



O

T

E

L

The power behind electricity

OHUG Product Catalogue

Edition 01

Section 04

Resin Cable Joint Kits & Resins

Resin Joint Kits	112
Resin Packs	118

3M™ Scotchcast™ Resin Cable Joint Kits

The 3M Scotchcast Resin Cable Joint range is designed to make the installation process faster, safer and more reliable than ever before. The range includes hydrocarbon resistant products specially developed for the oil and gas industries, as well as dedicated products to suit armoured cable types commonly found in mining and industrial environments. The range caters to a broad range of cable sizes and configurations, including inline and branch jointing applications.

Features available in new Scotchcast Resin Cable Joint Kit range include:

- > Express one-part mould body with innovative sealing system requiring no cutting to size or taping, allowing unmatched speed of installation (excludes LVI-3 series, which uses a hydrocarbon resistant two-part mould body, and the 82-AN series.)
- > Closed Mix-Pour with integrated resin delivery system. Designed to eliminate almost any chance of skin contact, user safety is increased and wastage from spills is minimized (excludes LVI-3 series and 82-AN series).
- > High quality 3M resin compounds which offer confidence through renowned reliability, and provide durability to avoid costly re-work and system down time



The 3M Scotchcast Closed Mix-Pour resin system allows mixing and pouring of the two-part resin without exposure to the user. No tools or mixing containers are required.



Sealed, two part resin bag



Integrated delivery system.
Included nozzle accessory
used for LVI-3 series



Internal mixing is safe and
clean



Resin is released and safely
poured in one easy step

3M™ Scotchcast™ Resin Cable Joint Range

Cable Type	Non-Armoured		Armoured
Joint Configuration	Inline	Branch	Inline
Scotchcast™ Joint Kit Hazardous Area Range		92-NBB-U Series	LVI-3 Series
Scotchcast™ Joint Kit Premium Range	92-NBA Series	92-NBB-Series (Y-branch) 92-NBC-Series (T-branch)	LVI-2 Series

3M™ Scotchcast™ Premium Resin Cable Joint Range

3M Scotchcast Premium Resin Cable Joints feature 3M™ Scotchcast™ Electrical Insulating Resin 40, which is a high quality two part polyurethane compound designed for electrical insulation and mechanical protection. Scotchcast Premium Resin Cable Joints are available in a range of sizes and configurations to suit inline, Y-branch, T-branch applications, and joints requiring cable armouring components. All products in this range utilise the “express” one-part mould body, providing time and cost savings through extra fast set up.

Applications

- > Indoor, outdoor, underground and submerged applications

The 3M™ Scotchcast™ “Express” one-part mould body is available in inline, T-branch and Y-branch (pictured) configurations.



Prepare and connect cables



Install mould



Mix and pour resin



Joint complete when resin has completely filled the mould

Product	Order Code	Cable Type	Cable Diameter		Joint Configuration	Mould Body
			Main	Branch		
92 - NBA0	3M750	Non-armoured	4-16 mm		Inline	Express one-part
92 - NBA1	3M751	Non-armoured	10-22 mm		Inline	Express one-part
92 - NBA2	3M752	Non-armoured	12-25 mm		Inline	Express one-part
92 - NBA3	3M753	Non-armoured	13-32 mm		Inline	Express one-part
92 - NBA4	3M754	Non-armoured	18-36 mm		Inline	Express one-part
92 - NBA5	3M755	Non-armoured	19-45 mm		Inline	Express one-part
92 - NBA6	3M756	Non-armoured	27-54 mm		Inline	Express one-part
92 - NBA7	3M757	Non-armoured	29-64 mm		Inline	Express one-part
92 - NBB0	3M758	Non-armoured	9-18 mm	9-18 mm	Branch (Y Config)	Express one-part
92 - NBB1	3M759	Non-armoured	11-23 mm	11-23 mm	Branch (Y Config)	Express one-part
92 - NBB2	3M760	Non-armoured	16-33 mm	16-33 mm	Branch (Y Config)	Express one-part
LVI-2/2-C*	POA	Non-armoured	12-25 mm			Express one-part
LVI-2/4	3M770	Armoured	18-36 mm			Express one-part
LVI-2/5	3M771	Armoured	19-45 mm			Express one-part
LVI-2/7	POA	Armoured	29-64 mm			Express one-part

* Connectors (crimp) included.

