with a glyptal varnish. This material is strong and flexible and dimensionally stable.

TERYLENE TAPE



APPLICATIONS

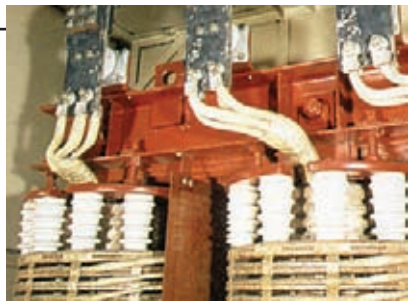
- Cable insulation
- Conductor wrapping
- Connection wrapping
- Armature protection caps

CHARACTERISTICS

- Highly flexible
- Good thermal properties
- Good electrical properties

This is a woven heat set Polyester which is then impregnated with a varnish, either glyptal, polyurethane or polyester. This makes it extremely versatile and suitable for a wide range of applications.

GLASS FABRIC TAPE



APPLICATIONS

- Cable wrapping
- Machine coil taping
- Phase barrier insulation
- End winding insulation
- Dry type transformer insulation
- Coil cell manufacture
- HT motor winding

CHARACTERISTICS

- Good tensile strength
- Flexible
- Good electrical properties
- Good mechanical resistance

This is produced using E glass fibre yarns, the fabric then being impregnated with one of five varnishes, depending on the performance requirement.

SPECIFICATIONS

In any width required from 6mm.
Standard roll lengths are 50 meters.

STANDARD COLOURS
Yellow (available in straight or bias cut)

	VARNISHED COTTON TAPE	VARNISHED TERYLENE TAPE	VARNISHED GLASS FABRIC TAPE
Operating Temperature - ºC	105	120	180
Thickness - mm	0.18 and 0.25	0.10, 0.13, 0.15 and 0.18	0.13, 0.18 and 0.25
Dielectric Strength - kV/mm	37	40 kV/mm	62
Tensile Strength - N/cm	100	80	38

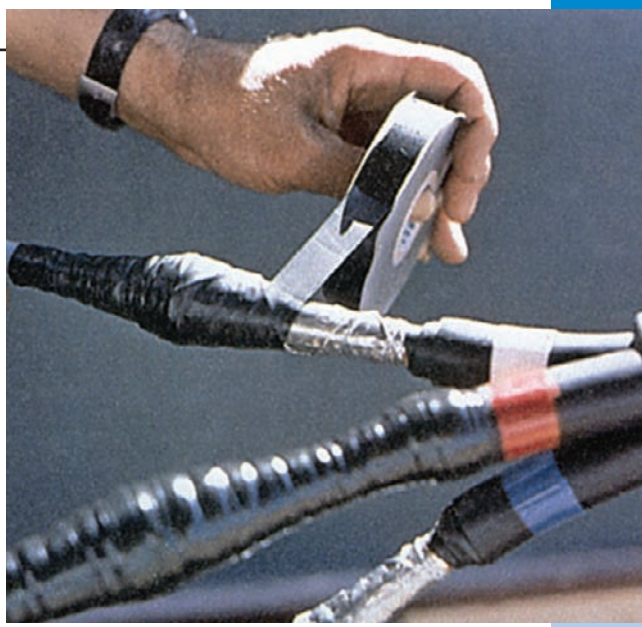
PVC SELF BONDING TAPE

APPLICATIONS

- Cable repair
- Cable protection
- Water-proofing
- Harnessing

CHARACTERISTICS

- Extremely flexible
- Good dielectric strength
- Easy to use
- Waterproof
- Flame resistant



This self-bonding PVC uses friction and overlap to maintain its bond until the self bonding cycle is complete.

SPECIFICATIONS

Available from stock in 19mm width, other widths available on request.

	STD
Operating Temperature - ºC	90
Thickness - mm	0.10
Tensile Strength - N/cm	22

STANDARD COLOURS
Black (no other colour available)

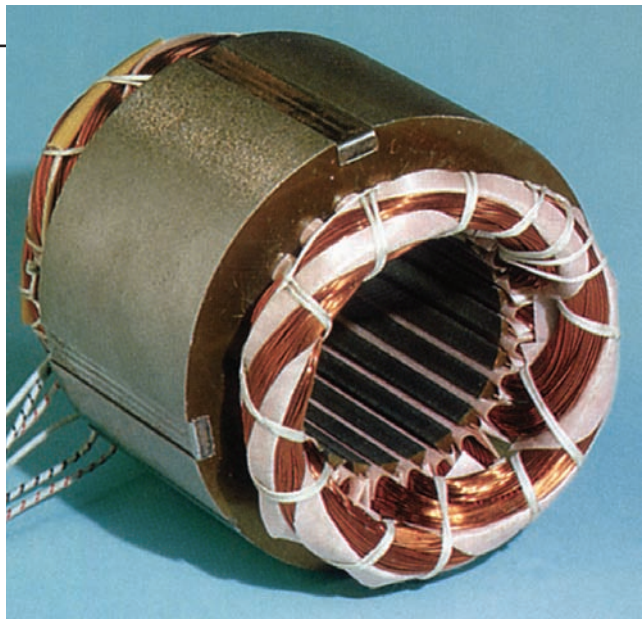
TYING TAPE

APPLICATIONS

- Lacing
- Electric motors
- Transformers
- Bundling

CHARACTERISTICS

- Flexible
- Easy to use
- Economical
- Good tensile strength



Tying tapes are made from a special stabilized synthetic rayon, treated to produce a high tensile strength. These continuous fibres are particularly suitable for wrapping around tight corners.

SPECIFICATIONS

Available from 4 strands to 32 strands.

	STD
Operating Temperature - ºC	130
Thickness - mm	0.25
Tensile Strength - kg per fibre	4

STANDARD COLOURS
Natural

STANDARD SIZES		
	WIDTH (MM)	REEL SIZE (M)
RT4	2	1800
RT8	4	800
RT16	7	350
RT22	10	250

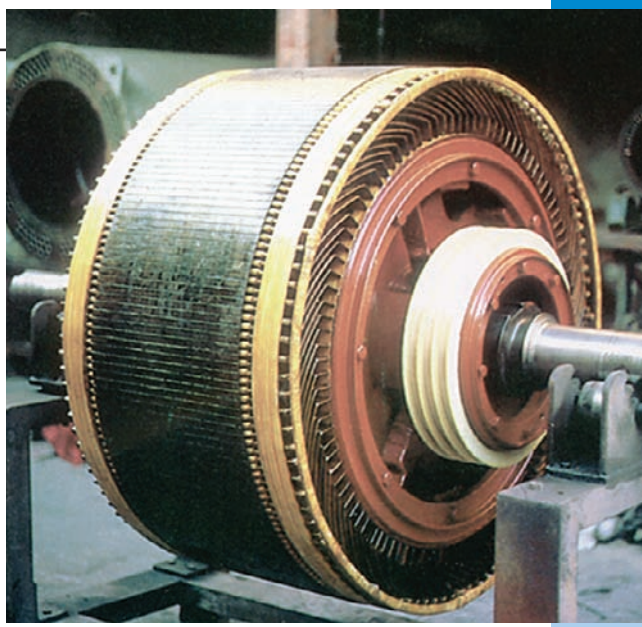
POLYGLAS BANDING TAPE

APPLICATIONS

- Banding of rotors and armatures
- Bracing tape for coils
- Blocking transformer columns

CHARACTERISTICS

- Strong
- Easy to use
- Good dielectric properties



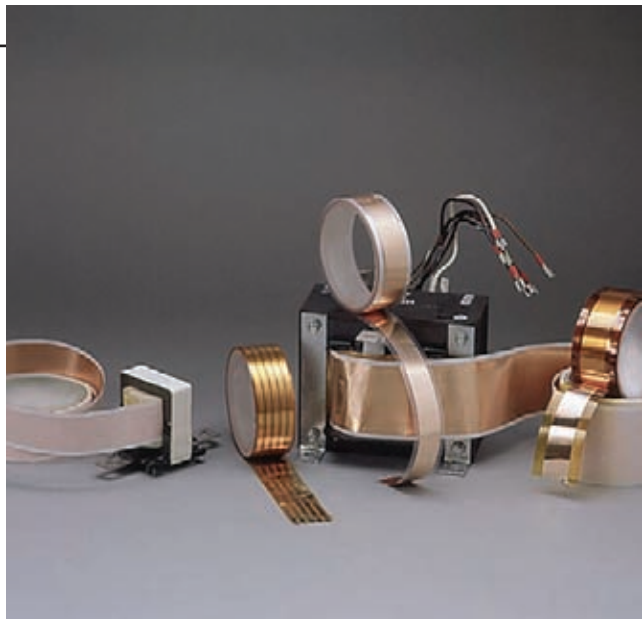
Banding tapes consist of parallel twisted glass yarn pre-impregnated with special thermosetting polyester resin. This gives a very strong tape that acts as an excellent insulator as well as a strong bond.

