

nbn™ Cable Guide

Version 2, 2016



Please scan for the latest version of the nbn™ cable guide.

All sizes and values without tolerances are reference values. Specifications are for product as supplied by Prysmian Group: any modification or alteration afterwards of product may give different result.

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Prysmian Australia Pty Ltd proudly manufactures in Australia and operates certified management systems compliant with the requirements of;

ISO 9001:2008

Quality Management Systems

AS/NZS 4801:2001

Occupational Health & Safety Management Systems

OHSAS 18001:2007

Assessment Specification for Occupational Health & Safety Management Systems

ISO 14001:2004

Environmental Management Systems



Welcome to the nbn™ Cable Guide.

Prysmian Group is the world's largest producer of power and telecommunication cables with 90 manufacturing plants, 17 Research & Development Centres and around 19,000 employees.

As the largest supplier of nbn's cable needs since 2011 and preferred supplier of all of Telstra's cable needs since 1998, we are committed to long term commercial partnerships with Australia's largest telecommunications providers. We have invested more than AU\$14M in our Dee Why (NSW) production facility specifically for nbn, which ensures long term local supply of fibre optic and copper cables to Australia's biggest infrastructure project, the national broadband network.

We are also committed to providing all of the necessary technical, installation, safety and practical information that may be required by designers, installers and users of our products in a comprehensive hand book that can easily be used in the field.

Please accept this edition of the nbn™ Cable Guide with our compliments.

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One stop shop.

We have all the cables you need.



No worries. Regardless of what cables you're looking for, we have them for sure. A full market offer ranging from construction, power and telecom cables. And if not, we'll invent them. Plus, we provide you with all the services you might need – before, during and after.

Australian made? Yes, of course.

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FIBRE OPTIC CABLES

Ribbon



Please scan to visit our web page for Ribbon Cables.

Ribbon optical fibre cables are designed for installation in ducts. The cables are fully dielectric thus immune to electric shocks or magnetic interferences. There are two types of cable construction, single tube and multi tube. The single tube construction is used for 72F and 144F ribbon cables, and the multi tube construction is used for 288F, 432F, 576F and 864F ribbon cables.

Single tube cables have two glass reinforced plastic (GRP) strength members either side of the central tube to provide longitudinal tensile and compressive strength. The tube is filled with a low viscosity, non-melting gel that prevents the longitudinal passage of moisture along the tube, and the cable core is protected from moisture permeation and water penetration by water swellable yarns and/or tapes.

Multi tube cables contain a central GRP strength member around which the tubes are stranded. The tubes are filled with a low viscosity, non-melting gel that prevents the longitudinal passage of moisture along the tube, and the cable core is protected from moisture permeation and water penetration by water swellable yarns and/or tapes.

Both single tube and multi tube cables are completed by the application of a co-extruded dual layer of polyethylene sheath with an integrally bonded nylon jacket for protection against termite attack with improved cable bending and durability. Rodent proof versions of these cables contain an outer layer of GRP straps, further sheathed in bonded PE-nylon.

CABLE INFORMATION

Ribbon, termite protection

nbn item code	Prismian equipment code	Equipment description	No. of fibres	Cable nominal weight (kg/km)	Min. bend. radius No load (mm)	Min. bend. radius Full load (mm)	Overall diam. (mm)	Supply as	Standard pack length (m)	Stock/ MTO	MOQ (m)	Nominal drum dimensions (mm)	Max. hauling tension Short Term (N)
10002243	5443608	72 FIBRE, RIBBON, TERMITE PROTECTION, V2	72	130	125	250	12.5	Full drum	2000	Stock	2000	OF3 - 1200/600/800	2000
10002249	5443608	72 FIBRE, RIBBON, TERMITE PROTECTION, V2	72	130	125	250	12.5	Cut length	-	Stock	30	Depending on cable length requested	2000
10002244	5443486	144 FIBRE, RIBBON, TERMITE PROTECTION, V2	144	165	142	284	14.2	Full drum	4000	Stock	4000	OF6 - 1600/800/800	2000
10002250	5443486	144 FIBRE, RIBBON, TERMITE PROTECTION, V2	144	165	142	284	14.2	Cut length	-	Stock	30	Depending on cable length requested	2000
10002245	5445404	288 FIBRE, RIBBON, TERMITE PROTECTION, V3	288	230	177	353	17.7	Full drum	4000	Stock	4000	OF8 - 2000/900/800	2000
10002251	5445404	288 FIBRE, RIBBON, TERMITE PROTECTION, V3	288	230	177	353	17.7	Cut length	-	Stock	30	Depending on cable length requested	2000
10002246	5448450	432 FIBRE, RIBBON, TERMITE PROTECTION, V2	432	345	219	437	21.9	Full drum	4000	Stock	4000	OF9 - 2200/900/850	2000
10002252	5448450	432 FIBRE, RIBBON, TERMITE PROTECTION, V2	432	345	219	437	21.9	Cut length	-	Stock	30	Depending on cable length requested	2000
10002247	5445396	576 FIBRE, RIBBON, TERMITE PROTECTION, V3	576	350	219	437	21.9	Full drum	3000	Stock	3000	OF8 - 2000/900/800	2000
10002253	5445396	576 FIBRE, RIBBON, TERMITE PROTECTION, V3	576	350	219	437	21.9	Cut length	-	Stock	30	Depending on cable length requested	2000
10002248	5440713	864 FIBRE, RIBBON, TERMITE PROTECTION	864	475	268	535	26.8	Full drum	2900	MTO	2900	OF9 - 2200/900/850	2000
10002254	5440713	864 FIBRE, RIBBON, TERMITE PROTECTION	864	475	268	535	26.8	Cut length	-	MTO	1000	Depending on cable length requested	2000



CABLE INFORMATION

Ribbon, rodent & termite protection

nbn item code	Prysmian equipment code	Equipment description	No. of fibres	Cable nominal weight (kg/km)	Min. bend. radius No load (mm)	Min. bend. radius Full load (mm)	Overall diam. (mm)	Supply as	Standard pack length (m)	Stock/ MTO	MOQ (m)	Nominal drum dimensions (mm)	Max. hauling tension Short term (N)
10002286	5444544	72 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V2	72	263	220	440	17.6	Full drum	7500	MTO	7500	OF9 - 2200/900/850	2000
10002292	5444544	72 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V2	72	263	220	440	17.6	Cut length		MTO	2000	Depending on cable length requested	2000
10002282	5444551	144 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V2	144	321	243	487	19.5	Full drum	5000	MTO	5000	OF9 - 2200/900/850	2000
10002288	5444551	144 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V2	144	321	243	487	19.5	Cut length		MTO	2000	Depending on cable length requested	2000
10002283	tba	288 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V3	288	390	276	552	22.1	Full drum	3200	MTO	3200	OF9 - 2200/900/850	2000
10002289	tba	288 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V3	288	390	276	552	22.1	Cut length		MTO	2000	Depending on cable length requested	2000
10002284	tba	432 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V2	432	585	336	672	26.9	Full drum	3200	MTO	3200	OF9 - 2200/900/850	2000
10002290	tba	432 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V2	432	585	336	672	26.9	Cut length		MTO	2000	Depending on cable length requested	2000
10002285	5448498	576 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V3	576	585	336	672	26.9	Full drum	2000	MTO	2000	OF9 - 2200/900/850	2000
10002291	5448498	576 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION, V3	576	585	336	672	26.9	Cut length		MTO	1000	Depending on cable length requested	2000
10002287	5440966	864 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION	864	815	406	812	32.5	Full drum	2000	MTO	2000	OF9 - 2200/900/850	2000
10002293	5440966	864 FIBRE, RIBBON, RODENT AND TERMITES PROTECTION	864	815	406	812	32.5	Cut length		MTO	1000	Depending on cable length requested	2000

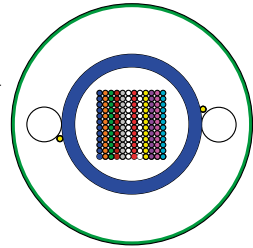
Note: Rodent proof cables are only suitable for duct applications (i.e. not to be used for direct burial).

UNDERGROUND CENTRAL TUBE OPTICAL CABLE

72 AND 144 FIBRE RCLT RIBBON CABLE FOR NBN ALL DIELECTRIC TERMITE RESISTANT

Cable construction

Optical fibres: Coloured acrylate coated silica.
 Number of elements (tubes): 1 / 12 fibres per ribbon / 6 or 12 ribbons within the tube.
 Tube and fibre identification: Colour coded to NBN specification A009.
 Secondary fibre protection (tubes): High density polyethylene (HDPE).
 Strength member: 2 / Glass reinforced plastic (GRP) rods (Opposite to each other).
 Water blocking: Water swellable yarns and/or water swellable tape (Interstices).
 Overall sheath and outer jacket: Integrally bonded LLDPE and Polyamide (Nylon) coloured NBN green with two ripcords for ease of removal.



144 fibre cable shown.
Drawing not to scale.

Product features

- Compact design
- Light weight
- Large tensile/weight ratio
- Fully water blocked
- Easily removable ribbon matrix
- Flexible buffer tube
- Termite protection
- UV stabilised

Applications

All outdoor telecommunications networking applications.
 Directly buried.
 Blown and hauled into ducts.