Selection Table

Inline joint kits for non-armoured cable

Cable Cross Section (mm ²)	1 Core	2 Cores	3 Cores	4 Cores
1.5	92-NBA0	92-NBA0	92-NBA0	92-NBA0
2.5	92-NBA0	92-NBA0	92-NBA0	92-NBA0
4	92-NBA0	92-NBA0	92-NBA0	92-NBA0
6	92-NBA0	92-NBA0	92-NBA0	92-NBA1
10	92-NBA0	92-NBA1	92-NBA1	92-NBA1
16	92-NBA0	92-NBA1	92-NBA1	92-NBA3
25	92-NBA0	92-NBA3	92-NBA3	92-NBA3
35	92-NBA0	92-NBA3	92-NBA3	92-NBA3
50	92-NBA0	N/A	92-NBA3	92-NBA4
70	92-NBA1	N/A	92-NBA4	92-NBA5
95	92-NBA1	N/A	92-NBA5	92-NBA5
120	92-NBA1	N/A	92-NBA5	92-NBA6
150	92-NBA3	N/A	92-NBA6	92-NBA6
185	92-NBA3	N/A	92-NBA7	92-NBA7

Inline joint kits for armoured cable

Cable Cross Section (mm ²)	1 Core	2 Cores	3 Cores	4 Cores
1.5	N/A	LVI-2/2-C*	LVI-2/2-C*	LVI-2/2-C*
2.5	N/A	LVI-2/2-C*	LVI-2/2-C*	LVI-2/2-C*
4	N/A	LVI-2/2-C*	LVI-2/2-C*	LVI-2/2-C*
6	N/A	LVI-2/2-C*	LVI-2/2-C*	LVI-2/2-C*
10	N/A	LVI-2/3-C*	LVI-2/3-C*	LVI-2/3-C*
16	N/A	LVI-2/3-C*	LVI-2/4	LVI-2/4
25	N/A	LVI-2/3-C*	LVI-2/4	LVI-2/4
35	N/A	LVI-2/4	LVI-2/5	LVI-2/5
50	LVI-2/3-C*	LVI-2/5	LVI-2/5	LVI-2/5
70	LVI-2/3-C*	LVI-2/5	LVI-2/6	LVI-2/6
95	LVI-2/4	LVI-2/6	LVI-2/6	LVI-2/7
120	LVI-2/4	LVI-2/6	LVI-2/7	LVI-2/7
150	LVI-2/4	LVI-2/6	LVI-2/7	LVI-2/7
185	LVI-2/5	LVI-2/7	LVI-2/7	
240	LVI-2/5	LVI-2/7		
300	LVI-2/6			
400	LVI-2/6			-
500	LVI-2/6	-	-	-
630	LVI-2/6	-	-	-
800	LVI-2/7	-	-	-
1000	LVI-2/7	-	-	-

* Connectors (crimp) included.

3M™ Scotchcast™ Resin T-Branch Kit LVBT-2/1

3M™ Scotchcast™ Resin T-Branch Kit LVBT-2/1 is designed to be used for single and multicore un-armoured, polymeric, low voltage energy cables up to 600 V. Suitable for indoor, outdoor and buried applications with high humidity or weather exposure. The kit contains resin 40 in a transparent two chamber bag with an integrated closed mixing system, two part mould shelves with a snap fit closing system, transparent mould body, pouring funnel and a closure plug.

Kit No.	Order Code	Main Cable OD Accommodation	Branch Cable OD Accommodation	Min cable/Joint Diameter	Cable Configuration
LVBT-2/1	POA	12.7 – 20.5 mm	Up to 9.5 mm	30	Single and multicore un-armoured, polymeric, low voltage energy cables up to 600 V.

