# SOLUTIONS



## DK Cable Junction Boxes

## Construction

Cable entry via integrated elastic membranes or metric knockouts. With elastic membranes, which can be removed for cable entry via cable glands. Multi-level knockouts for cable glands in different sizes. Degree of protection: IP 66

## **Applications**

For indoor installation in industrial and commercial buildings. Safe in industrial and commercial applications with demanding and tough environments

## Packaging

Per unit.

Specification	
Material	Polypropylene or polycarbonate
Burning Behaviour	Glow wire test in accordance with IEC 60695-2-11: 750°C
	Flame Retardant and Self-Extinguishing
Colour	Grey RAL 7035
Resistance to impact	IK 07 (2 Joule)







## KF Cable Junction Boxes

## Construction

Cable entry via metric knockouts. Degree of protection: IP 66 / IP 67 / IP 69 with cable glands as accessories, temporary submersion up to 1 meter, max 15 minutes. Comply with the regulatory restrictions for buildings with requirements regarding the structural fire protection DIN VDE 0100 Part 482 (German Standard)

## **Applications**

Weatherproof, for unprotected outdoor installation in harsh environment and offshore applications. Robust and weatherproof - for offshore applications and use outdoors in harshest conditions of industrial and commercial applications

## **Packaging**

Per unit.

## **Specification**

Material	PC-GFS polycarbonate
Burning Behaviour	Glow wire test in accordance with IEC 60695-2-11: 960°C Flame Retardant and Self-Extinguishing
Colour	Grey RAL 7035 or Black RAL 9011
Resistance to impact	IK 09 (10 Joule)
Halogen-Free	Low toxicity, low fume development
Weatherproof	UV-resistant, Rainwater-proof, temperature-resistant, saltwater-proof
VDE Tested	DNV GL - Certificate No.: TAE00000EE, Russian Maritime Register of Shipping documentation-No.: 250-A-1180-108795







## WP Cable Junction Boxes

## Construction

Cable entry via metric knockouts. Degree of protection: IP 68 with submersion up to 20 meters, 168 hours. The quantity of the sealing compound is always matched to the product - never too much or too little material during processing. The lid can be removed for inspection purposes, the sealing compound can be easily removed for subsequent installations or inspections.

## **Applications**

Waterproof, for encapsulation. For outdoor installation and use in harsh environmental conditions with risk of condensation and ingress of water as well as for ground installation without traffic loads

## **Packaging**

Per unit.

Specification	
Material	PC-GFS polycarbonate
Burning Behaviour	Glow wire test in accordance with IEC 60695-2-11: 960°C Flame Retardant and Self-Extinguishing
Colour	Grey RAL 7035 or Black RAL 9011
Resistance to impact	IK 09 (10 Joule)







## FK Cable Junction Boxes

## Construction

Cable entry via metric knockouts and grommets. Intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables. Insulation integrity PH120 in accordance with BS EN 50200 in combination with insulation retaining cables. Screw anchors, high-temperature-resistant ceramic terminal E30 up to E90 and cable entries included as standard. Multi-level knockouts for cable glands in different sizes. Cable junction box for large cable cross sections up to 500mm<sup>2</sup>

## **Applications**

For buildings with public traffic, to guarantee the emergency power supply in the event of a fire.

## Packaging

Per unit.

## ci unit.

PC-GFS polycarbonate
Glow wire test in accordance with IEC 60695-2-11: 960°C Flame Retardant and Self-Extinguishing
Orange RAL 2003
Insulating material / thermoplastic: IK 09 (10 Joule) Sheet steel, powder-coated: IK 10 (20 Joule)
Insulating material / thermoplastic: IP 66 Sheet steel, powder-coated: IP 66
Insulating material / thermoplastic: Insulated Sheet steel, powder-coated: Earthed





## TAPES

## **3M**

## Scotch<sup>®</sup> 1710 - PVC Electrical Tape

Stock No.	Description	Thickness	Size
UE555571343	Black General Purpose PVC Electrical tape.	0.18mm	18mm x 20m
UE555571350	Yellow General Purpose PVC Electrical tape.	0.18mm	18mm x 20m
UE555571368	Red General Purpose PVC Electrical tape.	0.18mm	18mm x 20m
UE555571376	White General Purpose PVC Electrical tape.	0.18mm	18mm x 20m
UE555571384	Green General Purpose PVC Electrical tape.	0.18mm	18mm x 20m
UE555571392	Blue General Purpose PVC Electrical tape.	0.18mm	18mm x 20m



### **Features**

- · Good quality general use polyvinyl chloride (PVC) tape.
- High dielectric stength, is conformable and provides very good mechanical protection with minimum bulk.
- Flame retardant; SANS 122 compliant SABS Tested.
- Excellent resistance to abrasion, moitsure, alkalis, acid, UV light and varying weather conditions.
- $\bullet$  Suitable for voltages of up to 600V and continuous operating temperatures of 80°C.
- Available in six colours.