Cable approvals

NBN A009 CEI/IEC 60793 series AS/NZS 3080 (ISO/IEC 11801) ITU-T Recommendations
 ACMA AS/CA 5008 CEI/IEC 60794 series AS 1049 TELCORDIA GR-20

Technical data

Part no.	Fibre count	Overall diam. mm	Weight kg/km	Min. bending radius mm		Max. pulling tension short term kN	Max. crush resistance short term kN/10 cm	Temperature range °C		
				No load	Full load			Storage	Installation	Operation
F72S2RCTNBNV2	72	12.5	130	125	250	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70
F144S2RCTNBNV2	144	14.2	165	142	284	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70

Singlemode 9/125µm (NBN_Standard)

NBNCo Limited A009 Specifications: Outside Plant Fibre Optic Underground cable Release 5.0

Optical fibre colours

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Tube colour and ribbon descriptor

Fibre count	Tube 1
	Opaque or blue
	Ribbon descr.
72	BL 1 to BL 6
144	BL 1 to BL 12

Each ribbon comprises 12 fibres.

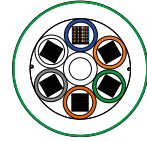
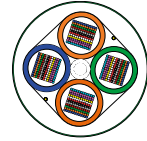
The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

UNDERGROUND LOOSE TUBE OPTICAL CABLE

288 TO 864 FIBRE RILT RIBBON CABLE FOR NBN ALL DIELECTRIC TERMITE RESISTANT

Cable construction

Optical fibres: Coloured acrylate coated silica.
 Number of elements (tubes): 4 or 6 / 12 fibres per ribbon / 6 or 12 ribbons within the tube.
 Tube and fibre identification: Colour coded to NBN specification A009.
 Secondary fibre protection (tubes): High density polyethylene (HDPE).
 Central strength member: Glass reinforced plastic (GRP) with or without over-sheathing.
 Water blocking: Thixotropic gel (Tubes). Water swellable yarns and/or water swellable tape (Interstices).
 Overall sheath and outer jacket: Integrally bonded linear low density polyethylene and polyamide (Nylon) coloured NBN green with ripcords for ease of removal.



576 and 864 fibre cables shown. Drawing not to scale.

Product features

- Compact design
- Light weight
- Large tensile/weight ratio
- Fully water blocked
- Easily removable ribbon matrix
- Flexible buffer tube
- Termite protection
- UV stabilised

Applications

All outdoor telecommunications networking applications.
 Directly buried.
 Blown and hauled into ducts.

Cable approvals

NBN A009 CEI/IEC 60793 series AS/NZS 3080 (ISO/IEC 11801) ITU-T Recommendations
 ACMA AS/CA S008 CEI/IEC 60794 series AS 1049 TELCORDIA GR-20

Technical data										
Part no.	Fibre count	Overall diam. mm	Weight kg/km	Min. bending radius mm		Max. pulling tension short term kN	Max. crush resistance short term kN/10 cm	Temperature range °C		
				No load	Full load			Storage	Installation	Operation
F288S2RLTNNBNV3	288	17.7	230	177	353	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70
F432S2RLTNNBNV2	432	21.9	345	219	437	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70
F576S2RLTNNBNV3	576	21.9	350	219	437	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70
F864S2RLTNNBN	864	26.8	490	268	535	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70

Singlemode 9/125µm (NBN_Standard)

NBNCo Limited A009 Specifications: Outside Plant Fibre Optic Underground cable Release 5.0

Optical fibre colours											
1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Tube colour and ribbon descriptor						
Fibre count	Tube 1	Tube 2	Tube 3	Tube 4	Tube 5	Tube 6
	Blue (BL)	Orange (OR)	Green (GR)	Brown (BR)	Slate (SL)	White (WH)
	Ribbon descr.	Ribbon descr.	Ribbon descr.	Ribbon descr.	Ribbon descr.	Ribbon descr.
288	BL 1 to BL 6	OR 1 to OR 6	GR 1 to GR 6	BR 1 to BR 6	N/A	N/A
432	BL 1 to BL 12	OR 1 to OR 12	GR 1 to GR 12	FILLER	N/A	N/A
576	BL 1 to BL 12	OR 1 to OR 12	GR 1 to GR 12	BR 1 to BR 12	N/A	N/A
864	BL 1 to BL 12	OR 1 to OR 12	GR 1 to GR 12	BR 1 to BR 12	SL 1 to SL 12	WH 1 to WH 12

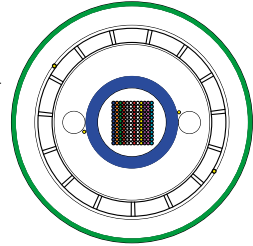
Each ribbon comprises 12 fibres.

UNDERGROUND CENTRAL TUBE OPTICAL CABLE

72 AND 144 FIBRE RCLT RIBBON CABLE FOR NBN ALL DIELECTRIC TERMITE AND RODENT RESISTANT

Cable construction

Optical fibres: Coloured acrylate coated silica.
 Number of elements (tubes): 1 / 12 fibres per ribbon / 6 or 12 ribbons within the tube.
 Tube and fibre identification: Colour coded to NBN specification A009.
 Secondary fibre protection (tubes): High density polyethylene (HDPE).
 Strength member: 2 / Glass reinforced plastic (GRP) rods (Opposite to each other).
 Water blocking: Thixotropic gel (Tube). Water swellable yarns and/or water swellable tape (Interstices).
 Inner sheath: Linear low density polyethylene.
 Armouring: Glass reinforced plastic (GRP) rods.
 Overall sheath and outer jacket: Integrally bonded linear low density polyethylene and polyamide (Nylon) coloured NBN green with ripcords for ease of removal.



144 fibre cable shown.
Drawing not to scale.

Product features

- Compact design
- Light weight
- Large tensile/weight ratio
- Fully water blocked
- Easily removable ribbon matrix
- Flexible buffer tube
- Rodent and termite protection
- UV stabilised

Applications

All outdoor telecommunications networking applications.
 Directly buried.
 Blown and hauled into ducts.

Cable approvals

NBN A009 CEI/IEC 60793 series AS/NZS 3080 (ISO/IEC 11801) ITU-T Recommendations
 ACMA AS/CA 5008 CEI/IEC 60794 series AS 1049 TELCORDIA GR-20

Technical data

Part no.	Fibre count	Overall diam.* mm	Weight kg/km	Min. bending radius mm		Max. pulling tension short term kN	Max. crush resistance short term kN/10 cm	Temperature range °C		
				No load	Full load			Storage	Installation	Operation
F72S2RCTNGNBNV2	72	17.6	263	220	440	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70
F144S2RCTNGNBNV2	144	19.5	321	243	487	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70

*Overall diameter may vary from the above nominal values between -2% (min.) and +8% (max.)

Singlemode 9/125µm (NBN_Standard)

NBNCo Limited A009 Specifications: Outside Plant Fibre Optic Underground cable Release 5.0

Optical fibre colours

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Tube colour and ribbon descriptor

Fibre count	Tube 1
	Opaque or blue
	Ribbon descr.
72	BL 1 to BL 6
144	BL 1 to BL 12

Each ribbon comprises 12 fibres.

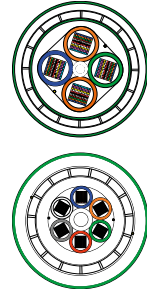
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UNDERGROUND LOOSE TUBE OPTICAL CABLE

288 TO 864 FIBRE RILT RIBBON CABLE FOR NBN ALL DIELECTRIC TERMITE AND RODENT RESISTANT

Cable construction

Optical fibres: Coloured acrylate coated silica.
 Number of elements (tubes): 4 or 6 / 12 fibres per ribbon / 6 or 12 ribbons within the tube.
 Tube and fibre identification: Colour coded to NBN specification A009.
 Secondary fibre protection (tubes): High density polyethylene (HDPE).
 Strength member: Glass reinforced plastic (GRP) with or without over-sheathing.
 Water blocking: Thixotropic gel (Tubes). Water swellable yarns and/or water swellable tape (Interstices).
 Inner sheath(s): Linear low density polyethylene Polyamide – applicable for 288, 432 & 576F.
 Armouring: Glass reinforced plastic (GRP) rods.
 Overall sheath and outer jacket: Integrally bonded linear low density polyethylene and polyamide (Nylon) coloured NBN green with ripcords for ease of removal.



576 and 864 fibre cables shown. Drawing not to scale.

Product features

- Compact design
- Light weight
- Large tensile/weight ratio
- Fully water blocked
- Easily removable ribbon matrix
- Flexible buffer tubes
- Rodent and termite protection
- UV stabilised

Applications

All outdoor telecommunications networking applications.
 Directly buried.
 Blown and hauled into ducts.

Cable approvals

NBN A009
 ACMA AS/CA 5008
 CEI/IEC 60793 series
 CEI/IEC 60794 series
 AS/NZS 3080 (ISO/IEC 11801)
 AS 1049
 ITU-T Recommendations
 TELCORDIA GR-20

Part no.	Fibre count	Overall diam. mm	Weight kg/km	Min. bending radius mm		Max. pulling tension short term kN	Max. crush resistance short term kN/10 cm	Temperature range °C		
				No load	Full load			Storage	Installation	Operation
				F288S2RLTNGNBNV3	288					
F432S2RLTNGNBNV2	432	26.9	585	336	672	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70
F576S2RLTNGNBNV3	576	26.9	585	336	672	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70
F864S2RLTNGNBN	864	32.5	815	406	812	2.0	2.0	-20 -> +70	0 -> +45	-10 -> +70

Singlemode 9/125µm (NBN_Standard)

NBNCo Limited A009 Specifications: Outside Plant Fibre Optic Underground cable Release 5.0

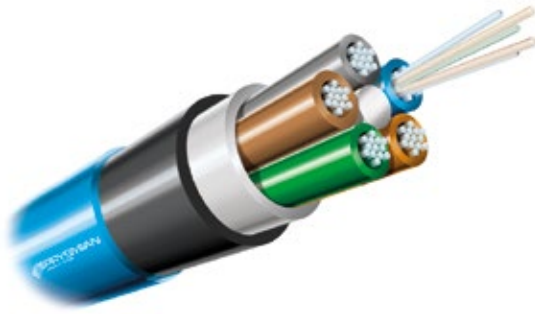
Optical fibre colours											
1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Tube colour and ribbon descriptor						
Fibre count	Tube 1	Tube 2	Tube 3	Tube 4	Tube 5	Tube 6
	Blue (BL)	Orange (OR)	Green (GR)	Brown (BR)	Slate (SL)	White (WH)
	Ribbon descr.	Ribbon descr.	Ribbon descr.	Ribbon descr.	Ribbon descr.	Ribbon descr.
288	BL 1 to BL 6	OR 1 to OR 6	GR 1 to GR 6	BR 1 to BR 6	N/A	N/A
432	BL 1 to BL 12	OR 1 to OR 12	GR 1 to GR 12	FILLER	N/A	N/A
576	BL 1 to BL 12	OR 1 to OR 12	GR 1 to GR 12	BR 1 to BR 12	N/A	N/A
864	BL 1 to BL 12	OR 1 to OR 12	GR 1 to GR 12	BR 1 to BR 12	SL 1 to SL 12	WH 1 to WH 12

Each ribbon comprises 12 fibres.