3M™ Scotchcast™ Hazardous Area Resin Cable Joint Range

Scotchcast Hazardous Area Resin Cable Joints feature 3M™ Scotchcast™ Insulating Resin 1402FR. Scotchcast 1402FR resin is flame retardant, halogen free, and remains virtually unaffected by immersion in hydrocarbons and chemical solvents. When exposed to petrol, diesel and aggressive solvents, rapid deterioration can be experienced by standard encapsulating resins – especially those commonly found in conventional, low cost resin jointing kits. 1402FR is an ultra-high quality, highly modified resin that demonstrates superior performance compared to other encapsulating resin types. 3M Scotchcast Hazardous Area resin joint kits are recommended for industrial or specialist applications where hydrocarbons are present.



Applications

- > Indoor, outdoor, underground and submerged applications
For use within Zone 1 and 2 areas.

Product	Order Code	Cable Type	Cable Diameter		Joint Configuration	Mould Body
			Main	Branch		
LVI-3/2-C*	3M780	Armoured	14-30 mm		Inline	Flame retardant two-part
LVI-3/3-C*	3M781	Armoured	23-35 mm		Inline	Flame retardant two-part
LVI-3/4	3M782	Armoured	28-47 mm		Inline	Flame retardant two-part
LVI-3/5	3M775	Armoured	35-60 mm		Inline	Flame retardant two-part
LVI-3/6	3M776	Armoured	45-70 mm		Inline	Flame retardant two-part
LVI-3/7	3M796	Armoured	45-90 mm		Inline	Flame retardant two-part
LVI-3/8	POA	Armoured	45-100 mm		Inline	Flame retardant two-part
LVI-3/2-IC	POA	Instrumentation/Control, Armoured	14-30 mm		Inline	Flame retardant two-part
LVI-3/4-IC	POA	Instrumentation/Control, Armoured	28-47 mm		Inline	Flame retardant two-part
LVI-3/5-IC	POA	Instrumentation/Control, Armoured	35-60 mm		Inline	Flame retardant two-part
LVI-3/2-C-TM*	POA	Termite/Control, Armoured	14-30 mm		Inline	Flame retardant two-part
LVI-3/3-C-TM*	POA	Termite/Control, Armoured	23-35 mm		Inline	Flame retardant two-part
92-NBB1-U	POA	Non-armoured	11-23 mm	11-23 mm	Branch (Y Config)	Express two-part
92-NBB2-U	POA	Non-armoured	16-33 mm	16-33 mm	Branch (Y Config)	Express two-part

* Connectors (crimp) included.

Selection Table

Inline joint kits for armoured cable in hazardous areas

Cable Cross Section (mm ²)	1 Core (1 kV)	2 Cores (1 kV)	3 Cores (1 kV)	4 Cores (1 kV)	3 Cores (3.3 kV)	4 Cores (3.3 kV)
1.5	N/A	LVI-3/2-C*	LVI-3/2-C*	LVI-3/2-C*	-	
2.5	N/A	LVI-3/2-C*	LVI-3/2-C*	LVI-3/2-C*	-	
4	N/A	LVI-3/2-C*	LVI-3/2-C*	LVI-3/2-C*	-	
6	N/A	LVI-3/2-C*	LVI-3/2-C*	LVI-3/2-C*	-	
10	N/A	LVI-3/3-C*	LVI-3/3-C*	LVI-3/3-C*	-	
16	N/A	LVI-3/3-C*	LVI-3/3-C*	LVI-3/3-C*	-	LVI-3/4
25	N/A	LVI-3/3-C*	LVI-3/4	LVI-3/4	-	LVI-3/4
35	N/A	LVI-3/4	LVI-3/4	LVI-3/4	-	LVI-3/4
50	LVI-3/2-C*	LVI-3/4	LVI-3/4	LVI-3/5	LVI-3/3-C*	LVI-3/5
70	LVI-3/3-C*	LVI-3/4	LVI-3/5	LVI-3/5	LVI-3/3-C*	LVI-3/5
95	LVI-3/3-C*	LVI-3/5	LVI-3/5	LVI-3/6	LVI-3/3-C*	LVI-3/6
120	LVI-3/4	LVI-3/5	LVI-3/6	LVI-3/6	LVI-3/4	LVI-3/6
150	LVI-3/4	LVI-3/6	LVI-3/7	LVI-3/7	LVI-3/4	LVI-3/6
185	LVI-3/4	LVI-3/6	LVI-3/7	LVI-3/7	LVI-3/4	LVI-3/7
240	LVI-3/5	LVI-3/7	LVI-3/7	LVI-3/8	LVI-3/5	LVI-3/7
300	LVI-3/5	LVI-3/7	LVI-3/7	LVI-3/8	LVI-3/5	LVI-3/8
400	LVI-3/5	LVI-3/7	LVI-3/8	LVI-3/8	LVI-3/5	LVI-3/8
500	LVI-3/5	-			LVI-3/5	
630	LVI-3/6	-			LVI-3/6	
800	LVI-3/6	-			LVI-3/6	
1000	LVI-3/7	-			LVI-3/7	