## Scotch<sup>®</sup> Super 33+ - High Quality PVC Tape

Stock No.	Description	Thickness	Size
80610138911	Black Premium grade all weather vinyl insulation tape. Suitable for high and low temperature applications.	0.178mm	19mm x 20m

### **Features**

- High quality premium polyvinyl chloride (PVC) tape.
- Very high dielectric stength and highly conformable.
- It is UL 50 listed and marked per UL Standard 510 as "Flame Retardant, Cold and Sunlight Resistant". Conforms to BS3924 and EU RoHS Compliant.
- SANS 122 compliant and SABS Tested. Certified as a VDE Type 5 PVC tape.
- Highly conformable, super stretchy in all weather applications, resists UV rays, abrasion, corrosion, alkalis and acids.
- Suitable for voltages of up to 600V.
- Maximum operating temperature of 105°C as per CSA C22.2 No. 197-M1983.
- Available in Black.

## Economical SABS tested general use tape. Primary electrical insulation for all wire and

**Applications** 

- Primary electrical insulation for all wire and cable joint repairs.
  Protective jacketing, harnessing and bundling for cables.



## **Applications**

- High quality tape for use in industrial and mining environments.
- Effective primary insulation of up to 600V and suitable for
- secondary insulation tape.
- Effective as a protective jacketing against moisture, UV, abrasion, corrosion, alkalis and acids.

## Scotch® 35 - High Quality PVC Tape Multi Colour

Stock No.	Description	Thickness	Size
80014000550	White Fade resistant tape.	0.178mm	19mm x 20m
80014000519	Red Fade resistant tape.	0.178mm	19mm x 20m
80014000543	Yellow Fade resistant tape.	0.178mm	19mm x 20m
80014000584	Green Fade resistant tape.	0.178mm	19mm x 20m
80014000527	Blue Fade resistant tape.	0.178mm	19mm x 20m



### **Features**

- High quality premium polyvinyl chloride (PVC) colour-coding fade-resistant tape.
  Very high dielectric strength, highly conformable super stretchy in all weather
- applications; resists UV rays, abrasion, corrosion, alkalis and acids. • Flame retardant and has low smoke emission; SANS 122 compliant - SABS Tested.
- Conforms to BS3924 and UL510.
- Suitable for voltages of up to 600V.
- Maximum operating temperature of 105°C as per CSA C22.2 No. 197-M1983..
- Available in nine colours.

## **Applications**

- Suitable for industrial and mining environments.
- Primary insulation for splices up to 600V, protective jacketing.
- Excellent for us in phase identification and marking, harnessing, colour coding of motor leads, piping systems and marking safety areas.



## TAPES

## Scotch® 23 - Self Fusing Insulation Tape

Stock No.	Description	Thickness	Size
H0001724667	Self-amalgamating EPR (Ethylene Propylene Rubber) based high voltage joining tape. For joints up to 69kV.	0.76mm	19mm x 9.15m
Features		Applicatio	ons

· Physical and electrical properties unaffected by degree of stretch.

• Can be stretched up to 100% to give void free, moisture resistant insulation.

· Self-amalgamating tape with excellent electrical properties. Primary electrical insulation for cable jointing and terminating up to 69kV at 90°C continuous operating temperatures and 130°C emergency overload temperatures.

## Scotch<sup>®</sup> 27 - Glass Cloth Tape

Stock No.	Description	Thickness	Size
80610781918	Woven glass cloth tape.	0.178mm	19mm x 20m
Features		Applications	

Glass will not shrink rot or burn and has high tensile stress.

Scotchfill<sup>®</sup> - Electrical Insulation Putty

Description

 Designed for continuous use at 130°C with high temperature thermosetting adhesive.

Electrical grade insulation compound in tape form.

- Applications requiring high mechanical strength and resistance to high temperatures.
- · Heat stable insulation for furnace and oven controls, motor leads and switches.