SPECIFICATIONS

Available in widths of 10, 15, 20, 25 or 30mm.
Please check availability with sales office before ordering.

	STD
Operating Temperature - ºC	200
Thickness - mm	0.25
Tensile Strength - N/cm	2000

COPPER SCREENING TAPE



These are specially formulated shielding tapes comprising of polyester/copper combinations and are suitable for electro-magnetic shielding.

APPLICATIONS

- Toroidal transformers
- Electro-magnetic screening
- Induction loops

CHARACTERISTICS

- High dielectric strength
- Conformable

APPROVALS

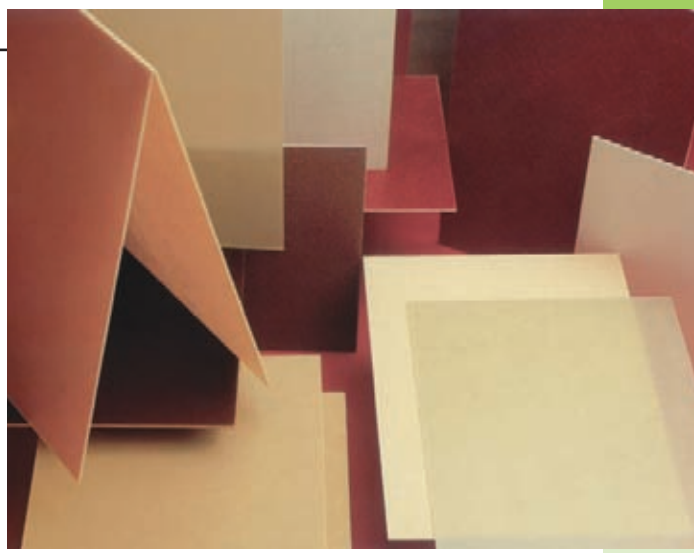
UL recognized for many of the varieties.

SPECIFICATIONS

This material is available in a large array of configurations for both copper and polyester. Thicknesses and widths can be varied to suit and the material can be supplied in a fill laminate, a fringed laminate fully enveloped, or with a solder gap.

	STD
Operating Temperature - ºC	150

INTRODUCTION TO Crovlam LAMINATES, SHEETS AND RODS



This range is largely used for its mechanical as well as electrical properties and includes presspapers, rigid composites, rods and tubes.

These materials are crafted by traditional methods giving exceptional quality and enhanced performance from paper based presspapers and Paxolin materials in several different grades, to high temperature, high performance GRP materials.

The majority of materials are available in sheet form or as tubes or rods, and we are able to offer a milling/machining service to supply in the final format required.

Crovlam QUICK PRODUCT SELECTOR

	TEMPERATURE ºC	DIELECTRIC STRENGTH	FLEXIBILITY	FLAME RETARDANCY
Elephantide / Melinex	120	Medium	High	Low
DMD	155	High	High	Medium
Nomex®/Mylar®/ Nomex®	155	High	High	High
Nomex®	220	Medium	High	High
Nomex®/Kapton®/ Nomex®	220	High	High	High
Presspaper and Pressboards	90	Low	Different on Type	Low
SRBP (Paxolin)	90	Medium	Rigin	Medium
SRBF	120	Medium	Rigid	Medium
Vulcanized Fibre	105	Medium	Semi Rigid	Medium
GRP Laminates	130 - 180	Medium	Rigid	Medium

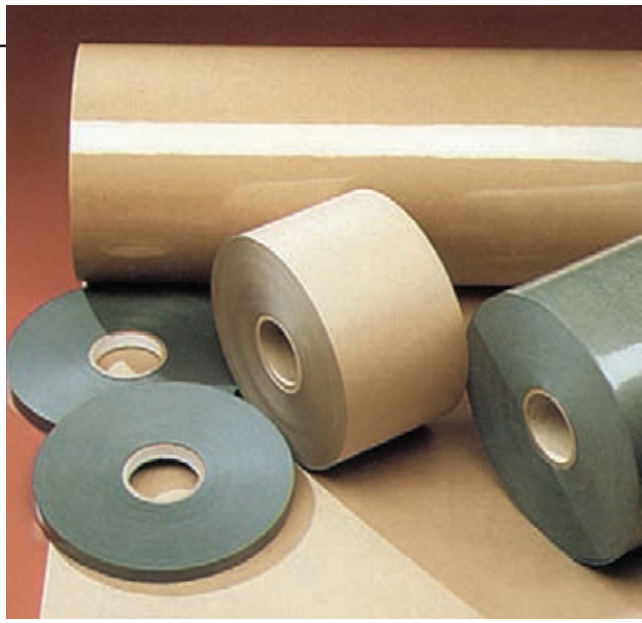
ELEPHANTIDE/MELINEX

APPLICATIONS

- Slot liners
- Coil separation
- Phase separation
- Intercoil insulation
- Outer wrap
- High frequency welding barrier

CHARACTERISTICS

- Flexible
- Mechanically strong
- Easily conformable
- Good dielectric strength
- Good chemical resistance
- Accepts impregnation



This laminate of Polyester Film and Elephantide high grade presspaper gives a good combination of thickness and mechanical strength, together with good dielectric properties.

SPECIFICATIONS

Available in any width required.

Operating Temperature - ºC	120

REFERENCE	BREAKDOWN STRENGTH TO IEC 626-2 (KV)	TENSILE STRENGTH TO IEC-626-2 (N/CM)		TEAR STRENGTH TO IEC-626-2 (N)		NOMINAL WEIGHT (GM^2)	OVERALL THICKNESS (MM)
		MD	XMD	MD	XMD		
10ME/040GP	6.3	120	70	70	120	168	0.13
10ME/120GP	7	315	180	165	410	419	0.35
10ME/050E4	8.5	309	265	365	590	220	0.18
20ME/100E4/20ME	10.9	682	533	280	505	457	0.22
20ME/160GP	10.2	420	200	280	560	572	0.45
30ME/070E4	10.5	180	140	380	600	320	0.25
10ME/060GP.10ME	10.5	175	100	160	390	265	0.2

	FILM THICKNESS		PAPER THICKNESS		FILM		REFERENCE
	(MM)	(IN)	(MM)	(IN)	(MM)	(IN)	
Two-ply construction	0.025	0.001	0.13	0.005			10ME/0504E4
	0.025	0.001	0.15	0.006			10ME/060GP
	0.025	0.001	0.25	0.01			10ME/100E4
	0.05	0.002	0.1	0.004			20ME/040GP
	0.05	0.002	0.18	0.007			20ME/070E4
	0.05	0.002	0.3	0.012			20ME/120E4
Three-ply construction	0.025	0.001	0.15	0.006	0.025	0.001	10ME/060GP/10ME
	0.025	0.001	0.25	0.01	0.025	0.001	10ME/100E4/10ME
	0.025	0.001	0.25	0.01	0.025	0.001	10ME/100GP/10ME
	0.05	0.002	0.3	0.012	0.05	0.002	20ME/120E4/20ME

DMD

A composite insulation material consisting of Polyester film protected on both sides by Polyester fleece which is then impregnated with a heat stabilized resin.

APPLICATIONS

- Slot insulation
- Phase insulation
- Interlayer insulation
- Outer insulation
- Transformers
- Electric motors
- Electronics

CHARACTERISTICS

- Flexible
- Good dielectric properties
- Good thermal properties
- Easy to use

SPECIFICATIONS

Available in a wide variety of thicknesses from 0.09mm to 0.9mm and in any width required. Also available in an uncalendered version for increased varnish absorption, and as formed slot closures.
Please contact the sales office for further details.

	STD
Operating Temperature - ºC	155
Dielectric Strength - kV/mm	54
Tensile Strength - daN/cm²	180

NOMEX®/MYLAR®/NOMEX®

This combination laminate of Polyester film and Nomex® aramid paper gives excellent mechanical strength as well as high temperature performance.

APPLICATIONS

- Slot insulation
- Phase insulation
- Interlayer insulation
- Outer layer insulation

CHARACTERISTICS

- Flexible
- Good dielectric properties
- Good thermal properties
- Good thermal ageing
- Good chemical resistance
- Compatible with varnishes and resins

SPECIFICATIONS

This material can be supplied in a two-ply or three-ply laminate, in a range of thicknesses from 0.22mm to 0.52mm in any width required. It is also available in an uncalendered version for better impregnation of varnishes and resins.

THICKNESS (MM)	TENSILE STRENGTH		AVERAGE KV	OPERATING TEMPERATURE °C
	MD	XMD		
	N/CM	N/CM		
0.22	175	225	10	155
0.30	285	295	15	155
0.36	385	310	19	155
0.38	465	345	20	155
0.42	435	385	21	155
0.52	446	460	25	155

NOMEX®

This tough, flexible, synthetic paper is widely used throughout the insulation industry due to its high temperature resistance and good dielectric properties.