* Connectors included.



3M™ Scotchcast™ Inline Resin Power Cable Splice Kits 82-AN Series

3M™ 82-AN Series Inline Resin Power Cable Splice Kit is designed to insulate and seal 5kV-rated unshielded, single conductor cables and 1 kV-rated multiple conductor cables. It is suitable for use in weather-exposed or direct-burial locations. Kit includes a mould body, pouring spouts, 23 electrical tape and No. 4N resin.

3M™ Scotchcast™ Electrical Resin 4N is a 2-part, insulating and encapsulating, epoxy-based, liquid resin that generates its own heat to cure. Compatible with solid/synthetic cable insulations and jackets, this resin makes an excellent insulator and sealer for cable splicing.



Applications

> Indoor, outdoor, underground and submerged.

Important:

> Use cable or connector diameter for final ordering criteria



Product	Order Code	Cable Size	Connector Diameter (maximum)	Connector Diameter (maximum)	Joint Configuration	Mould Body
82-A1N	3M772	Up to 30 mm ²	10 mm	16 mm	Inline	Standard two-part
82-A2N	3M773	35 - 80 mm ²	16 mm	25 mm	Inline	Standard two-part
82-A3N	3M774	95 - 200 mm ²	25 mm	40 mm	Inline	Standard two-part

3M™ Scotchcast™ Flexible Power Cable Kits 82-F Series

3M™ Scotchcast™ Flexible Power Cable Splicing Kits 82-F Series are flexible inline splices for use on non-shielded portable power cables and cords. These splices are designed to be used on single or multiple conductor cables, depending on the voltage rating.



Applications

> For use in weather-exposed, direct burial or submerged location

Product	Order Code	Cable O.D. Range (mm)	Number of Conductors	Connection Max O.D. (mm)	Voltage Rating (Max. Volts)	Conductor Size Range (mm ²)
82-F1	3M791	6.4 - 20.3	1	15.7 (Connector)	5000	16 - 50 mm ²
			Multi	22.8 (Connector Bundle O.D.)	1000 (600/2000)*	**
82-F2	POA	20.4 - 30.4	1	20.8 (Connector)	5000	70 - 120 mm ²
			Multi	33 (Connector Bundle O.D.)	1000 (600/2000)*	**

*Mine Portable Cable Rating of 600/2000 Volts. **Base multi-conductor selection on cable O.D. range.

3M™ Scotchcast™ Flexible Cable Jointing and Repair Systems

3M™ Scotchcast™ Flexible Cable Jointing and Repair Systems are flexible cold pour resin systems for the permanent jointing and repair of single and multi-core flexible power cables. The flexible Scotchcast resin bonds securely to the cable sheath, providing a permanent joint or repair with water tight seal. 3M™ Scotchcast™ Flame-Retardant Electrical Insulating Resin 2131 is suitable for use with these Kits.