Heavy duty

eXTR@CORE™



Heavy Duty (High Strength eXTR@CORE™ – HSe) Multi-Loose Tube optical fibre cables designed for installation by direct burial in soils up to and including Soil Risk Rating level 8 (CSIRO Soil Classifications). Cable is fully dielectric, thus being immune to earth potential rises that can occur during lightning strikes and in areas of high soil resistivity. Loose tubes of increased hoop strength, each containing up to 12 single mode fibres, are stranded in reversing helix around a composite glass fibre reinforced plastic (GRP) central strength member. The dimension of the strength member has been increased, affording high axial strength to resist the massive forces experienced in areas of reactive/black soils commonly found in rural Australia. The tubes are filled with a low viscosity, non-melting gel that

prevents the longitudinal passage of moisture along the tube. Similarly to standard designs, the cable core includes a dry water blocking system to prevent the longitudinal passage of liquid along the cable, thus preventing moisture entering joint enclosures via the cable core. Fibre counts in the range of 12 to 144 are catered for with this construction. Each individual fibre and tube is coloured for unambiguous identification. The cable is completed by the application of a robust co-extruded dual layer of polyethylene sheath incorporating a bonded Nylon jacket for protection against termite attack with improved cable bending and durability. Additional layers consisting of flat GRP rods can be applied for rodent protection.

CABLE INFORMATION

Heavy duty

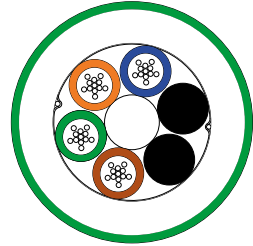
nbn item code	Prysmian equipment code	Equipment description	No. of fibres	kg/km	Min. bending radius No load (mm)	Min. bending radius Full load (mm)	Overall diam. (mm)	Supply as	Standard pack size (m)	Stock/ MTO	MOQ (m)	Max. drum length (m)	Nominal drum dimensions (mm)	Max. hauling tension Short term (N)
10002255	5441116	48 FIBRE, STRANDED, HEAVY DUTY, TERMITE PROTECTION	48	175	222	444	14.8	Full drum	10000	MTO	10000	10000	MF9 - 2000/1000/1000	4000
10002256	5441123	72 FIBRE, STRANDED, HEAVY DUTY, TERMITE PROTECTION	72	175	222	444	14.8	Full drum	10000	MTO	10000	10000	MF9 - 2000/1000/1000	4000
10002257	5441130	144 FIBRE, STRANDED, HEAVY DUTY, TERMITE PROTECTION	144	395	345	690	23.0	Full drum	5000	MTO	5000	5000	MF9 - 2000/1000/1000	4000
10010214	5441147	48 FIBRE, STRANDED, HEAVY DUTY, RODENT AND TERMITE PROTECTION	48	290	276	552	18.4	Full drum	7000	MTO	7000	7000	MF9 - 2000/1000/1000	5000
10002281	5441154	72 FIBRE, STRANDED, HEAVY DUTY, RODENT AND TERMITE PROTECTION	72	290	276	552	18.4	Full drum	7000	MTO	7000	7000	MF9 - 2000/1000/1000	5000
10002280	5441161	144 FIBRE, STRANDED, HEAVY DUTY, RODENT AND TERMITE PROTECTION	144	585	407	813	27.1	Full drum	3500	MTO	3500	3500	MF9 - 2000/1000/1000	5000

HSe eXTR@CORE™ ENHANCED HIGH STRENGTH UNDERGROUND OPTICAL CABLE
F(48-72-144)S2LTNH1NBN

eXTR@CORE™

Cable design

- Multi-loose tube construction.
- Central strength member (CSM):
 Glass fibre reinforced plastic material (GRP) with or without over-sheathing.
- Tube:
 Thermoplastic material, containing 12 single-mode optical fibres filled with a low viscosity, thixotropic, non-melting gel fully compatible with fibre coating and tube material.
- Stranding:
 The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member.
- Longitudinal water tightness:
 Water swellable elements (dry-core technology).
- Sheath:
 Polyethylene in compliance with AS 1049. Two ripcords provided beneath the sheath for easy removal.
- Outer jacket:
 UV stabilised polyamide (Nylon) in compliance with AS 1049 integrally bonded to PE sheath.



Drawing not to scale.

This Enhanced High Strength cable is engineered to feature high shear and compression resistance specially designed and tested for direct burial in black, expansive soils. Qualified using enhanced Axial Compression Resistance (ACR) test method.

Identification

- Sheath colour: The outer sheath colour is green.
- Sheath marking: The outer sheath is marked in 1 metre intervals as follows:

nbn FIBRE OPTIC CABLE PRYSMIAN DW XXXF HEAVY DUTY CN#### MM/YYYY *****

Logistic

- Packing: Steel drums with NOLCO-FLEX protection.
- Delivery lengths: As per current contract/agreement.

Technical data

No. of fibres	Item code number	No. of elements	Cable nominal diameter ¹ mm	Cable nominal weight kg/km	Max. tensile strength kN	Max. crush resistance kN/100 mm		Min. bending radius mm		Temperature range Operation °C
						Short term	Long term	Full load	No load	
48	F48S2LTNH1NBN	6	14.8	175	4.0	6.0	3.0	30 x Cable OD	15 x Cable OD	-10 -> +70
72	F72S2LTNH1NBN	6	14.8	175	4.0	6.0	3.0	30 x Cable OD	15 x Cable OD	-10 -> +70
144	F144S2LTNH1NBN	12	23.0	395	4.0	6.0	3.0	30 x Cable OD	15 x Cable OD	-10 -> +70

Note 1: Diameter may vary from the above nominal values between -2% (min.) and +8% (max.).

Fibre and buffer tube colours

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Fillers are either natural (opaque) or black.

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.



HSe eXTR@CORE™ ENHANCED HIGH STRENGTH UNDERGROUND OPTICAL CABLE

F(48-72-144)S2LTNH1NBN



Main mechanical characteristics			
Parameter	Test method	Test conditions	Acceptance criteria*
Tube kinking	IEC 60794-1-2-G7	Bend diameter (minimum): 80 mm Number of cycles: 5 Number of samples: 10	No kink occurs at the minimum bend diameter and no attenuation increase greater than 0.1 dB occurs.
Tensile strength	IEC 60794-1-2-E1	Load: As per cable max. tensile strength – see table.	After 30 minutes the maximum strain on the fibre should not exceed 0.6% and no attenuation increase greater than 0.1 dB occurs.
Crush	IEC 60794-1-2-E3	Short time: 10 min Long time: 120 min Load: As per max. crush resistance – see table. Number of positions: 3 adjacent sections (ensuring one over tube and one over lay reversal).	No damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs.
Impact	IEC 60794-1-2-E4	Weight: 1.5 kg Height: 1.0 m Anvil radius: 12.5 mm Impacts: 1	After 5 minutes no fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs.
Torsion	IEC 60794-1-2-E7	Sample length: 1 m Bends: 360° (1 turn) clockwise and after measurement (one minute) 720° (2 turns) anticlockwise (two minutes).	No fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs.
Bend	IEC 60794-1-2-E11	Mandrel diameter: 30 x Cable OD Bend: 360° (1 turn)	No attenuation increase greater than 0.1 dB occurs.
Bend under tension	Concurrent to tensile test IEC 60794-1-2-E18	Mandrel diameter: 60 x Cable OD Bend: 360° (1 turn)	After 1 minute no fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs from no load to full load.
Temperature cycling	IEC 60794-1-2-F1	Sample length: 1000 m (minimum) Temperature range: From -10 °C to +70 °C	There should be no average attenuation increase at the temperature extremes when compared to the attenuation at ambient temperature. No individual fibre should measure an attenuation greater than 0.15 dB/km.
Compression & Shear resistance (Harbour Bridge)	Prysmian internal test method	Sample length: 3 m	After the test is completed no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs from no load to full load.
Water penetration	IEC 60794-1-2-F5B	Sample length = 3 m Water height = 1 m	No water leakage after 24 hour.
Axial compression resistance (ACR)	Prysmian internal test method	Sample length: > 3 m Load: 4 kN Compression: > 0/1 % Lateral deviation: < 0.03 x Cable OD	No attenuation increase greater than 0.1 dB occurs. After the test is completed no damage to the sheath or to the core structure.

* All optical measurements above are performed at 1550 nm except ACR test that is measured at 1625 nm.