APPLICATIONS

- Slot insulation
- Phase insulation
- Interlayer insulation
- Outer layer insulation
- High temperature applications

CHARACTERISTICS

- Flexible
- Good electrical properties
- Good resistance to chemicals and solvents
- Good dielectric strength
- Tear resistant
- Self extinguishing

APPROVALS

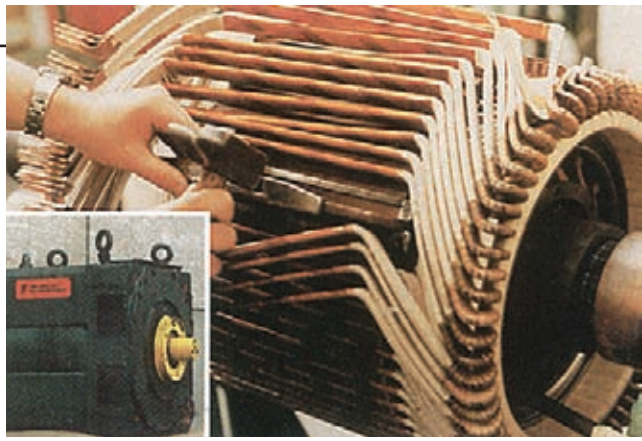
UL approved – File No E34739 (R)

SPECIFICATIONS

Calendered and uncalendered versions are available in thicknesses from 0.05mm to 0.76mm, in any width required.
Supplied in both sheet and roll form.

	STD
Operating Temperature - ºC	220
Dielectric Strength - kV/mm	38
Tensile Strength - Kg/cm for 0.3mm thick	39

NOMEX®/KAPTON®/NOMEX®



A laminate of two high performance materials, together giving superior temperature and ageing performance.

APPLICATIONS

- Slot lining
- Coil separators
- Phase separators
- High voltage insulation

CHARACTERISTICS

- Flexible
- High operating temperature
- Good dielectric properties
- Good chemical resistance
- Excellent ageing

SPECIFICATIONS

Supplied as a two or three-ply laminate, in a range of thicknesses from 0.1mm to 0.4mm in any width required.

	STD
Operating Temperature - ºC	220
Dielectric Strength - kV/mm	75
Tensile Strength - N/cm for 0.18mm thick	200

PRESSPAPER AND PRESSBOARDS

This is a range of high quality electrical presspapers and pressboards in several different grades ranging from 100% Kraft to pure cottons, for many different uses.

APPLICATIONS

- Interlayer insulation
- Outer wraps
- Lead exit protection
- Layer end packing
- Oil immersed transformers

CHARACTERISTICS

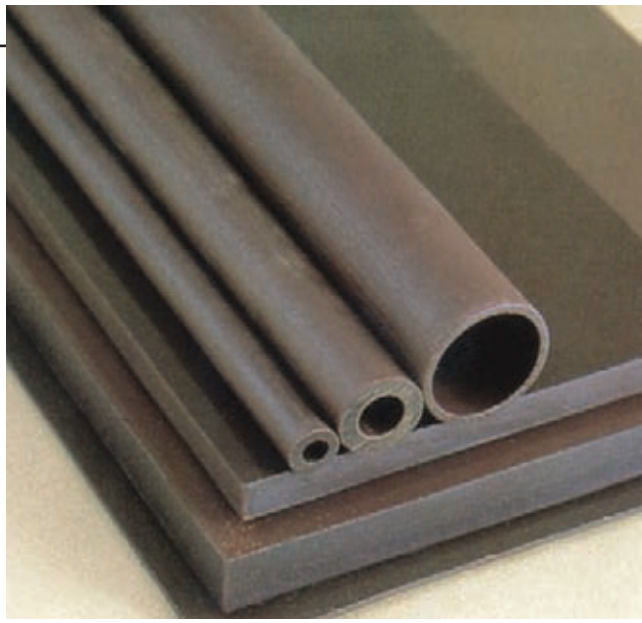
- Flexible in thinner sections
- Conforms well to uneven surfaces
- Easy to shape and form

SPECIFICATIONS

Available in several different grades, varying in colour from buff to blue. In thicknesses of 0.10mm to 3mm. Also available in tube and rod form.

	STD
Tensile Strength - N/mm²	70-90
Electric Strength - kV/mm	10-14

SRBP (PAXOLIN)



This is a strong, rigid, economical material with good electrical insulation properties.

APPLICATIONS

- Terminal boards
- Mounting plates
- Busbar supports
- Cable supports

CHARACTERISTICS

- Rigid
- Mechanically strong
- Good electric strength

APPROVALS

UL recognized for many of the varieties Pertinax P1-P100/P1001. IS 2036 Grade P1 BS 2572 Grade P1. NEMA LI1-1989 Grade X MIL-P Grade PBM. DIN 7735 Grade Hp 2061

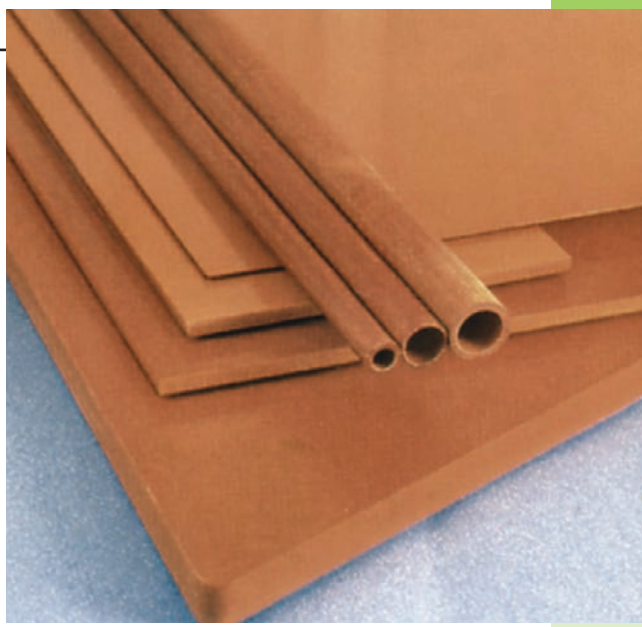
SPECIFICATIONS

Available in thicknesses from 0.8mm to 75mm.
Standard sheet size is 1200 x 1200mm but other sizes can be supplied on request.

	STD
Operating Temperature - ºC	90
Dielectric Strength flatwise in oil - mv/m	10
Sheer Strength - MPa	90

STANDARD COLOUR
Brown

SRBF



APPLICATIONS

- Terminal boards
- Busbar supports
- Railway applications
- Marine applications

CHARACTERISTICS

- Rigid
- Strong in both directions
- Easily machined

APPROVALS

Canvasite F1-F1321. IS 2036 Grade F1
BS 2572 Grade F1. NEMA L11.1989 Grade LE
MIL-P Grade FBE. DIN 7735 Grade Hp 2083.5

This is a very tough material with good wear resistance, which is easy to machine into finished components.

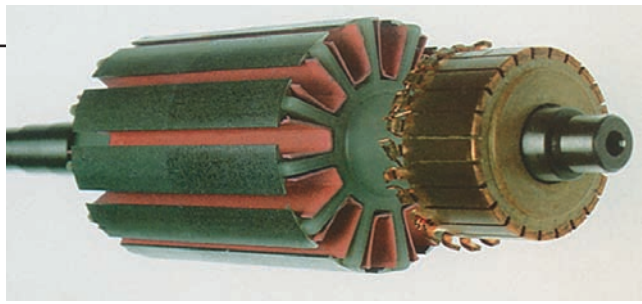
SPECIFICATIONS

Available in thicknesses from 0.8mm to 75mm.
Standard sheet size is 1200 x 1200mm but other sizes can be supplied on request.

	STD
Operating Temperature - ºC	120
Dielectric Strength flatwise in oil - mv/m	10
Sheer Strength - MPa	90

STANDARD COLOUR
Brown

VULCANIZED FIBRE



This material has extremely high internal bond strength and mechanically is excellent in punching, forming and machining applications.

APPLICATIONS

- Washers
- Spacers
- Gaskets
- Insulation slot wedges
- Cable clamps

CHARACTERISTICS

- High mechanical strength
- Good dielectric properties
- Good wear resistance
- Good resistance to solvents

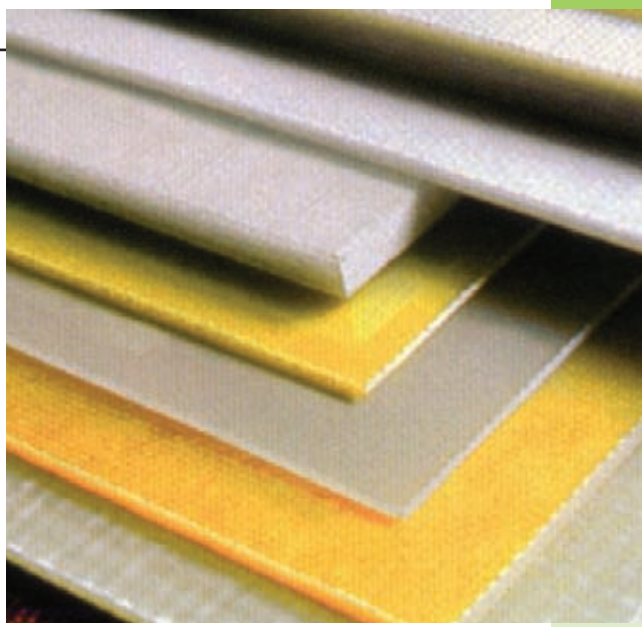
SPECIFICATIONS

Please check with the sales office for availability.
Available in thicknesses from 0.8mm to 12.7mm.