Applications

> Can be used to joint or repair frequently coiled power cables



Product	Order Code	Min Cable Size (Dia) (mm)	Max Cable Size (Dia) (mm)	Max Length of Joint/Repair (mm)	Mould Length (mm)	Quantity of Resin needed for Joint - supplied separately
M20	POA	41	63	330-381	508	1200g [2 x Size C packs]
M30	POA	47	102	508	737	2220g [3 x Size C and 2 x Size B Packs]
M40	POA	47	152	813	1118	3600g [6 x Size C Packs]

3M™ Scotchcast™ Electrical Insulating Resin 1402FR

3M Scotchcast™ Hazardous Area Electrical Insulating Resin 1402FR is a halogen free, flame retardant, two component polyurethane resin. The resin is designed with flame retardant and chemical resistant properties for electrical insulation and mechanical protection of electrical cable joints.



Applications

- > Electrical insulation and mechanical protection of low and medium voltage electrical joints installed for indoor and outdoor, underground and submerged applications in conditions where flame retardancy and/or resistance to chemicals such as hydrocarbons is required.

Product	Order Code	Size	Viscosity at 23°C (mixed)	Cured Properties			Dielectric Strength
				Hardness Shore D	Tensile Strength	Elongation at Break	
1402FR	POA	C 370mL	2500 mPas	75	25 MPa	2%	>20 kV/mm

3M™ Scotchcast™ Encapsulating and Blocking Compound 4407

3M Scotchcast Encapsulating and Blocking Compound 4407 is a hard encapsulant designed specifically for permanent splice protection and cable blocking applications using telecommunications cables.



Applications

- > Telecommunication applications requiring a hard, non-re-enterable compound with good handling and performance characteristics.

Product	Order Code	Size	Viscosity at 23°C (mixed)	Cured Properties		
				Hardness Shore A	Tensile Strength	Elongation at Break
4407 Size A	3M783	89 mL	1200 mPas	70	3.45 MPa	150%
4407 Size B	3M784	197 mL	1200 mPas	70	3.45 MPa	150%
4407 Size C	POA	396 mL	1200 mPas	70	3.45 MPa	150%
4407 Size E	POA	637 mL	1200 mPas	70	3.45 MPa	150%

3M™ Scotchcast™ Electrical Insulating Resin 40

3M Scotchcast Premium Electrical Insulating Resin 40 is a high quality two part polyurethane room temperature curing (low exotherm) resin designed for electrical insulation and mechanical protection. Once hardening is complete, the resin provides impact resistance and durability against moisture and atmospheric corrosion. It features a Closed Mix and Pour (CMP) Delivery System designed to improve user safety and minimize wastage from spills (note - 40 size C without nozzle does not use a Closed Mix and Pour system). Pot life at 23°C is 20 minutes.



Applications

- > Mechanical protection and electrical insulation of low voltage electrical joints installed for indoor and outdoor, underground and submerged applications.

Product	Order Code	Size	Viscosity at 23°C (mixed)	Cured Properties			
				Hardness Shore D	Tensile Strength	Elongation at Break	Dielectric Strength
40 Size A	3M777	A 90 mL (104 g)	900 mPas	56	17 MPa	87%	36 kV/mm
40 Size B	3M778	B 200 mL (230 g)	900 mPas	56	17 MPa	87%	36 kV/mm
40 Size C	3M779	C 370 mL (426 g)	900 mPas	56	17 MPa	87%	36 kV/mm
40 Size C no nozzle*	POA	C 370 mL (426 g)	900 mPas	56	17 MPa	87%	36 kV/mm

*No nozzle format is recommended for resin pressure method (RPM) applications.

3M™ Scotchcast™ Easy Dispenser 250

3M™ Scotchcast™ Easy Dispenser 250 is an easy to use dispenser of electrical re-enterable resin for electrical installers. The 3M™ Scotchcast™ Easy Dispenser 250 contains 3M™ Scotchcast™ 8882 resin. This is a soft, two-part polybutadiene electrical resin encapsulant, designed for re-enterable splice protection. 3M™ Scotchcast™ 8882 resin is formulated for virtually every electrical application requiring a reliable, soft, re-enterable resin with good handling and performance characteristics. Scotchcast™ 8882 has excellent wetting properties and low viscosity. The resin flows well at low temperatures, filling the closure and minimizing air voids.