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

HSe eXTR@CORE™ ENHANCED HIGH STRENGTH RODENT PROOF OPTICAL CABLE
F(48-72-144)S2LTNH1GNBN

eXTR@CORE™

Cable design

- Multi-loose tube construction.
- Central strength member (CSM): Glass fibre reinforced plastic material (GRP) with or without over-sheathing.
- Tube: Thermoplastic material, containing 12 single-mode optical fibres filled with a low viscosity, thixotropic, non-melting gel fully compatible with fibre coating and tube material.
- Stranding: The required numbers of elements (tubes and fillers) are SZ stranded around the central strength member.
- Longitudinal water tightness: Water swellable elements (dry-core technology).
- Bedding: Polyethylene in compliance with AS1049. Two ripcords provided beneath the sheath for easy removal.
- Armour: Flat GRP Rods.
- Sheath: Polyethylene in compliance with AS 1049. Two ripcords provided beneath the sheath for easy removal.
- Outer jacket: UV stabilised polyamide (Nylon) in compliance with AS 1049 integrally bonded to PE sheath.



Drawing not to scale.

This Enhanced High Strength cable is engineered to feature high shear and compression resistance specially designed and tested for direct burial in black, expansive soils, GRP armour provides rodent protection. Qualified using enhanced Axial Compression Resistance (ACR) test method.

Identification

- Sheath colour: The outer sheath colour is green.
- Sheath marking: The outer sheath is marked in 1 metre intervals as follows:
- nbN FIBRE OPTIC CABLE PRYSMIAN DW XXXF HEAVY DUTY RODENT CN#### MM/YYYY *****

Logistic

- Packing: Steel drums with NOLCO-FLEX protection.
- Delivery lengths: As per current contract/agreement.

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

Technical data										
No. of fibres	Item code number	No. of elements	Cable nominal diameter ¹ mm	Cable nominal weight kg/km	Max. tensile strength kN	Max. crush resistance kN/100 mm		Min. bending radius mm		Temperature range Operation °C
						Short term	Long term	Full load	No load	
48	F48S2LTNH1GNBN	6	18.4	290	5.0	6.0	3.0	30 x Cable OD	15 x Cable OD	-10 -> +70
72	F72S2LTNH1GNBN	6	18.4	290	5.0	6.0	3.0	30 x Cable OD	15 x Cable OD	-10 -> +70
144	F144S2LTNH1GNBN	12	27.1	585	5.0	6.0	3.0	30 x Cable OD	15 x Cable OD	-10 -> +70

Note 1: Diameter may vary from the above nominal values between -2% (min.) and +8% (max.).

Fibre and buffer tube colours											
1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Fillers are either natural (opaque) or black.



HSe eXTR@CORE™ ENHANCED HIGH STRENGTH RODENT PROOF OPTICAL CABLE

F(48-72-144)S2L2TNH1GNBN



Main mechanical characteristics			
Parameter	Test method	Test conditions	Acceptance criteria*
Tube kinking	IEC 60794-1-2-G7	Bend diameter (minimum): 80 mm Number of cycles: 5 Number of samples: 10	No kink occurs at the minimum bend diameter and no attenuation increase greater than 0.1 dB occurs.
Tensile strength	IEC 60794-1-2-E1	Load: As per cable max. tensile strength – see table.	After 30 minutes the maximum strain on the fibre should not exceed 0.6% and no attenuation increase greater than 0.1 dB occurs.
Crush	IEC 60794-1-2-E3	Short time: 10 min Long time: 120 min Load: As per max. crush resistance – see table. Number of positions: 3 adjacent sections (ensuring one over tube and one over lay reversal).	No damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs.
Impact	IEC 60794-1-2-E4	Weight: 1.5 kg Height: 1.0 m Anvil radius: 12.5 mm Impacts: 1	After 5 minutes no fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs.
Torsion	IEC 60794-1-2-E7	Sample length: 1 m Bends: 360° (1 turn) clockwise and after measurement (one minute) 720° (2 turns) anticlockwise (two minutes).	No fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs.
Bend	IEC 60794-1-2-E11	Mandrel diameter: 30 x Cable OD Bend: 360° (1 turn)	No attenuation increase greater than 0.1 dB occurs.
Bend under tension	Concurrent to tensile test IEC 60794-1-2-E18	Mandrel diameter: 60 x Cable OD Bend: 360° (1 turn)	After 1 minute no fibre breaks, no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs from no load to full load.
Temperature cycling	IEC 60794-1-2-F1	Sample length: 1000 m (minimum) Temperature range: From -10 °C to +70 °C	There should be no average attenuation increase at the temperature extremes when compared to the attenuation at ambient temperature. No individual fibre should measure an attenuation greater than 0.15 dB/km.
Compression & Shear resistance (Harbour Bridge)	Prysmian internal test method	Sample length: 3 m	After the test is completed no damage to the sheath or to the core structure and no attenuation increase greater than 0.1 dB occurs from no load to full load.
Water penetration	IEC 60794-1-2-F5B	Sample length = 3 m Water height = 1 m	No water leakage after 24 hour.
Axial compression resistance (ACR)	Prysmian internal test method	Sample length: > 3 m Load: 4 kN Compression: > 0/1% Lateral deviation: < 0.03 x Cable OD	No attenuation increase greater than 0.1 dB occurs. After the test is completed no damage to the sheath or to the core structure.

* All optical measurements above are performed at 1550 nm except ACR test that is measured at 1625 nm.

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

Only the best for True Blue Aussies.

Australian made quality cables.



We've been producing tailor-made cables in Australia since 1944. And we will continue to do so. Our great staff of highly skilled and experienced people know what it takes to make cables that withstand everything from termites to hazardous mine sites. Just fair dinkum cables, mate.

Australian made? Yes, of course.

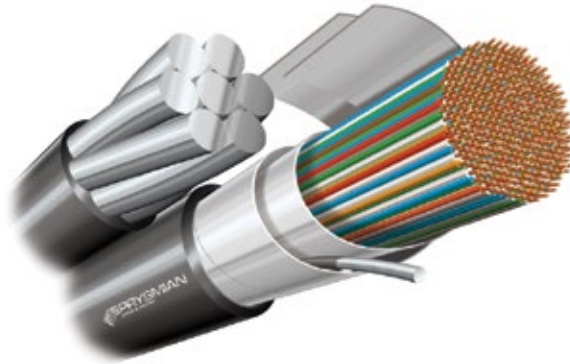
A brand of the

Prysmian
Group

COPPER CABLES



Aerial (IB)



Aerial (IB = Integral Bearer) cables are used in the Distribution Network where aerial deployment is required. This is typically where underground ducts are not present such as in older metropolitan developments or rural locations.

Unlike underground cables, the conductor insulation is made from solid polyethylene, which is tougher and provides a higher voltage breakdown strength that improves lightning resistance.

Single wires are twisted into pairs and subsequently 10 pair units in the same way as underground cables. The cable core is un-filled (no grease) since it will never be submerged below the water table and therefore does not require any longitudinal protection against moisture infiltration. A black UV resistant polyethylene overall sheath is applied, into which is incorporated a galvanized high tensile steel bearer wire in a 'figure eight' configuration. Special fittings are available in various sizes to clamp the wire at the ends and intermediate points of a run to support the cable on the poles.

CABLE INFORMATION

Aerial (IB)

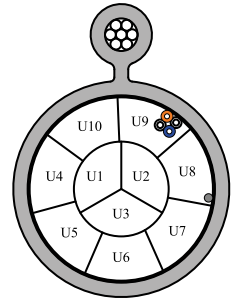
nbn item code	Prysmian equipment code	Equipment description	No. of pairs	kg/km	Min. bending diam. (mm)	Overall diam. (mm)	Standard pack size (m)	Stock/ MTO	MOQ (m)	Nominal drum dimensions (mm)	Max. hauling tension (N)
10023578	5445725	10 PAIR / 0.40MM PEIUT / IB	10	115	160	7.7	500	Stock	500	LW1 - 600/250/480	2000
10023579	5445732	50 PAIR / 0.40MM PEIUT / IB	50	260	280	13.9	500	Stock	500	LW3 - 1000/350/600	2000
10023580	5445749	100 PAIR / 0.40MM PEIUT / IB	100	510	400	19.7	500	Stock	500	LW4 - 1100/400/600	3500
10024292	5445824	10 PAIR / 0.64MM PEIUT / IB	10	165	210	10.4	500	Stock	500	LW1 - 600/250/480	2000
10023583	5445831	30 PAIR / 0.64MM PEIUT / IB	30	390	340	16.7	500	Stock	500	LW3 - 1000/350/600	3500
10023584	5445848	50 PAIR / 0.64MM PEIUT / IB	50	570	420	21.0	500	Stock	500	LW5 - 1250/450/600	3500
10023585	5445923	100 PAIR / 0.64MM PEIUT / IB	100	1080	590	29.2	500	MTO	500	OF6 - 1600/800/800	5800

AERIAL SELF-SUPPORTED TELEPHONE CABLE (FIGURE 8)

T(10-100)P40IB NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid Cu wire 0.40 mm in compliance with AS1125.
- Insulation: Solid polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair units).
- Wrapping: Polyethylene terephthalate tape.
- Drain wire: Tinned annealed copper wire 0.5 mm diameter.
- Screen: Aluminium/polyethylene terephthalate tape.
- Bearer wire: Galvanised steel wire with AS 1222.1.
- Sheath: UV stabilised polyethylene in compliance with AS 1049.



Drawing not to scale.

This self-supported copper telephone cable is designed for external aerial installations. GSW integral bearer is incorporated into the polyethylene sheath in 'figure 8' formation.

Identification

- Sheath colour: The standard outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 500 m.