## **Applications**

Thickness 3.175mm

- . To build up cable joints and fill out major irregularities and voids in low voltage joints (<2300V).
- To insulate low-voltage (<600V) connections.

Size

38mm x 1.5m

- · To create moisture seal in high-voltage joints and for multi-conductor cable connections.
- To round out high-voltage connections to gear.

## Scotch<sup>®</sup> 24 - Electrical Shielding Tape

Non-corrosive, synthetic rubber that will not dry out.

Stock No. BC00000887	Description All-metal, open-weave, shielding braid tape in a flat, cable-like form.	Size 25mm x 4.5m
Features	Annietal, open-weave, smelding state tape in a nat, case-interiorm.	

Fire resistant.

Stock No.

UT10000934

• Applies cleanly without waste.

**Features** 

· Compatible with all high-voltage splicing and termination materials.

- To provide shielding for cable joints on shielded power cables.
- . To make the conductive portion of the stress cone on power
- cable terminations.
- To smooth connector area in oil-filled cables.

## Scotchrap<sup>®</sup> Tapes 50, 51 and Pipe Primer

Stock No.	Description	Size
UE000092648	Polyvinyl chloride based tapes with special high tack adhesives	24mm x 30.5m
UE000092663	Polyvinyl chloride based tapes with special high tack adhesives	48mm x 30.5m
UE000092705	Polyvinyl chloride based tapes with special high tack adhesives	96mm x 30.5m

### **Features**

 Resistant to corrosive salt water, soil acids, alkalis and salts, common chemicals. chemical vapors and exposure to outdoor weathering and sunlight.

## **Applications**

 The Scotchrap Tapes 50 and 51 are easy to apply without special tools or dangerous flame.









- To smooth busbar irregularities.







## TAPES

## Scotch<sup>®</sup> 70 - Silicone Rubber Tape

Stock No.	Description	Thickness	Size
UE100053029	Silicone Rubber Electrical tape.	0.3mm	25mm x 9m

### **Features**

- Excellent track, ozone & arc resistance. High dielectric strength.
- Class "H" material (180°C continuous operation).
- · Workable in extremely low temperatures.
- Excellent conformability.
- · Excellent instantaneous fusion, does not need to be held down.

## Scotch® 13 Tape - Semi Conducting EPR

Stock No.	Description	Thickness	Size
UE100000947	Soft Black rubber tape highly conformable.	0.762mm	19mm x 4.5m
Features Applications			ons

## Features

- Remains stable at 130°C and is non-vulcanising.
- Elongates easily to form irregular shapes.
- Resist cracking, solvents, U.V and moisture.
- Tape and liner boldly printed to distinguish from insulating tape.
- Meets requirements of ADTM-D4388, Type IV.

## **Applications**

 As an Over-wrap for protection of terminating high-voltage cables against arcing and tracking.

terminations. Replaces semi-conducting layer beneath metallic shield of damaged cables.

• Electricity rounds-off high voltage connectors and lugs.

· Provides screen continuation for high voltage joints and

· Forms conductive portion of stress cones.

## Scotch® 77 Tape - Fire Retardant and Electric Arc Proofing Tape

Stock No.	Description	Size	
HC000602306	Non-adhesive, Intumescent Elastomer.	76mm x 6.1m	
Features		Applications	

- · Flexible unsupported elastomer clean, easy to apply, eliminates cuts and contusions of hands.
- · Conformability provides wrinkle-free wrapping and complete coverage with minimum effort.
- · Designed to protect most types of electrical cables when exposed to potential failures in an adjacent cable.
- Specifically formulated adhesive expands in fire to form a thick char buildup between the flame and the cable. The resulting firewall acts as a heat shield and flame barrier, thus protecting the nearby cables and accessories.

## Scotch<sup>®</sup> 2220 - Stress Tape

Stock No.	Description	Thickness	Size
UE333346406	Mastic Stress Tape	0.76mm	18mm x 4.8m

### **Features**

- · Scotch® 2220 Stress Control Type changes the voltage distribution in electrical field surrounding medium voltage joints or terminations.
- Range of Temperature: Continuous operating temperature 90°C: Emergency operating temperature: 130°C.

## **Applications**

 Stress control in medium voltage joints and terminations; ines of flux are regulated to equalize the electrical stresses in a controlled manner along the entire taped joint or termination area where the shielding has been re-moved. By changing the electrical field surrounding the joint or termination, the stress concentration is reduced from several thousand volts to values found in continuous cable.