	STD
Operating Temperature - ºC	105
Dielectric Strength - kV/mm	6.9
Tensile Strength - kgf/mm²	9.5

STANDARD COLOUR
Black
Red
Grey

GRP LAMINATES



These glass reinforced rigid materials are for use at higher temperatures and can be made in a number of grades, including self-extinguishing.

APPLICATIONS

- Control panels
- Punched components
- Busbar supports
- High voltage insulation

CHARACTERISTICS

- Low water absorption
- Excellent mechanical properties
- Some grades self-extinguishing

SPECIFICATIONS

Generally in thicknesses from 0.2mm to 40mm, in several different grades depending on the required application. Also available in tube and rod form. Please check with the sales office for availability.

	STD
Temperature Range - ºC	130 - 180
Dielectric Strength - kV/mm	15
Tensile Strength - MPa	200

INTRODUCTION TO Croyfilm FILMS

This range of largely polymeric materials offers a broad array of applications requiring superior dielectric and thermal characteristics.

All of the materials are available in full width rolls, sheet form, or slit to width tape.

We are able to offer all of these materials in piece part format and, using our in-house CAD/CAM facility, can produce many of these without the need for tooling charges.

Croyfilm QUICK PRODUCT SELECTOR

	TEMPERATURE ºC	DIELECTRIC STRENGTH	FLEXIBILITY	FLAME RETARDANCY	HALOGEN FREE
Polyester Film (PET)	130	High	High	High	Yes
Polypropylene Film	80	High	High	Medium	Yes
Polycarbonate Film	115	High	Medium	Medium	Yes
Kapton® Polyimide Film	400	High	High	High	Yes
Protective Films	Properties vary depending on type				

POLYESTER FILM (PET)

This widely used film displays excellent thermal and electrical characteristics as well as being easy to use.

APPLICATIONS

- Interlayer insulation
- Outer insulation
- Transformers
- Electric motors
- Electronics
- Slot insulation
- Phase insulation

CHARACTERISTICS

- Excellent dielectric strength
- Good thermal resistance
- Flexible
- Good chemical resistance

APPROVALS

UL recognized – File No E110983 (M)

SPECIFICATIONS

	STD
Operating Temperature - ºC	130
Dielectric Strength - kV/mm	200
Tensile Strength - kgf/mm²	20

STANDARD SIZES	
THICKNESS (MICRON)	WIDTHS (MM OR SLIT WIDTH)
23	914
36	914
50	914
75	914
100	914
125	914
190	914
250	914
350	914

POLYPROPYLENE FILM

Croy®film

An economical thermoplastic material that offers excellent physical, chemical, mechanical, thermal and electrical properties.

APPLICATIONS

- General insulation
- Spacers
- Linings

CHARACTERISTICS

- Good electrical properties
- Excellent chemical resistance
- Good fatigue resistance
- Tough / hard wearing

SPECIFICATIONS

Other sizes available on request.

	STD
Operating Temperature - ºC	80
Insulation Resistance - ohms.cm	$>10^{15}$
Tensile Strength - N/mm^2	26
Elongation at Break %	>50

STANDARD THICKNESSES (MM)
1
1.5
2
3
4
5
6
9
12

STANDARD SHEET SIZE (MM)
2440 x 1220
3000 x 1500

POLYCARBONATE FILM

APPLICATIONS

- Printed circuit board insulation
- Backlit panels
- Computer rack partitions
- General insulation

CHARACTERISTICS

- Flame retardant
- Optically clear
- Good heat resistance
- Tough / hard wearing

APPROVALS

UL V-0

A high performance thermoplastic film available in a number of finishes to suit the desired application.

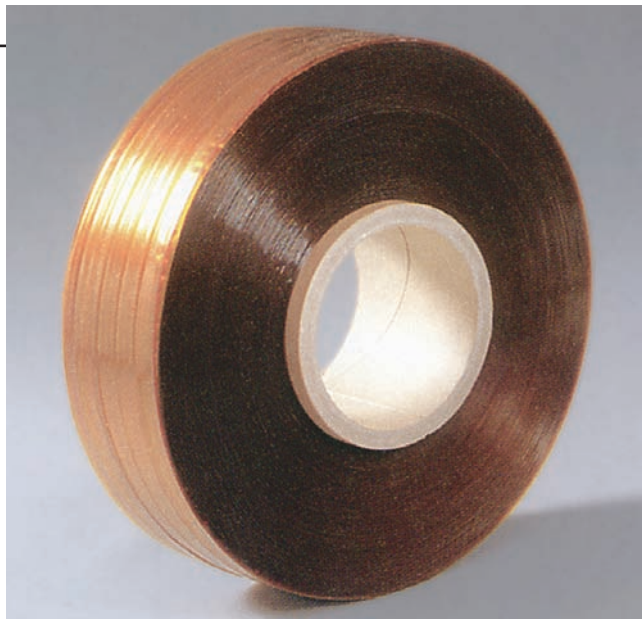
SPECIFICATIONS

	STD
Temperature Range - ºC	-135 to +115
Tensile Strength - MPa	70
Dielectric Strength - kV/mm	59

STANDARD THICKNESSES (MM)
0.25
0.375
0.5

STANDARD SHEET SIZE (MM)	ROLL WIDTH (MM)
915 x 610	1220
3000 x 1500	

KAPTON® POLYIMIDE FILM



This unique material offers excellent physical, electrical and mechanical properties over a wide temperature range.

APPLICATIONS

- Aerospace
- Printed circuit boards
- Traction motors
- Nuclear industry

CHARACTERISTICS

- Excellent thermal resistance
- Excellent chemical resistance
- Excellent dielectric strength
- Flexible
- Radiation resistance
- Flame retardant

APPROVALS

UL approved – File No QMFZ2.E73117

SPECIFICATIONS

Available in thicknesses from 7.5 micron to 150 micron, in any width required. Please check with the sales office for availability.

	STD
Temperature Range - ºC	-269 to +400
Dielectric Strength - kV/mm	Between 150 to 300
Tensile Strength - MPa	231

PROTECTIVE FILMS

APPLICATIONS

- Automotive
- Aerospace
- Ship building
- Component protection

Ideal for keeping items pristine until ready to use and particularly useful on high gloss finishes.

SPECIFICATIONS

These films are easy peel, low tack items which can be cut to shape for ease of application.

INTRODUCTION TO Croyflex CABLES

The range of cables shown in this section is a selection of the most commonly used within our industry. However, there is a vast range of cables available to suit many different applications and we would advise that specific requirements are discussed with our Sales Staff in order to obtain the most suitable cable.

We are able to supply most of our cables in a wide range of colours and can offer a cut-to-length service as well as cut and stripping, crimping and terminations.

Croyflex QUICK PRODUCT SELECTOR

	TEMPERATURE °C	VOLTAGE RATING	FLEXIBILITY	FLAME RETARDANCY	HALOGEN FREE	ABRASION RESISTANCE
Tri Rated Cable	105	Medium	Low	Low	No	Medium
Soflex Cable	105	Medium	High	Medium	No	Medium
Radox 125 and FR Cables	125	Medium	Medium	High	Yes	High
Radox 155 Cable	155	Medium	Medium	High	No	High
Radox EP-125A-FR Single Core Cable	125	Medium	Medium	High	Yes	High
Traction Cable Radox 4 GKW-AX	120	High	Medium	High	Yes	High
Silicone Cables	180	Medium	High	High	Yes	Low
Coiled Cable	105	Medium	High	High	No	Medium