Technical data							
Number of pairs	Cable nominal diameter mm	Diameter over bearer (nominal) mm	Cable nominal weight kg/km	GSW (IB) diameter mm	Max. installation tension ¹ kN	Min. bending diameter mm	Temperature range Operation °C
10	7.7 x 13.9	5	115	1 / 2.50	2.0	20 x Cable OD	-10 -> +70
50	13.9 x 20.1	5	260	1 / 2.50	2.0	20 x Cable OD	-10 -> +70
100	19.7 x 28.2	7	510	7 / 1.25	3.5	20 x Cable OD	-10 -> +70

Note 1 = Over GSW (IB) messenger

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	40,000 min.	52 max. average	70 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification										
Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Pair number	1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey

Units : 10 pairs (pairs 1 to 10).

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

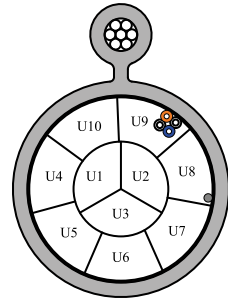
AERIAL SELF-SUPPORTED TELEPHONE CABLE (FIGURE 8)

T(10-100)P64IB NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid Cu wire 0.64 mm in compliance with AS1125.
- Insulation: Solid polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair units).
- Wrapping: Polyethylene terephthalate tape.
- Drain wire: Tinned annealed copper wire 0.5 mm diameter.
- Screen: Aluminium/polyethylene terephthalate tape.
- Bearer wire: Galvanised steel wire with AS 1222.1.
- Sheath: UV stabilised polyethylene in compliance with AS 1049.

This self-supported copper telephone cable is designed for external aerial installations. GSW integral bearer is incorporated into the polyethylene sheath in 'figure 8' formation.



Drawing not to scale.

Identification

- Sheath colour: The standard outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 500 m.

Technical data

Number of pairs	Cable nominal diameter mm	Diameter over bearer (nominal) mm	Cable nominal weight kg/km	GSW (IB) diameter mm	Max. installation tension ¹ kN	Min. bending diameter mm	Temperature range Operation °C
10	10.4 x 16.5	5	165	1 / 2.50	2.0	20 x Cable OD	-10 -> +70
30	16.7 x 24.8	7	390	7 / 1.25	3.5	20 x Cable OD	-10 -> +70
50	21.0 x 29.4	7	570	7 / 1.25	3.5	20 x Cable OD	-10 -> +70
100	29.2 x 39.9	9	1080	7 / 1.60	5.8	20 x Cable OD	-10 -> +70

Note 1 = Over GSW (IB) messenger.

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF) pair to pair	Capacitance unbalance (pF) pair to earth
56.4 max.	40,000 min.	52 max. average	37 max.*	800 max. for 10 pairs, 600 max. for 30 to 100 pairs**

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average. **Corrected to 1000 m length.

Colour code / Pair and unit identification

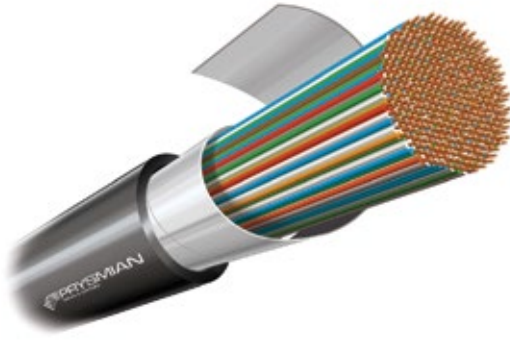
Pair number		1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey
Pair number		1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour		Blue	Orange	Green	Brown	Grey	White	White	White	White	White
		Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey

Units : 10 pairs (pairs 1 to 10).

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.



Distribution (Jelly filled)



This cable forms the basis of the underground Distribution Network for connections from the pillar to the final joint adjacent to the customer's premises and also for connections between the Node and the Pillar in FTTH configurations. Insulation is foam (cellular) polyethylene to give the appropriate electrical characteristics for long transmission distances and different conductor sizes are available to cover various applications.

Typically 0.40 mm conductors are used in metropolitan installations where distances are short and 0.64 and 0.90 mm conductors are used in rural situations where longer distances are required. Single wires are twisted into pairs and then bunched together

into 10 pair units which form the basic building block for cables up to 400 pairs. Protection against longitudinal moisture infiltration is afforded by fully filling the cable interstices with a semi-dry compound. All cables have an overall sheath of black polyethylene with the options of incorporating a Nylon jacket for termite resistance and/or an aluminium tape moisture barrier (MB) for added moisture protection and electrical screening (such as electric fences) in rural applications. All cables up to 100 pair have the nylon jacket intrinsically bonded to the polyethylene sheath.

All types may be installed in underground conduits, ducts or directly buried.



CABLE INFORMATION

Distribution (Jelly Filled)

nbn item code	Prysmian equipment code	Equipment description	No. of pairs	kg/km	Min. bending diam. (mm)	Overall diam. (mm)	Standard pack size (m)	Stock/ MTO	MOQ (m)	Nominal drum dimensions (mm)	Max. hauling tension (N)
10023567	5445756	10 PAIR / 0.40MM CPFUT / PE	10	50	112	7.0	1000	Stock	1000	LW1 - 600/250/480	240
10024181	5447705	10 PAIR / 0.40MM CPFUT / PEHJC BONDED	10	55	152	7.6	1000	Stock	1000	PL3 PLASTIC DRUM - 580x460	240
10023568	5445763	30 PAIR / 0.40MM CPFUT / PE	30	130	174	10.9	1000	Stock	1000	LW2 - 750/250/600	720
10024182	5447712	30 PAIR / 0.40MM CPFUT / PEHJC BONDED	30	135	228	11.4	1000	Stock	1000	LW2 - 750/250/600	720
10016679	5447330	50 PAIR / 0.40MM CPFUT / PE	50	195	210	13.1	1000	Stock	1000	LW3 - 1000/350/600	1200
10024183	5447729	50 PAIR / 0.40MM CPFUT / PEHJC BONDED	50	205	274	13.7	1000	Stock	1000	LW3 - 1000/350/600	1200
10016650	5445787	100 PAIR / 0.40MM CPFUT / PE	100	365	285	17.8	1000	Stock	1000	LW4 - 1100/400/600	2400
10024184	5447736	100 PAIR / 0.40MM CPFUT / MBHJC BONDED	100	400	368	18.4	1000	MTO	1000	LW4 - 1100/400/600	2400
10024184	5447422	200 PAIR / 0.40MM CPFUT / PE	200	670	352	22.0	1000	MTO	1000	OF6 - 1600/800/800	4800
10016648	5445794	200 PAIR / 0.40MM CPFUT / MB	200	680	354	22.1	1000	MTO	1000	OF6 - 1600/800/800	4800
10024185	5447668	200 PAIR / 0.40MM CPFUT / MBHJS	200	760	488	24.4	500	MTO	4000	OF6 - 1600/800/800	4800
10025257	5449174	400 PAIR / 0.40MM CPFUT / PE SDF (NBN)	400	1315	502	31.4	500	MTO	500	OF7 - 1800/800/800	9600
10026423	5449488	400 PAIR / 0.40MM CPFUT / PE (Reduced Diameter)	400	1550	442	27.6	1000	MTO	1000	OF7 - 1800/800/800	9600
10024186	5447637	400 PAIR / 0.40MM CPFUT / MB	400	1305	4820	30.0	500	MTO	500	OF7 - 1800/800/800	9600
10024159	5445800	400 PAIR / 0.40MM CPFUT / MBHJ (AIR TUBE)	400	1365	634	31.7	500	MTO	500	OF7 - 1800/800/800	9600
10024187	5447675	400 PAIR / 0.40MM CPFUT / MBHJS	400	1415	646	32.3	500	MTO	500	OF7 - 1800/800/800	9600
10023958	5447439	10 PAIR / 0.64MM CPFUT / PE	10	105	154	9.6	1000	Stock	1000	LW2 - 750/250/600	600
10024171	5445862	10 PAIR / 0.64MM CPFUT / MBHJC BONDED	10	125	216	10.8	1000	MTO	1000	LW2 - 750/250/600	600
10023959	5447446	30 PAIR / 0.64MM CPFUT / PE	30	265	238	14.9	1000	Stock	1000	LW3 - 1000/350/600	1800
10024172	5445879	30 PAIR / 0.64MM CPFUT / MBHJC BONDED	30	300	320	16.0	1000	MTO	1000	LW3 - 1000/350/600	1800



CABLE INFORMATION

Distribution (Jelly Filled)