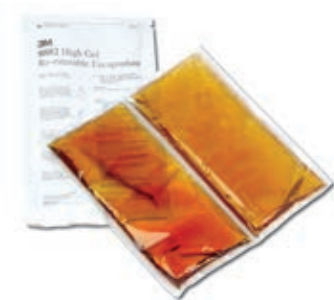
Applications

- > Electrical insulation and moisture sealing of multicore low voltage cables up to 0.6/1 (1.2)kV in junction boxes where a re-enterable system is required.

Product	Order Code	Size	Operating Temperature	Emergency Operating Temperature	Dielectric Strength
Easy 250	3M795	250 ml	90°C continuous	Up to 130°C	22 kV/mm

3M™ High Gel Re-enterable Encapsulant 8882

3M High Gel Re-enterable Encapsulant 8882 is a two-part non-urethane encapsulating compound. The encapsulant aggressively adheres to filled cable and is compatible with common plastics used in telephone splice connectors. The encapsulant permits easy cable splice re-entry for future changes and maintenance.



Applications

- > Encapsulating, sealing, potting and shock damping

Product	Order Code	Size	Operating Temperature	Emergency Operating Temperature	Dielectric Strength
8882-Size A	POA	90 ml	90°C continuous	Up to 130°C	Meets IP68, and IEC60529 requirements
8882-Size E	POA	292 ml	90°C continuous	Up to 130°C	Meets IP68, and IEC60529 requirements
8882-Size C	3M787	385 ml	90°C continuous	Up to 130°C	Meets IP68, and IEC60529 requirements
8882-Size D	POA	659 ml	90°C continuous	Up to 130°C	Meets IP68, and IEC60529 requirements

3M™ Scotchcast™ Re-enterable Resin 48FR

3M Scotchcast Re-enterable Polyurethane Resin 48FR can be used on either temporary or permanent cable joints. It is designed for easy removal, enabling further work or the recovery of parts, and can be removed with a simple plastic knife - no other tools, heat or solvents are required. It was developed to satisfy the requirements of the coal mining industry, where re-entry into joints and couplers is necessary. Flame retardant and semi-flexible. Gel time 15 minutes.

Applications

- > To provide secondary insulation and moisture sealing in joints and couplers where re-entry into that joint or coupler may be necessary.

Product	Order Code	Size	Viscosity at 23°C (mixed)	Cured Properties			
				Hardness Shore A	Tensile Strength	Elongation	Dielectric Strength
48FR	POA	4 L	1500 mPas	12	0.24 MPa	120%	>5 kV/mm
48FR	POA	2 L	1500 mPas	12	0.24 MPa	120%	>5 kV/mm

3M™ Scotchcast™ Flame-Retardant Electrical Resin 2131

3M™ Scotchcast™ Flame-Retardant Electrical Insulating resin 2131 is a two-part polyurethane resin designed to replace the cable jacket when splicing or repairing mine and portable cables. It can withstand the rugged conditions under which mine and portable cables operate.

Applications

- > Replace or repair the jacket on both single and multi-core power cables
- > Insulate between conductors of splices operating at up to 1000 volts
- > Potting cable or wire encasements, splices, printed circuit boards and junction boxes



Product	Order Code	Pack Description	Weight	Volume (cm ³)	Flame Retardant	Voltage	Maximum Operating Temperature
2131B	POA	2-part pouch	213 g	175	Yes	Up to 1000 v	90°C continuous. 130°C emergency.
2131C	3M792	2-part pouch	612 g	502	Yes	Up to 1000 v	90°C continuous. 130°C emergency.



OHUG

OHUG POWER EQUIPMENT LIMITED (HEAD OFFICE)

71 Adams Drive, PO Box 1074
Pukekohe, Auckland 2340
New Zealand

P: +64 9 239 2186
F: +64 9 239 2189
E: info@ohug.com

SALES LOWER NORTH ISLAND

P: 0800 438 648
F: 0800 GET OHUG
E: info@ohug.com

SALES & WAREHOUSE SOUTH ISLAND

P: +64 3 686 3578
F: 0800 GET OHUG
E: info@ohug.com