TRI RATED CABLE

APPLICATIONS

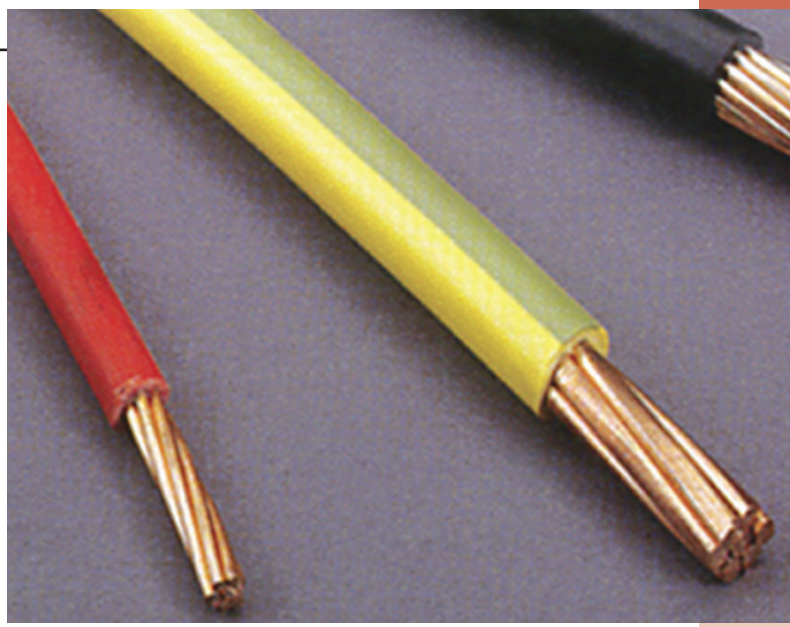
- Lead wires
- Switchgear
- Control gear wiring
- Relays
- Instrument panels

CHARACTERISTICS

- Flexible
- Low cost
- Easy to cut and strip

APPROVALS

UL Style 1015
CSA Type TEW
BS 6231: 1990 Type CK



This general use PVC cable is widely used due to its triple specification and economical cost.

SPECIFICATIONS

Available in all colours from sizes 0.5mm² to 70mm², in single core, and in solid core and multi-core versions. Not all sizes and colours are held in stock, so please check with the sales office before ordering.

	STD
Temperature Range - ºC	-15 to +105
Conductor Type	Plain annealed copper wires
Jacket Material	PVC
Voltage Rating - V	600

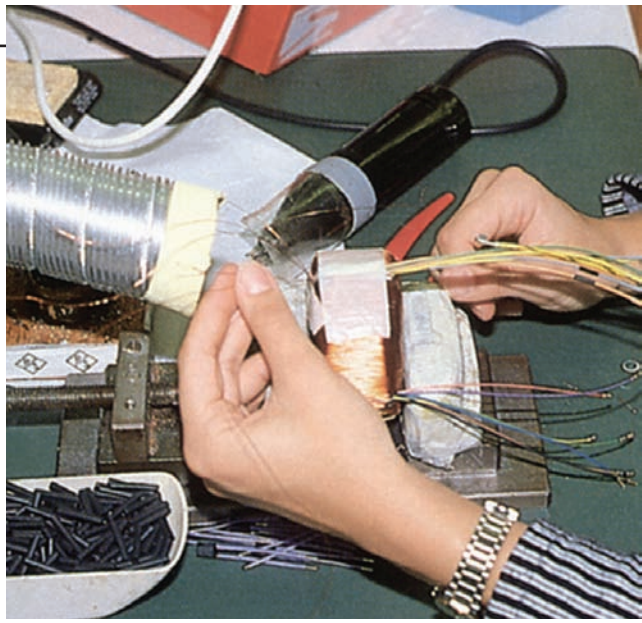
SOFLEX CABLE

APPLICATIONS

- Motor lead-out wires
- Transformer winding
- Reactance coils
- Relay coils
- Lead wires

CHARACTERISTICS

- Very flexible
- Impregnation resistant
- Short term high temperature resistance



This cable has superior flexibility and uses a special PVC insulation in order to allow it to withstand high curing temperatures beyond its normal operating temperature.

SPECIFICATIONS

Available in all colours from 0.22mm to 150mm. Please check with the sales office before ordering as not all sizes and colours are kept in stock.

	STD
Temperature Range - ^{o}C	-30 to +105
Conductor Type	Soft annealed copper wires
Jacket Material	PVC

NOMINAL CROSS-SECTION (MM^2)	STRUCTURE WIRES X DIA (MM)		INSULATED CONDUCTOR		REEL SIZE (M)	BENDING RADIUS
	UNTINNED	TINNED	CONDUC. DIA (MM)	NOMINAL OUTER DIA D(MM)		
0.05	On request	7 x 0.10	0.30	0.85 ± 0.05	200	6 X D
0.09	On request	12 x 0.10	0.42	0.95 ± 0.05	200	6 X D
0.14	On request	18 x 0.10	0.50	1.20 ± 0.06	200	6 X D
0.22	On request	7 x 0.20	0.64	1.30 ± 0.06	200	6 X D
0.25	On request	14 x 0.15	0.65	1.55 ± 0.08	200	6 X D
0.34	On request	20 x 0.15	0.88	1.60 ± 0.08	200	6 X D
0.50	On request	16 x 0.20	1.00	1.90 ± 0.10	200	6 X D
0.75	On request	24 x 0.20	1.20	2.20 ± 0.10	200	6 X D
1.00	On request	32 x 0.20	1.40	2.40 ± 0.11	200	6 X D
1.50	On request	30 x 0.25	1.70	3.10 ± 0.13	100	6 X D
2.50	On request	50 x 0.25	2.20	3.80 ± 0.14	100	6 X D
4.00	On request	56 x 0.30	2.75	4.35 ± 0.15	100	6 X D
6.00	On request	82 x 0.30	2.85	4.45 ± 0.15	100	6 X D
10.00	On request	78 x 0.40	3.80	5.80 ± 0.15	100	6 X D
16.00	On request	119 x 0.40	5.55	7.55 ± 0.20	100	6 X D
25.00	On request	188 x 0.40	7.10	9.50 ± 0.20	To be specified	6 X D
35.00	On request	264 x 0.40	8.30	10.70 ± 0.30	To be specified	6 X D
50.00	On request	380 x 0.40	10.10	12.90 ± 0.30	To be specified	6 X D
70.00	On request	342 x 0.50	12.10	14.90 ± 0.30	To be specified	6 X D
95.00	On request	456 x 0.50	13.90	17.10 ± 0.30	To be specified	6 X D
120.00	On request	576 x 0.50	15.70	18.90 ± 0.30	To be specified	6 X D
150.00	On request	720 x 0.50	17.60	21.20 ± 0.30	To be specified	6 X D

RADOX 125 AND FR CABLES

HUBER+SUHNER

APPLICATIONS

- Fire alarm systems
- Fire safety cable
- Railways
- Underground
- Automotive

CHARACTERISTICS

- Good flexibility
- Good temperature resistance
- Good chemical resistance
- Easy strip
- Good current carrying capacity

A range of low smoke and fume, zero halogen Radox cables.

SPECIFICATIONS

Not all sizes and colours are held in stock, so please check with the sales office before ordering.

	STD
Temperature Range - ºC	-40 to +125
Conductor Type	Stranded tin plated copper
Jacket Material	Polyolefin
Voltage Rating Uo/U	450/750
Test Voltage - V	3500