## **COMFORT GRIP GLOVES**

Code	Size
WX300921193	Large
WX300921201	X-Large

- · Exceptional comfort and breathability : Thin foam coating provides high breathability for maximum comfort.
- Flexibility: Fine gauge knit nylon liner provides flexibility and padding.
- · High Durability: Unique nitrile formula offers resistance to abrasion.
- Machine washable.

Characteristics









## LOW VOLTAGE **CABLE JOINTS**

## Scotchcast<sup>™</sup> Low Voltage Resin Splicing Kits up to 1.1kV - 82 Series

### Stock No. Description

UE000156427	Scotchcast <sup>™</sup> 82-A1 LT Epoxy resin splicing kit.	
UE000156435	Scotchcast <sup>™</sup> 82-A2 LT Polyurethane splicing kit.	
UE000156443	Scotchcast <sup>™</sup> 82-A3 LT Polyurethane splicing kit.	

### **Features**

- It utilizes a slim line mould with a two part amber transparent epoxy (82-A1) / Polyurethane (82-A2/3) resin with excellent chemical, mechanical and electrical properties.
- Resin stable up to 1100V : does not run once cured.
- Resin meets SABS 526 and SABS 150 standards. Kits meet VDE 0278, BS 6910 and are SABS Tested.
- Rated up to 1.1KV.
- Unaffected by solvents, ozone, UV light and moisture.
- Tried and tested in local environment for over 30 years.
- · SABS performance test reports available on request.

### Cable 2.5-4mm<sup>2</sup> Cable 6-16mm<sup>2</sup> Cable 25-35mm<sup>2</sup>

Size

## **Applications**

- The Scotchcast<sup>™</sup> 82 A Series Low Voltage Resin joints are designed to be used for multi-core non-shielded polymeric low voltage electrical cables.
- · Suitable for indoor and outdoor applications.
- Suitable for underground and submerged applications. Ideal for borehole application where space is limited.

## Scotchcast<sup>™</sup> Low Voltage Resin Splicing Kits up to 1.1kV - 91 Series

Stock No.	Description	Size
UE000189436	Scotchcast™91-A1 LT Polyurethane resin kit.	(8mm - 28mm) 4-10mm <sup>2</sup>
UE000189311	Scotchcast <sup>™</sup> 91-A2 LT Polyurethane resin kit.	(14mm - 32mm) 16-25mm <sup>2</sup>
UE000189428	Scotchcast <sup>™</sup> 91-A3 LT Polyurethane resin kit.	(23mm - 39mm) 35-50mm <sup>2</sup>
UE000189451	Scotchcast <sup>™</sup> 91-A4 LT Polyurethane resin kit.	(28mm - 51mm) 70mm <sup>2</sup>
UE444458611	Scotchcast <sup>™</sup> 91-A4,5 LT Polyurethane resin kit.	(30mm - 55mm) 95mm <sup>2</sup>
UE000189444	Scotchcast <sup>™</sup> 91-A5 LT Polyurethane resin kit.	(45mm - 70mm) 120-150mm <sup>2</sup>
UE100084842	Scotchcast <sup>™</sup> 91-A6 LT Polyurethane resin kit.	(48mm - 86mm) 185-240mm <sup>2</sup>
UE555571236	Scotchcast™91-A7 Cold Shrink.	(50mm - 100mm) 300mm²

### **Features**

**Features** 

- · It utilizes a "burge" type mould with a two part clear Scotchcast 460M polyurethane resin with excellent chemical, mechanical and electrical properties.
- Resin stable up to 1100V Degree Celsius: does not run once cured.

Unaffected by solvents, ozone, UV light and moisture. Resin is highly hydrolytically

- Resin meets VDE 0291-2 and Cenelec Pr HD 631, SABS 526 and SABS 150
- standards. Kits meet VDE 0278, BS 6910 and are SABS Tested. Bated up to 1.1KV.
- Tried and tested in local environments for over 30 years.

- **Applications**
- The Scotchcast<sup>™</sup> 91 A Series Low Voltage Resin joints are designed to be used for multi-core non-shielded polymeric low voltage electrical cables.
- Suitable for indoor and outdoor applications.
- · Suitable for underground and submerged applications.