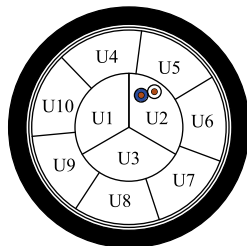
ribn item code	Prysmian equipment code	Equipment description	No. of pairs	kg/km	Min. bending diam. (mm)	Overall diam. (mm)	Standard pack size (m)	Stock/ MTO	MOQ (m)	Nominal drum dimensions (mm)	Max. hauling tension (N)
10023960	5447453	50 PAIR / 0.64MM CPFUT / PE	50	430	304	19.0	1000	Stock	1000	LW5 - 1250 / 450 / 600	3000
10024173	5445886	50 PAIR / 0.64MM CPFUT / MBHJC BONDED	50	470	400	20.0	1000	MTO	1000	OF5 - 1400 / 800 / 800	3000
10023961	5447460	100 PAIR / 0.64MM CPFUT / PE	100	835	419	26.2	1000	Stock	1000	OF6 - 1600 / 800 / 800	6100
10016651	5445893	100 PAIR / 0.64MM CPFUT / MBHJC BONDED	100	870	542	27.1	1000	MTO	1000	OF6 - 1600 / 800 / 800	6100
10024174	5447743	100 PAIR / 0.64MM CPFUT / MBHJC BONDED (AIR TUBE)	100	905	572	28.6	1000	MTO	4000	OF7 - 1800 / 800 / 800	6100
10023962	5447477	200 PAIR / 0.64MM CPFUT / PE	200	1525	515	32.2	500	Stock	500	OF7 - 1800 / 800 / 800	12200
10024188	5447644	200 PAIR / 0.64MM CPFUT / MB	200	1560	528	33.0	500	MTO	500	OF8 - 2000 / 900 / 800	12200
10024189	5447682	200 PAIR / 0.64MM CPFUT / MBHJS	200	1685	706	35.3	500	MTO	500	OF8 - 2000 / 900 / 800	12200
10023963	5447484	400 PAIR / 0.64MM CPFUT / PE	400	3000	720	45.0	500	MTO	500	OF7 - 1800 / 800 / 800	24500
10024190	5447651	400 PAIR / 0.64MM CPFUT / MB	400	3110	773	48.3	500	MTO	500	STEEL - 2400 / 1200 / 1000	24500
10023573	5445916	400 PAIR / 0.64MM CPFUT / MBHJ (AIR TUBE)	400	3200	994	49.7	500	MTO	500	STEEL - 2400 / 1200 / 1000	24500
10024191	5447699	400 PR / 0.64MM CPFUT / MBHJS	400	3300	1016	50.8	500	MTO	500	STEEL - 2400 / 1200 / 1000	24500
10023964	5447491	10 PAIR / 0.9MM CPFUT / PE	10	190	210	13.1	1000	Stock	1000	LW4 - 1100 / 400 / 600	1200
10024175	5445930	10 PAIR / 0.90MM CPFUT / MBHJC BONDED	10	215	268	13.4	1000	MTO	2000	LW3 - 1000 / 350 / 600	1200
10023965	5447507	30 PAIR / 0.9MM CPFUT / PE	30	530	341	21.3	500	MTO	2000	OF7 - 1800 / 800 / 800	3600
10024176	5445947	30 PAIR / 0.90MM CPFUT / MBHJC BONDED	30	560	436	21.8	500	MTO	2000	OF6 - 1600 / 800 / 800	3600
10023966	5447514	50 PAIR / 0.90MM CPFUT / PE	50	820	395	24.7	500	MTO	2000	OF6 - 1600 / 800 / 800	6000
10024177	5445954	50 PAIR / 0.90MM CPFUT / MBHJ	50	905	552	27.6	500	MTO	2000	OF6 - 1600 / 800 / 800	6000
10023967	5447521	100 PAIR / 0.90MM CPFUT / PE	100	1590	542	33.9	500	MTO	2000	OF8 - 2000 / 900 / 800	12000
10024178	5445961	100 PAIR / 0.90MM CPFUT / MBHJ	100	1690	726	36.3	500	MTO	2000	OF8 - 2000 / 900 / 800	12000

EXTERNAL UNDERGROUND DISTRIBUTION CABLE - UNSCREENED

T(10-100)P40CPFUT PE NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate or paper tape.
- Outer sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial.

Identification

- Sheath colour: The standard outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km.

Technical data

Number of pairs	Cable nominal diameter mm	Cable nominal weight kg/km	Max. installation tension N	Min. bending diameter mm	Temperature range Operation °C
10	7.0	50	240	16 x Cable OD	-10 -> +70
30	10.9	130	720	16 x Cable OD	-10 -> +70
50	13.1	195	1200	16 x Cable OD	-10 -> +70
100	17.8	365	2400	16 x Cable OD	-10 -> +70

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	20,000 min.	49 max. average	70 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification

Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Pair number	1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey

Units : 10 pairs (pairs 1 to 10).

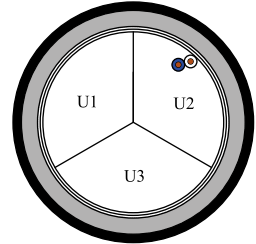
The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

EXTERNAL UNDERGROUND DISTRIBUTION CABLE - UNSCREENED

T(10-50)P40CPFUT PEHJ NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate or paper tape.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Outer jacket: UV stabilised polyamide (nylon) in compliance with AS 1049 integrally bonded to the polyethylene sheath.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Polyamide provides effective anti-termite barrier.

Identification

- Sheath colour: The standard outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km.

Technical data					
Number of pairs	Cable nominal diameter mm	Cable nominal weight kg/km	Max. installation tension N	Min. bending diameter mm	Temperature range Operation °C
10	7.6	55	240	20 x Cable OD	-10 -> +70
30	11.4	135	720	20 x Cable OD	-10 -> +70
50	13.7	205	1200	20 x Cable OD	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	20,000 min.	49 max. average	70 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification										
Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Pair number	1 to 10	11 to 20	21 to 30	31 to 40	41 to 50					
Group colour		Blue	Orange	Green	Brown	Grey				
		Blue	Orange	Green	Brown	Grey				

Units : 10 pairs (pairs 1 to 10).

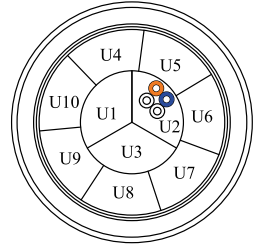
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EXTERNAL UNDERGROUND DISTRIBUTION CABLE - SCREENED

T100P40CPFUT MBHJC NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Moisture Barrier: Aluminium/polyethylene laminated tape.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Outer jacket: UV stabilised polyamide (nylon) in compliance with AS 1049 integrally bonded to the polyethylene sheath.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection and polyamide provides effective anti-termite barrier.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km.

Technical data

Number of pairs	Cable nominal diameter mm	Cable nominal weight kg/km	Max. installation tension kN	Min. bending diameter mm	Temperature range Operation °C
100	18.4	400	2.4	20 x Cable OD	-10 -> +70

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	20,000 min.	49 max. average	70 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification

Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Pair number	1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey

Units : 10 pairs (pairs 1 to 10).

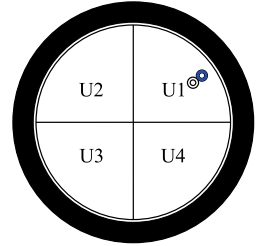
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EXTERNAL UNDERGROUND DISTRIBUTION CABLE - UNSCREENED

T(200-400)P40CPFUT PE NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Outer sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km for 200 pairs, 500 m for 400 pairs.

Technical data					
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
200	22	670	4.8	16 x Cable OD	-10 -> +70
400	31.4	1315	9.6	16 x Cable OD	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	20,000 min.	49 max. average	70 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification										
Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Sub-Unit (10 pairs) binding colour	B & BW Units					C Units				
	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
Unit (50 pairs) binding colour	B & C Units					BW Units				
	White					Red				
					White					Red

- 200 pairs - Circular: BW + C + B + C.
- 400 pairs - Centre: 10 x Sub-units, 1st Layer: BW + C + B + C + B + C.

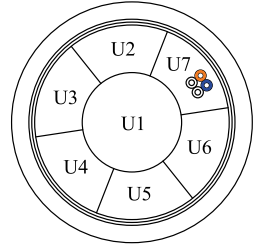
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EXTERNAL UNDERGROUND DISTRIBUTION CABLE - SCREENED

T(200-400)P40CPFUT MB NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Moisture Barrier: Aluminium/polyethylene laminated tape.
- Outer sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km for 200 pairs, 500 m for 400 pairs.

Technical data

Number of pairs	Cable nominal diameter mm	Cable nominal weight kg/km	Max. installation tension kN	Min. bending diameter mm	Temperature range Operation °C
200	22.1	680	4.8	16 x Cable OD	-10 -> +70
400	30.0	1305	9.6	16 x Cable OD	-10 -> +70

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	20,000 min.	49 max. average	70 max. *

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification

Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Sub-Unit (10 pairs) binding colour	B & BW Units					C & CW Units				
	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
Unit (50 pairs) binding colour	B & C Units					BW & CW Units				
	White					Red				
	White					Red				

Sub-Units : 10 pairs, Units: 5 x Sub-Units.

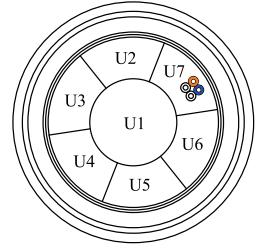
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EXTERNAL UNDERGROUND DISTRIBUTION CABLE - SCREENED

T(200-400)P40CPFUT MBHJSJ NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Moisture Barrier: Aluminium/polyethylene laminated tape.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Hard jacket: UV stabilised polyamide (nylon) in compliance with AS 1049.
- Sacrificial Sheath: UV stabilised polyethylene in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection. Polyamide provides effective anti-termite barrier.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 500 m.

Technical data					
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
200	24.4	760	4.8	20 x Cable OD	-10 -> +70
400	32.3	1415	9.6	20 x Cable OD	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	20,000 min.	49 max. average	70 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification											
Pair number		1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey
Sub-Unit (10 pairs) binding colour						Sub-Unit (10 pairs) binding colour					
B & BW Units						C & CW Units					
Blue Orange Green Brown Grey						White White White White White					
Blue Orange Green Brown Grey						Blue Orange Green Brown Grey					
Unit (50 pairs) binding colour						Unit (50 pairs) binding colour					
B & C Units						BW & CW Units					
White						Red					
White						Red					

Sub-Units : 10 pairs, Units: 5 x Sub-Units.

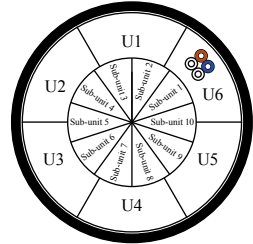
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EXTERNAL UNDERGROUND DISTRIBUTION CABLE - UNSCREENED

T400P40CPFUT PE (Reduced Diam) NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Outer sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.