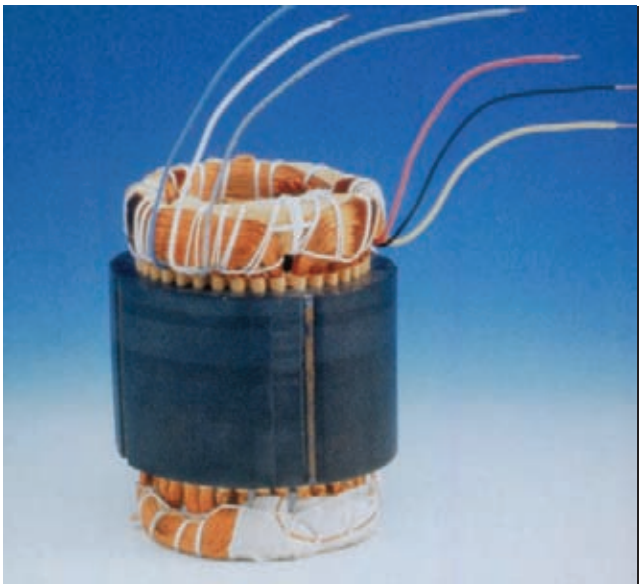
STANDARD COLOURS

Black, Red, Brown, Yellow, Green, Orange, Blue, Grey, White

CROSS SECTION NOM. (MM^2)	CONDUCTOR CONSTRUCTION NOM. (N X MM Ø)	CONDUCTOR DIAMETER MAX (MM)	CORE DIAMETER D (MM)	R_{20} IEC228 MAX (Ω/KM)	WEIGHT NOM. (KG/100M)	NOMINAL VOLTAGE (V)	TEST VOLTAGE (V)	MIN. BENDING RADIUS (MM)	REEL SIZE (MM)
0.25	19 X 0.13	0.6	1.45 ± 0.05	85.9	0.4	450/750	2500	3 X D	100
0.34	19 X 0.16	0.8	1.60 ± 0.10	52.1	0.5	450/750	2500	3 X D	100
0.50	19 X 0.18	0.9	1.70 ± 0.10	40.1	0.7	450/750	2500	3 X D	100
0.75	24 X 0.20	1.15	2.20 ± 0.10	26.7	1.1	600/1000	3500	3 X D	100
1.0	32 X 0.20	1.3	2.60 ± 0.10	20.0	1.5	600/1000	3500	3 X D	100
1.5	30 X 0.25	1.55	2.73 ± 0.10	13.7	1.9	600/1000	3500	3 X D	100
2.5	48 X 0.25	2.05	3.50 ± 0.10	8.21	3.0	600/1000	3500	3 X D	100
4.0	56 X 0.30	2.6	4.15 ± 0.15	5.09	4.6	600/1000	3500	3 X D	100
6.0	81 X 0.30	3.4	4.95 ± 0.15	3.39	6.7	600/1000	3500	3 X D	100
10	78 X 0.40	4.4	6.15 ± 0.15	1.95	11	600/1000	3500	3 X D	50
16	119 X 0.40	5.4	7.35 ± 0.15	1.24	16.5	600/1000	3500	3 X D	50
25	182 X 0.40	6.7	8.9 ± 0.2	0.795	25	600/1000	3500	3 X D	50
35	266 X 0.40	7.9	10.3 ± 0.2	0.565	34.9	600/1000	3500	3 X D	25
50	378 X 0.40	9.4	12.1 ± 0.25	0.393	50	600/1000	3500	4 X D	25
70	348 X 0.50	11.5	14.4 ± 0.25	0.277	70.8	600/1000	3500	4 X D	25
95	444 X 0.50	12.9	16.0 ± 0.3	0.210	89	600/1000	3500	4 X D	25
120	570 X 0.50	15.1	18.6 ± 0.3	0.164	116	600/1000	3500	4 X D	25
150	722 X 0.50	17.0	20.5 ± 0.3	0.132	145	600/1000	3500	4 X D	25
185	874 X 0.50	18.5	22.2 ± 0.3	0.108	173	600/1000	3500	4 X D	25
240	1147 X 0.50	21.3	25.4 ± 0.3	0.0817	225	600/1000	3500	4 X D	25

RADOX 155 CABLE

HUBER+SUHNER



APPLICATIONS

- Motor lead wire
- Transformers
- Control panels
- Refrigeration units
- Solenoids
- Lighting
- Switchgear
- Traction vehicles

CHARACTERISTICS

- Flexible
- Excellent chemical resistance
- Easy processing
- Good soldering iron resistance
- Good current carrying capacity

This flexible cross-linked insulated cable has extremely good mechanical and chemical properties and is compatible with insulating varnishes and impregnation resins.

APPROVALS

Available as a UL approved version.

SPECIFICATIONS

Not all sizes and colours are held in stock, so please check with the sales office before ordering.

Temperature Range - °C	-55 to +155
Conductor Type	Stranded tin plated copper
Jacket Material	Polyolefin
Voltage Rating Uo/U	450/750
Test Voltage - V	3500

STANDARD COLOURS

Black, Red, Brown, Yellow, Green, Orange, Blue, Grey, White

CROSS SECTION NOM. (MM^2)	CONDUCTOR CONSTRUCTION NOM. (N X MM Ø)	CONDUCTOR DIAMETER MAX (MM)	CORE DIAMETER D (MM)	R_{20} IEC228 MAX (Ω/KM)	WEIGHT NOM. (KG/100M)	NOMINAL VOLTAGE (V)	TEST VOLTAGE (V)	MIN. BENDING RADIUS (MM)	REEL SIZE (MM)
0.25	19 X 0.13	0.6	1.45 ± 0.05	85.9	0.4	450/750	2500	3 X D	100
0.34	19 X 0.16	0.8	1.60 ± 0.10	52.1	0.5	450/750	2500	3 X D	100
0.50	19 X 0.18	0.9	1.70 ± 0.10	40.1	0.7	450/750	2500	3 X D	100
0.75	24 X 0.20	1.15	2.20 ± 0.10	26.7	1.1	600/1000	3500	3 X D	100
1.0	32 X 0.20	1.3	2.60 ± 0.10	20.0	1.5	600/1000	3500	3 X D	100
1.5	30 X 0.25	1.55	2.70 ± 0.10	13.7	1.9	600/1000	3500	3 X D	100
2.5	48 X 0.25	2.05	3.50 ± 0.10	8.21	3.0	600/1000	3500	3 X D	100
4.0	56 X 0.30	2.6	4.15 ± 0.15	5.09	4.5	600/1000	3500	3 X D	100
6.0	81 X 0.30	3.4	5.4 ± 0.15	3.39	6.5	600/1000	3500	3 X D	100
10	78 X 0.40	4.4	6.4 ± 0.15	1.95	11	600/1000	3500	3 X D	50
16	119 X 0.40	5.4	7.6 ± 0.15	1.24	16.5	600/1000	3500	3 X D	50
25	182 X 0.40	6.7	9.2 ± 0.2	0.795	25	600/1000	3500	3 X D	25
35	266 X 0.40	7.9	10.6 ± 0.2	0.565	34.5	600/1000	3500	3 X D	25
50	378 X 0.40	9.4	12.3 ± 0.25	0.393	50	600/1000	3500	4 X D	25
70	348 X 0.50	11.5	14.6 ± 0.25	0.277	68	600/1000	3500	4 X D	25
95	444 X 0.50	12.9	16.3 ± 0.3	0.210	89	600/1000	3500	4 X D	25
120	551 X 0.50	15.1	18.4 ± 0.3	0.164	110	600/1000	3500	4 X D	25
150	722 X 0.50	17.0	20.8 ± 0.3	0.132	142	600/1000	3500	4 X D	25
185	874 X 0.50	18.5	22.5 ± 0.3	0.108	171	600/1000	3500	4 X D	25
240	1147 X 0.50	21.3	25.7 ± 0.3	0.0817	225	600/1000	3500	4 X D	25

RADOX EP-125A-FR SINGLE CORE CABLE

APPLICATIONS

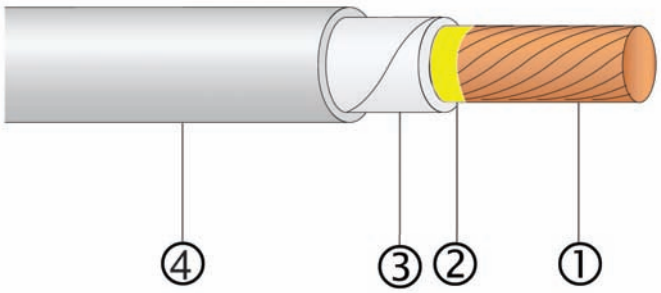
- Railways
- Underground

CHARACTERISTICS

- Good temperature resistance
- Good chemical resistance
- Flexible

APPROVALS

According to London Underground Ltd. Specification EME-SP-14-026-A1



1. Conductor: Stranded bare copper, acc to IEC 228 cl. 2 and BS 6360.
2. Flame barrier.
3. Insulation*: Radox 125 EF: Electron crosslinked EPDM based compound, colour natural.
4. Insulation*: Radox 125 A: Electron crosslinked copolymer, colour diverse.

* Dual wall insulation

SPECIFICATIONS

	STD
Voltage Rating - Uo/U	600/1000
Test Voltage 50Hz, 15 min - V	3500
Maximum Continuous Conductor Temperature - ºC	85
Temperature Range - ºC	-40 to +120

SIZE (MM^2)	CONDUCTOR			CABLE	
	CONSTRUCTION (N X MMØ)	DIAMETER (MM)	MAXIMUM RESISTANCE AT 20ºC (Ω/KM)	MEAN WALL (MM)	DIAMETER (MM)
1.5	7 x 0.53	1.59	12.1	0.7	3.50 ±0.10
2.5	7 x 0.67	2.01	7.41	0.8	4.20 ±0.15
4.0	7 x 0.86	2.58	4.61	0.8	4.75 ±0.15
6.0	7 x 1.07	3.25	3.08	0.8	5.45 ±0.15

TRACTION CABLE
RADOX 4 GKW-AX

Croyflex®

HUBER+SUHNER

APPLICATIONS

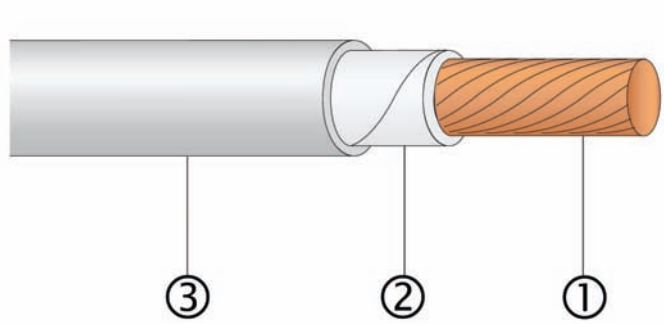
- Railway rolling stock
- Buses
- Vehicles

CHARACTERISTICS

- Excellent resistance to high and low temperatures
- Good chemical resistance
- Low smoke
- Flame retardant

APPROVALS

BS6853 1a
DIN5510-Z
NFF16-101 A1



1. Conductor: Stranded tin plated copper, acc. to IEC 60228 cl. 5
2. Insulation: Radox GKW K.
3. Sheath: Radox GKW S, colour black.