## Scotchcast<sup>™</sup> Low Voltage Resin Splicing Kits up to 1.1kV - 91W Series

Stock No.	Description	Size
UE44446053	Scotchcast™91-A1/W.	(8mm - 28mm) 4-10mm²
UE44446061	Scotchcast™91-A2/W.	(14mm - 32mm) 16-25mm <sup>2</sup>
UE44446079	Scotchcast™91-A3/W.	(23mm - 39mm) 35-50mm <sup>2</sup>
UE44446087	Scotchcast™91-A4/W.	(28mm - 52mm) 70mm <sup>2</sup>
UE989899096	Scotchcast™91-A4/WE with earthing kit.	(28mm - 52mm) 70mm <sup>2</sup>
UE444458629	Scotchcast™91-A4,5/W.	(30mm - 55mm) 95mm <sup>2</sup>
XZ005704097	Scotchcast™91-A4,5/WE with earthing kit.	(30mm - 55mm) 95mm <sup>2</sup>
UE44446095	Scotchcast™91-A5/W.	(45mm - 70mm) 120-150mm <sup>2</sup>
UE555564447	Scotchcast™91-A5WE with earthing kit.	(45mm - 70mm) 120-150mm <sup>2</sup>
UE44446111	Scotchcast™91-A6/W.	(48mm - 79mm) 185-240mm <sup>2</sup>

## **Applications**

- The Scotchcast<sup>™</sup> 91 A W Series Low Voltage Resin joints are designed to be used for multi-core non-shielded polymeric low voltage electrical cables.
- Specifically designed for indoor and outdoor applications in environments that require maximum flame redundancy.
- Suitable for underground and submerged applications.



• Refer to 91 Series Splicing Kits.

• Utilizes a flame retardant resin and mould.

stabilized with low exothermic temperatures.

Tried and tested in local environment for over 30 years.

SABS performance test reports available on request.







## 11kV COLD SHRINK CABLE JOINTS

## 3 Core 11kV Cold Shrink Splice Kits for XLPE Cables

Stock No.	Description	Resin Type	Insulation OD	Size
3M-76458	MVX1-FR splicing kit for XLPE.	52FR Flame retardant	14.1-18.2mm	16-35mm <sup>2</sup>
3M-76459	MVX2-FR splicing kit for XLPE.	52FR Flame retardant	18.0-33.4mm	50-120mm <sup>2</sup>
3M-76460	MVX3-FR splicing kit for XLPE.	52FR Flame retardant	22.6-41.3mm	150-300mm <sup>2</sup>

## **Kit Contents**

- Ferrule tubes.
- Earthing materials.
- Disposable resin dispensing materials.
- High-K mastic and 2228 tape.
- Rejacketing materials.
- Scotchcast 52FR resin.

### **Features & Benefits**

- Cold shrink installation.
- EPDM rubber.
- Good dielectric strength.
- Kit accomodates wide cable range.
- Slim design ideal for rack installations.
- Resin filled.
- · Each kit is supplied with step-by-step instruction including pictures.
- Suitable for all cable and connector types.
- Continuous radial pressure ensures a tight natural seal.
- Easy, safe and quick installation.
- No special tooling or heating required.

## **11kV COLD SHRINK CABLE TERMINATIONS**

## 3 Core 11kV Cold Shrink Termination Kits for XLPE Cables with Earthing Kits

Stock No.	Description	Area of use	Size
3M-51780	1001 LC-B indoor termination kit.	Indoor, Low Contamination.	25-50mm <sup>2</sup>
3M-51780	1002 LC-B indoor termination kit.	Indoor, Low Contamination.	70-120mm <sup>2</sup>
3M-51780	1003 LC-B indoor termination kit.	Indoor, Low Contamination.	150-185mm <sup>2</sup>
3M-51780	1001 HC-B outdoor termination kit.	Outdoor, High Contamination.	25-50mm <sup>2</sup>
3M-51780	1002 HC-B outdoor termination kit.	Outdoor, High Contamination.	70-120mm <sup>2</sup>
3M-51780	1003 HC-B outdoor termination kit.	Outdoor, High Contamination.	150-185mm <sup>2</sup>

### **Features**

- 1000 series termination kits were designed to terminate 11kV 3-core XLPE cables.
- Silicone rubber Cold Shrink tubes are used over the cores and a Cold Shrink sheath seal resembling a three fingered glove to divide the crutch of the termination.
- The kit also includes: High-K stress control tube, Scotch No.13 and 33 tapes, putty, and TR cable preparation kit.
- Detailed instructions are supplied with the kit.