Drawing not to scale.

This copper telecommunications cable is designed for external underground installations in ducts or by direct burial in trenches.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1000 m.

Technical data						
Number of pairs	Cable nominal diameter mm	Cable maximum diameter mm	Cable nominal weight kg/km	Max. installation tension kN	Min. bending diameter mm	Temperature range Operation °C
400	27.6	28.7	1200	9.6	16 x Cable OD	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	20,000 min.	54 max. average	70 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification										
Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Sub-Unit (10 pairs) binding colour	Units 1, 3 & 5					Units 2, 4 & 6				
	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
Unit (50 pairs) binding colour	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6				
	Blue	Orange	Green	Brown	Grey	White				

Cable size	Layer	Pair number/Unit binding colours									
400	Centre	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	99-100
	1 st	101-150	151-200	201-250	251-300	301-350	351-400				

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

Relax – we have you covered.

Prysmian safe cables wont let you d(r)own.



To us “good enough” is never good enough. We’re all depending on safe and reliable cables and Prysmian will always stand in the forefront, manufacturing the safest cables for Australian conditions. That includes making rigorous tests of all cables before letting them out on the market. It’s better to be safe than sorry.

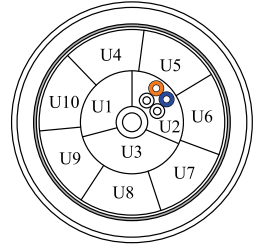
A brand of the

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Group

EXTERNAL UNDERGROUND DISTRIBUTION CABLE WITH AIRTUBE - SCREENED
T400 P40CPFUT MBHJC AIRTUBE NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Airtube: Polyethylene 6/8 mm ID/OD.
- Wrapping: Polyethylene terephthalate tape.
- Moisture Barrier: Aluminium/polyethylene laminated tape.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Outer jacket: UV stabilised polyamide (nylon) in compliance with AS 1049 integrally bonded to the polyethylene sheath.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection and polyamide provides effective anti-termite barrier. Cable is fitted with a polyethylene tube running along its central axis for pressurised air flow.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 500 m.

Technical data

Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
400 ¹	31.7	1365	9.6	20 x Cable OD	-10 -> +70

Note 1: Bonded nylon is not available for these items.

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	20,000 min.	49 max. average	70 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification

Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Sub-Unit (10 pairs) binding colour	B & BW Units					C & CW Units				
	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
Unit (50 pairs) binding colour	B & C Units					BW & CW Units				
	White					Red				
					Red					

Sub-Units : 10 pairs, Units: 5 x Sub-Units.

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

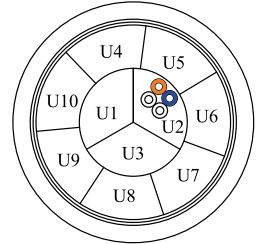
EXTERNAL UNDERGROUND JELLY FILLED DISTRIBUTION CABLE - UNSCREENED

T(10-100)P64CPFUT PE NBN

Cable design

Multi-pair construction.

- Conductor: Annealed solid copper wire 0.64 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Outer Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial.

Identification

- Sheath colour: The standard outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km.

Technical data					
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
10	9.6	105	0.6	Full load 16 x Cable OD	-10 -> +70
30	14.9	265	1.8	Full load 16 x Cable OD	-10 -> +70
50	19.0	430	3.0	Full load 16 x Cable OD	-10 -> +70
100	26.2	835	6.1	Full load 16 x Cable OD	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF) pair to pair
56.4 max.	20,000 min.	49 max. average	37 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification											
Pair number		1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey
Pair number		1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour		Blue	Orange	Green	Brown	Grey	White	White	White	White	White
		Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey

Units : 10 pairs (pairs 1 to 10).

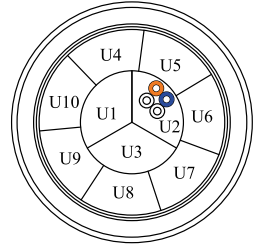
The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

EXTERNAL UNDERGROUND JELLY FILLED DISTRIBUTION CABLE - SCREENED

T(10-100)P64CPFUT MBHJC NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.64 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Moisture barrier: Aluminium/polyethylene laminated tape.
- Sheath: UV stabilised polyethylene in compliance with AS 1049.
- Outer jacket: UV stabilised polyamide (nylon) in compliance with AS 1049 integrally bonded to the polyethylene sheath.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection and polyamide provides effective anti-termites barrier.

Identification

- Sheath colour: The standard outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km.

Technical data

Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
10	10.8	125	0.6	Full load 20 x Cable OD	-10 -> +70
30	16.0	300	1.8	Full load 20 x Cable OD	-10 -> +70
50	20.0	470	3.0	Full load 20 x Cable OD	-10 -> +70
100	27.1	870	6.1	Full load 20 x Cable OD	-10 -> +70

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
56.4 max.	20,000 min.	49 max. average	37 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification

Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Pair number	1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour		Blue	Orange	Green	Brown	Grey	White	White	White	White
		Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown

Units : 10 pairs (pairs 1 to 10).

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change without the terms and conditions of relevant agreement and/or contract.

EXTERNAL UNDERGROUND DISTRIBUTION CABLE WITH AIRTUBE - SCREENED

T(100-400)P64CPFUT MBHJC AIRTUBE NBN

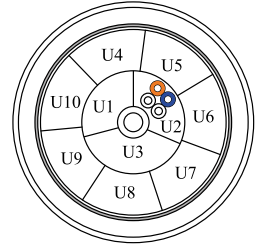
Cable design

Multi-pair construction.

- Conductor: Annealed solid copper wire 0.64 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.

- Airtube: Polyethylene 6/8 mm ID/OD.
- Wrapping: Polyethylene terephthalate tape.
- Moisture Barrier: Aluminium/polyethylene laminated tape.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Outer jacket: UV stabilised polyamide (nylon) in compliance with AS 1049.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection and polyamide provides effective anti-termite barrier. Cable is fitted with a polyethylene tube running along its central axis for pressurised air flow.



Drawing not to scale.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 or steel drums with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km for 100 & 200 pairs, 500 m for 400 pairs.

Technical data					
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
100	28.6	905	6.1	20 x Cable OD	-10 -> +70
400	49.7	3200	24.5	20 x Cable OD	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
56.4 max.	20,000 min.	49 max. average	37 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification											
Pair number		1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey
Sub-Unit (10 pairs) binding colour		B & BW Units					C & CW Units				
		Blue	Orange	Green	Brown	Grey	White	White	White	White	White
Unit (50 pairs) binding colour		B & C Units					BW & CW Units				
		White					Red				

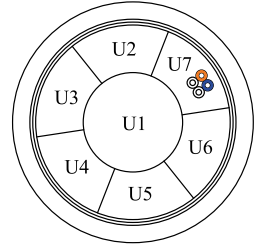
Sub-Units : 10 pairs, Units: 5 x Sub-Units.

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

EXTERNAL UNDERGROUND JELLY FILLED DISTRIBUTION CABLE - UNSCREENED
T(200-400)P64CPFUT PE NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.64 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Outer sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 500 m.

Technical data

Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
200	32.2	1525	12.2	16 x Cable OD	-10 -> +70
400	45.0	3000	24.5	16 x Cable OD	-10 -> +70

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
56.4 max.	20,000 min.	49 max. average	37 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification

Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Sub-Unit (10 pairs) binding colour	B & BW Units					C & CW Units				
	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
Unit (50 pairs) binding colour	B & C Units					BW & CW Units				
	White	White	White	White	White	Red	Red	Red	Red	Red

Sub-Units : 10 pairs, Units: 5 x Sub-Units.

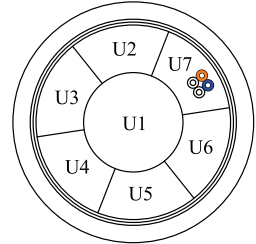
The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

EXTERNAL UNDERGROUND DISTRIBUTION CABLE - SCREENED

T(200-400)P64CPFUT MB NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.64 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Moisture Barrier: Aluminium/polyethylene laminated tape.
- Outer sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 or steel drums with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 500 m.

Technical data					
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
200	33.0	1560	12.2	16 x Cable OD	-10 -> +70
400	48.3	3110	24.5	16 x Cable OD	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF) pair to pair
56.4 max.	20,000 min.	49 max. average	37 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification										
Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Sub-Unit (10 pairs) binding colour	B & BW Units					C & CW Units				
	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
Unit (50 pairs) binding colour	B & C Units					BW & CW Units				
	White					Red				
					Red					

Sub-Units : 10 pairs, Units: 5 x Sub-Units.

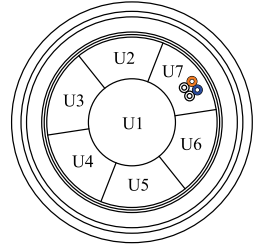
The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

EXTERNAL UNDERGROUND DISTRIBUTION CABLE - SCREENED

T(200-400)P64CPFUT MBHJSJ NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.64 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units, 50 pair units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Moisture Barrier: Aluminium/polyethylene laminated tape.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Hard jacket: UV stabilised polyamide (nylon) in compliance with AS 1049.
- Sacrificial Sheath: UV stabilised polyethylene in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection. Polyamide provides effective anti-termite barrier.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 or steel drums with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 500 m.