SPECIFICATIONS

	STD
Voltage Rating - Uo/U	1800/3000
Temperature Range - ºC	-40 to +120
Test Voltage 50Hz, 15 min - V	6500

SIZE (MM^2)	CONDUCTOR		WALL MINIMUM (MM)	CABLE -D NOM (MM)	R20 MAX (Ω / KM)	CH20 NOM (pF/M)	FIRE LOAD (KJ/M)	WEIGHT	
	CONSTRUCTION (N X MM)	DIAMETER (MM)						COPPER (KG/100M)	CABLE (KG/100M)
1.5	30 x 0.26	1.52 ± 0.05	0.70	3.20 ± 0.10	13.7	254	154	1.3	2.2
2.0	37 x 0.26	1.70 ± 0.05	0.80	3.55 ± 0.10	10.5	257	188	1.6	2.8
2.5	50 x 0.26	1.95 ± 0.05	0.80	3.75 ± 0.10	8.21	292	200	2.2	3.4
4.0	56 x 0.31	2.46 ± 0.10	0.85	4.50 ± 0.10	5.09	322	275	3.4	5.2
6.0	84 x 0.31	2.93 ± 0.10	0.90	5.10 ± 0.15	3.39	350	340	5.2	7.4
10	80 x 0.41	3.89 ± 0.20	1.00	6.35 ± 0.15	1.95	392	489	9.1	12
16	119 x 0.41	5.30 ± 0.20	1.20	8.30 ± 0.20	1.24	447	834	13	18
25	182 x 0.41	6.60 ± 0.20	1.35	10.20 ± 0.30	0.795	451	1260	21	28
35	266 x 0.41	7.80 ± 0.20	1.55	11.70 ± 0.30	0.565	489	1568	30	39
50	378 x 0.41	9.30 ± 0.20	1.85	13.60 ± 0.30	0.393	512	1960	43	55
70	348 x 0.51	11.40 ± 0.30	1.75	15.60 ± 0.30	0.277	619	2514	61	73
95	444 x 0.51	12.80 ± 0.30	1.90	17.30 ± 0.30	0.210	640	2743	78	94
120	570 x 0.50	14.90 ± 0.40	1.80	19.60 ± 0.30	0.164	650	3485	94	118
150	722 x 0.51	16.80 ± 0.40	2.15	21.90 ± 0.30	0.132	719	3998	127	151
185	874 x 0.51	18.30 ± 0.40	2.35	23.80 ± 0.30	0.108	725	4751	153	180
240	1147 x 0.51	21.10 ± 0.60	2.50	26.90 ± 0.30	0.0817	791	5958	201	229
300	1443 x 0.51	23.70 ± 0.60	2.50	29.70 ± 0.30	0.0654	918	6510	253	291
400	2016 x 0.51	29.10 ± 0.70	2.60	35.80 ± 0.50	0.0495	955	8741	353	404

SILICONE CABLES

APPLICATIONS

- Heating
- Lighting
- Household appliances
- Automotive

CHARACTERISTICS

- Extremely flexible
- High temperature resistance
- Good dielectric strength
- Good mechanical resistance

This cable offers extremely good flexibility, together with high operating temperatures.

SPECIFICATIONS

Available in all colours from sizes 0.25mm² to 120mm²
Also supplied as single solid core and multi-core cables, with a glass over-braid for additional abrasion protection.

	STD
Temperature Range - ºC	-60 to +180
Voltage Rating - V	500

COILED CABLE

Croyflex®

APPLICATIONS

- Household appliances
- Stair lifts
- Connections between rail carriages
- Retail displays
- Lighting

CHARACTERISTICS

- Expandable
- Good resilience

Coiled or spiral cables are available in a large range of different types of material and can be made to the customer's specific requirements.

SPECIFICATIONS

These cables can be made out of a number of materials giving the required properties. Standard stocks are held in PVC.

SIZE (MM)	AMP	COIL AT REST (M)	EXTENDED LENGTH (M)
3 x 0.25	1	1.5	2.5
3 x 0.75	6	1.5	2.5
3 x 1	10	1.5	2.5
3 x 1.5	13	1.5	2.5

STANDARD COLOURS
Black
White

ELECTRICAL SWITCHGEAR MATTING

APPLICATIONS

- Floor cover at switchboards, substations, electrical generators and work benches

CHARACTERISTICS

- Good dielectric strength
- Hard wearing
- Anti-slip
- Easy to use

Manufactured from high quality rubber compound to exacting British Standards, this essential safety product is designed to protect where there is exposure to live conductors. This is required by the Factories Act to prevent danger from shock in “generation, transformer, distribution, or use of electrical energy”. One side of the material has a fine, fluted, non-slip surface for added safety.

SPECIFICATIONS

Available in 6 and 9mm thicknesses, and widths of 915 and 1200mm. Other widths and thicknesses available on request.

Finish	Fine fluted top/cloth Impression reverse side Identification stamped
Polymer/compound:	High quality natural blend
Hardness	55/65º Sh
Tensile strength - mpa	5
Elongation - %	250
6.0mm	Tested to 11kV - working voltage 450
9.5mm	Tested to 15kV - working voltage of 650 (BS 921/1976)
Supply	Rolls/sheets/cut panels

STANDARD COLOURS
Black

Electrical Switchgear Matting is manufactured from high quality rubber compound to exacting standards. It is an essential safety product designed to protect where there is exposure to live conductors. The Factories Act requires the provision of permanent insulation to prevent danger from shock to persons employed in the generation, transformation, distribution or use of electrical energy. The above products are recommended for floor covering at switchboards, sub-stations, transformers, generators and electrical work benches. It is stressed that rubber mats should not afford the sole means of protection for those working on electrical circuits and wherever possible, further adequate protection should be taken against the risk of shock and short-circuit. In this connection, attention is drawn to the Electricity (Factories Act) special regulations 1908 and 1944.

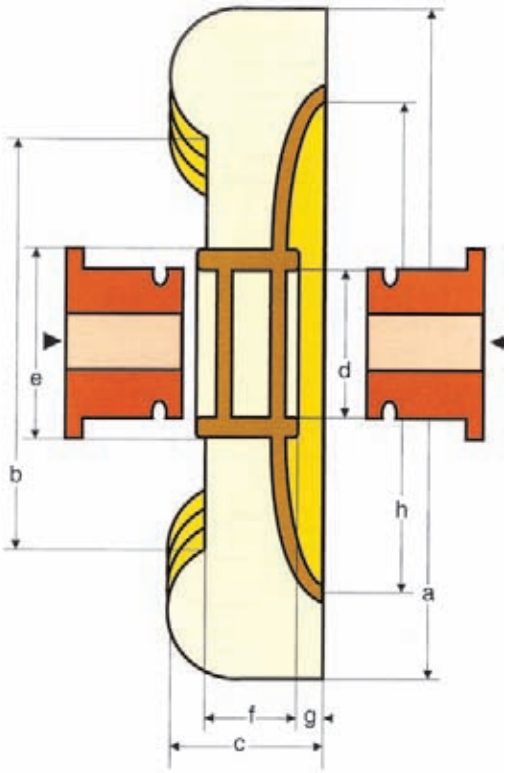
MOTOR VENTILATORS

APPLICATIONS

- Motors

CHARACTERISTICS

- Strong
- Easy to use
- Easily machinable



This range of yellow fans is designed to be as flexible and easy to use for both repair shops and manufacturers alike. The bush for the fan is a separate piece from the fan itself meaning that bore dimensions can easily be altered to suit the motor spindle.

SPECIFICATIONS

TYPE	A	B	C	D	E	F	G	H
CS71	123	75	26	275	33	15	10	99
CS80	132	79	25	275	33	15	10	104
CS90	165	95	32	425	50	185	13	131
CS100	171	99	36	425	50	185	10	147
CS112	212	1245	46	56	63	245	15	174
CS132	247	134	56	56	63	245	17	203
CS160	296	1725	56	69	76	29	17	244
CS180	335	214	55	69	76	29	17	276

TYPE	BUSH SIZE					
CS71	14	60	0			
CS80	16	19	20	0		
CS90	24	25	30	0		
CS100	24	25	30	0		
CS112	28	30	32	40	45	0
CS132	28	30	32	40	45	0
CS160	42	45	50	0		
CS180	42	45	50	0		

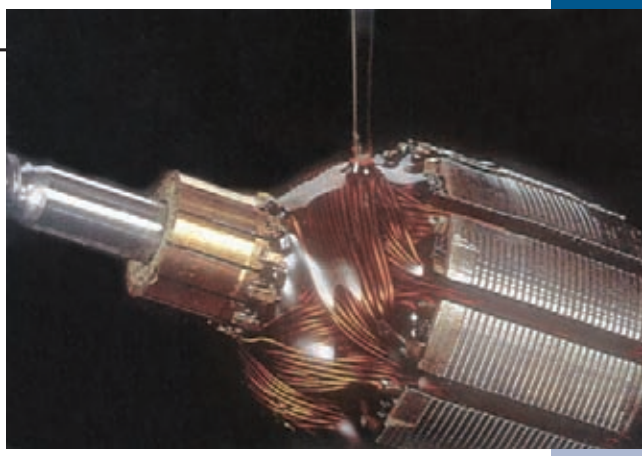
The new range of 'yellow fans' CS71 - CS180, designed for electric motors IEC71 - IEC180, are an invaluable development for both repair shops and manufacturers of small batches. Their unique, universal bushing system eliminates any need for expensive tooling to produce special fans.

With conventional 'standard' fans, the bore dimensions rarely match those of the motor spindle ends. Additionally, it is impractical to alter the bore dimensions due to the difficulties involved in holding the fan in a lathe. Similarly, it is a costly operation to turn the motor spindle to a suitable dimension to obtain a proper fit. This results in repair shops having to carry large stocks which take up valuable storage space and involve capital outlay.

The new CS range of fans are manufactured with a single, large diameter bore and supplied with appropriate bushes to fit a variety of spindle dimensions. In the event of a perfectly fitting bush not being available, it is a simple process to turn the bore of the nearest smaller sized bush to the required dimension. For each type of fan there are various bush sizes with standard bore and two keyways, also an additional bush with cylindrical bore for turning on a lathe. Problems from expansion are eliminated, as both fans and bushes are manufactured from the same material providing complete compatibility. A feature of this unique bushing system is the three lips inside the fan bore positioned above and below to ensure a strong, permanent fit from both sides. If it is necessary to lock the bush to the motor shaft, this is also possible as the fan can be fitted afterwards.

To cover the widest range of applications, fans are manufactured as flat as possible making them suitable for motors of differing manufacture. For even greater flexibility one size of bush is suitable for two fan types - i.e. bush 25mm dia. will suit either CS90 or CS100 fans. The special mixture of polypropylene used in manufacture provides a smooth, easily machinable finish.

VARNISHES, RESINS AND SILICONES



We offer a comprehensive range of varnishes and resins for a large range of applications, whether drip, trickle, spray or vacuum impregnation, and in a number of different solvent and solventless bases with different thermal and electrical properties.

These widely used products should be carefully selected to obtain the most suitable for the individual application.

Our staff will be more than happy to advise the best material to use for your application.

SILICONE COMPOUNDS

As the UK distributor for Shin Etsu silicones we offer a diverse range of products which are generally split into categories of 1-Part and 2-Part Compounds, with condensation or addition cure systems.

The general properties of the cured compound offer good temperature and electrical characteristics with average operating temperatures of 180ºC. We offer a wide range of these products for many different applications and the correct materials should be chosen carefully for the required outcome.

Our staff will be more than happy to aid in the selection of the correct material.

DOW CORNING® 561 TRANSFORMER FLUID

Dow Corning® 561 Silicone Transformer Fluid is an ideal safety fluid for use in oil filled transformers and can be used safely even when the transformer has to be located close to the load, indoors or near buildings.

561 Transformer Fluid contains no chlorine or other halogens. It is a pure polydimethylsiloxane material that contains no additives. It is compatible with materials used in the construction of transformers, nonvolatile, thermally stable and chemically inert. This in itself helps to prolong the life of the transformer and helps reduce maintenance.

561 Transformer Fluid has been tested and approved by authorities around the world for use in electrical applications. Due to its high fire point it is extremely difficult to ignite but, if it should burn, its emissions are extremely low and it is self–extinguishing.

For full details of this product please contact our sales office.

DOW CORNING® VARNISHES & RESINS

This range of silicone electrical varnishes and resins are used for their high temperature capabilities and good resistance to UV light, radiation and corona resistance.

2104 RESIN

- Heat stable, low pressure thermosetting silicone resin.
- Meets the requirements of AIEE Class 220ºC insulating material.
- Low dielectric losses.
- Very stable electrical properties over a wide range of frequencies and temperatures even when wet.

2106 RESIN

- Good physical and electrical stability over a wide range of temperatures, frequencies and humidities.
- UV light, radiation and corona resistant.
- AIEE Class 220ºC insulating material.
- Outstanding thermal stability.

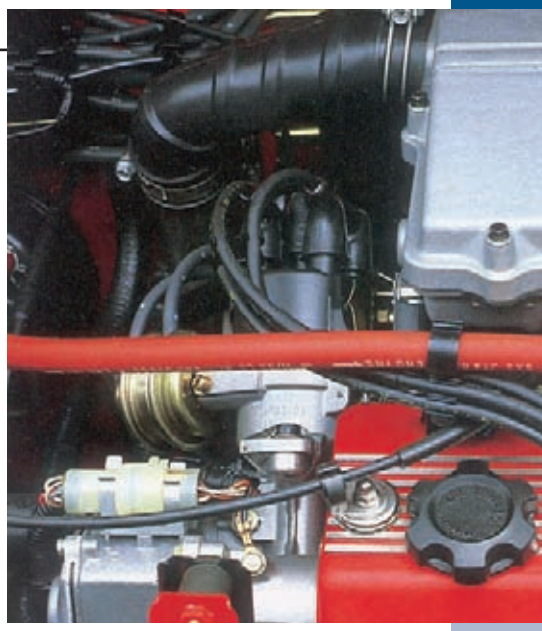
994 VARNISH

- Silicone resin in xylene.
- Heat and water resistant.
- AIEE Class 220ºC insulating material.
- The most heat stable varnish available.
- Glass cloth coated with this varnish retains its flexibility and electric strength after one year at 250ºC.

996 VARNISH

- Silicone resin in xylene.
- Can be cured at temperatures as low as 150ºC.
- Proven reliability over a decade of extensive use.
- Long service life even at 220ºC hottest spot temperature.
- Combines in one varnish, excellent electrical properties, bond strength and moisture resistance.
- Good drainage factor (little varnish run-off during cure).

CONVERSIONS



ENGLISH/METRIC METRIC/ENGLISH

LENGTH	AREA	VOLUME	MASS
Inch x 25.40 = Millimetres	Sq Inch x 6.452 = Sq Centimetre	Cu Inch x 16.39 = Cu Centimetre	Ounce x 28.35 = Gram
Millimetres x 0.03973 = Inches	Sq Centimetre x 0.1550 = Sq Inch	Cu CM x 0.06102 = Cu Inch	Gram x 0.03527 = Ounce
Feet x 0.3048 = metres	Sq Foot x 0.0929 = Sq Metre	Cu Foot x 0.02832 = Cu Metre	Pound x 0.4536 = Kilogram
metres x 3.281 = Feet	Sq Metre x 10.76 = Sq Foot	Cu Metre x 35.31 = Cu Foot	Kilogram x 2.205 = Pound
Miles x 1.609 = Kilometres	Sq Mile x 2.590 = Sq Kilometre		Kilogram/km x 0.6214 = Pound/kft
Kilometres x 0.6214 = Miles	Sq Kilometre x 0.3861 = Sq Mile		Pound/kft x 1.4881 = Kilogram/km
Ohms/km x 0.3048 = Ohms/kft	Circular Mil x 0.7854 = Sq Mil		

THICKNESS

			NOMINAL TOLERANCE		
INCHES	MM	MICRON	FRACTION	MIN.	MAX.
0.001	0.025	25			
0.002	0.05	51		0.045	0.055
0.003	0.08	76		0.070	0.085
0.004	0.1	102		0.090	0.110
0.005	0.13	127		0.115	0.140
0.006	0.15	152		0.135	0.165
0.007	0.18	178		0.160	0.195
0.0075	0.19	191			
0.008	0.2	203		0.185	0.220
0.009	0.23	229		0.205	0.250
0.010	0.25	254		0.230	0.275
0.012	0.3	305		0.275	0.330
0.013	0.33	330			
0.014	0.36	356		0.320	0.390
0.015	0.38	381		0.340	0.420
0.0156	0.40	396			
0.018	0.46	457			
0.020	0.51	508		0.460	0.560
0.025	0.64	635		0.570	0.690
0.030	0.76	762		0.690	0.830
0.031	0.79	787	1/32		
0.047	1.19				
0.063	1.60		1/16		
0.078	1.98				
0.094	2.39		3/32		
0.109	2.77				
0.125	3.18		1/8		

THERMAL CLASSES

TEMPERATURE GRADES	
Y	90 degree
A	105 degree
E	120 degree
B	130 degree
F	155 degree
H	180 degree
C	220+ degree

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