Technical data

Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
200	35.3	1685	12.2	20 x Cable OD	-10 -> +70
400	50.8	3300	24.5	20 x Cable OD	-10 -> +70

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF) pair to pair
56.4 max.	20,000 min.	49 max. average	37 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair, Sub-unit and Unit identification

Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Sub-Unit (10 pairs) binding colour	B & BW Units					C & CW Units				
	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
Unit (50 pairs) binding colour	B & C Units					BW & CW Units				
	White	White	White	White	White	Red	Red	Red	Red	Red

Sub-Units : 10 pairs, Units: 5 x Sub-Units.

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

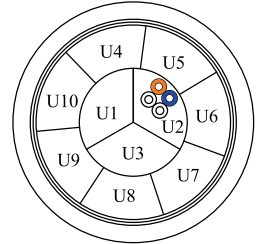
EXTERNAL UNDERGROUND JELLY FILLED DISTRIBUTION CABLE - UNSCREENED

T(10-100)P90CPFUT PE NBN

Cable design

Multi-pair construction.

- Conductor: Annealed solid copper wire 0.90 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Outer Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial.

Identification

- Sheath colour: The standard outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 or steel drums with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km for 10 Pairs, 500 m for 30, 50 & 100 Pairs.

Technical data					
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
10	13.1	190	1.2	Full load 16 x Cable OD	-10 -> +70
30	21.3	530	3.6	Full load 16 x Cable OD	-10 -> +70
50	24.7	820	6.0	Full load 16 x Cable OD	-10 -> +70
100	33.9	1590	12.0	Full load 16 x Cable OD	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF) pair to pair
27.9 max.	20,000 min.	49 max. average	32 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification											
Pair number		1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey
Pair number		1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour		Blue	Orange	Green	Brown	Grey	White	White	White	White	White
		Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey

Units : 10 pairs (pairs 1 to 10).

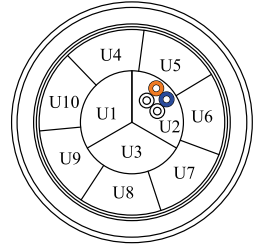
The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

EXTERNAL UNDERGROUND DISTRIBUTION CABLE - SCREENED

T(10-100)P90CPFUT MBHJC NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.90 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (10 pair sub-units).
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Wrapping: Polyethylene terephthalate tape.
- Moisture Barrier: Aluminium/polyethylene laminated tape.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Outer jacket: UV stabilised polyamide (nylon) in compliance with AS 1049 integrally bonded to the polyethylene sheath.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Aluminium moisture barrier provides complete water protection and polyamide provides effective anti-termite barrier.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 1 km for 10 Pairs, 500 m for 30, 50 & 100 Pairs.

Technical data

Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
10	13.4	215	1.2	20 x Cable OD	-10 -> +70
30	21.8	560	3.6	20 x Cable OD	-10 -> +70
50 ¹	27.6	905	6.0	20 x Cable OD	-10 -> +70
100 ¹	36.3	1690	12.0	20 x Cable OD	-10 -> +70

Note 1: Bonded nylon is not available for these items.

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
27.9 max.	20,000 min.	49 max. average	32 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification

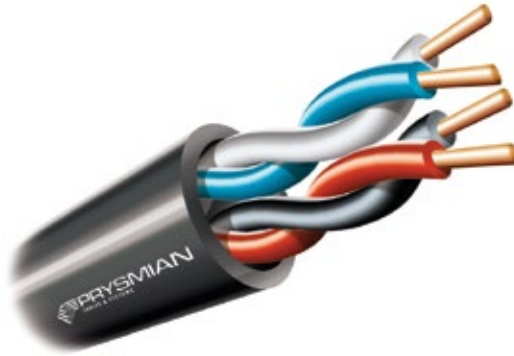
Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Pair number	1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour	Blue	Orange	Green	Brown	Grey	White	White	White	White	White
	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey

Units : 10 pairs (pairs 1 to 10).

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.



Lead-in



Lead-in cable is used for the last drop from the Distribution Network to the customer premises.

The cable has two polyethylene insulated pairs and has similar transmission characteristics to the corresponding ranges of Distribution Cable.

Lead-in cables are available in designs suitable for either underground or aerial installation. In metropolitan applications the lead-in is typically short, simply running from a street distribution cable to the first socket in the customer premises that forms the network boundary. However, in rural installations lead-in cables may be run for many kilometers in situations where a single dwelling is located a long distance from the road. In this circumstance the 2 pair 0.64 mm conductor cable with Nylon termite resistant jacket is typically utilized.

CABLE INFORMATION

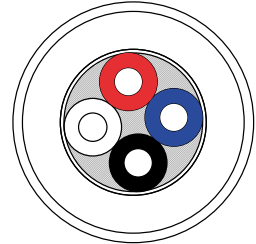
Lead-in

nbn item code	Prysmian equipment code	Equipment description	No. of pairs	kg/km	Min. bending diam. (mm)	Overall diam. (mm)	Standard pack length (m)	Stock/ MTO	MOQ (m)	Nominal drum dimensions (mm)	Max. hauling tension (N)
10023566	5445718	2 PAIR / 0.40MM PE/FLI / PE	2	18.5	80	4.6	500	Stock	500	REELEX - 415/415/225 (MAGENTA)	50
10024180	5447750	2 PAIR / 0.40MM PE/FLI / PE/HJC BONDED	2	19.5	100	4.7	500	Stock	500	1xREEL (338/102/230), CRTN (340/340/245)	50
10024294	5445817	2 PAIR / 0.64MM PE/IL / PE/IB	2	38	100	4.4	500	Stock	500	PL1 - PLASTIC DRUM 450X380	1000
10024293	5447538	2 PAIR / 0.64MM CP/FLI / PE	2	29	90	5.6	500	Stock	500	1xREEL (422/102/306), CRTN (435/435/320)	120
10024170	5445855	2 PAIR / 0.64MM CP/FLI / PE/HJC BONDED	2	35	100	6.2	500	Stock	500	1xREEL (422/102/306), CRTN (435/435/320)	120

EXTERNAL LEAD-IN CABLE
T2P40PEFLI PE(H) NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.40 mm diameter in compliance with AS1125.
- Insulation: Solid polyethylene compound in compliance with AS1049.
- Cabling element: Twisted Quad.
- Colour code: See table Colour code.
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Hard jacket: UV stabilised polyamide (nylon) in compliance with AS 1049 (Alternative) integrally bonded to the polyethylene sheath.



Drawing not to scale.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Alternative design with polyamide provides effective anti-termite barrier.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Fibreboard 'easy-pull' dispenser cartons (Reelex) or Plastic reels and cardboard boxes.
- Delivery lengths: Standard delivery length is 500 m.

Technical data					
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (N)	Min. bending diameter (mm)	Temperature range Operation (°C)
2	4.6	18.5	50	80	-10 -> +70
2 (Hard jacket)	4.7	19.5	50	100	-10 -> +70

Electrical characteristics at 20°C			
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
139.3 max.	40,000 min.	49 max. average	1200 max.*

*Corrected to 1000 m length.

Colour code / Pair and unit identification			
Pair number		1	2
Insulation colour	Wire a	White	Red
	Wire b	Blue	Black

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

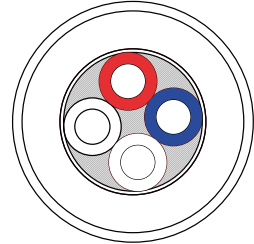
EXTERNAL LEAD-IN CABLE

T2P64CPFLI PE(HJC) NBN

Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.64 mm diameter in compliance with AS1125.
- Insulation: Cellular polyethylene compound in compliance with AS1049.
- Cabling element: Twisted Quad.
- Colour code: See table Colour code.
- Longitudinal water tightness: Semi-dry gel (Unilite) filled interstices.
- Sheath: UV stabilised polyethylene (LLDPE) in compliance with AS 1049.
- Hard jacket: (Alternative) UV stabilised polyamide (nylon) in compliance with AS 1049 integrally bonded to the polyethylene sheath.

This copper telephone cable is designed for external underground installations in ducts or by direct burial. Alternative design with polyamide provides effective anti-termite barrier.



Drawing not to scale.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Plastic reels and cardboard boxes.
- Delivery lengths: Standard delivery length is 500 m.

Technical data

Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (N)	Min. bending diameter (mm)	Temperature range Operation (°C)
2	5.6	29	120	90	-10 -> +70
2 (Hard jacket)	6.2	35	120	100	-10 -> +70

Electrical characteristics at 20°C

DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF pair to pair)
56.4 max.	40,000 min.	49 max. average	100 max.*

*Corrected to 1000 m length. Corresponds to be exponentially smoothed average.

Colour code / Pair and unit identification

Pair number	1	2
Insulation colour	Wire a	Red
	Wire b	Black

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

AERIAL SELF-SUPPORTED TELEPHONE CABLE (FIGURE 8)

T2P64IB NBN

Cable design

- Quad construction
- Conductor: Annealed solid Cu wire 0.64 mm in compliance with AS1125.
- Insulation: Solid polyethylene compound in compliance with AS1049.
- Cabling element: Twisted quad.
- Colour code: See table Colour code.
- Bearer wire: Galvanised steel wire with AS 1222.1.
- Sheath: UV stabilised polyethylene in compliance with AS 1049.

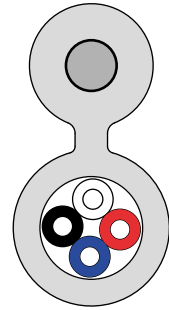
This self-supported copper telephone cable is designed for external aerial installations. GSW integral bearer is incorporated into the polyethylene sheath in 'figure 8' formation.

Identification

- Sheath colour: The outer sheath colour is black.
- Sheath marking: As per nbn technical requirements.

Logistic

- Packing: Plastic reels and cardboard boxes.
- Delivery lengths: Standard delivery length is 500 m.



Drawing not to scale.

Technical data						
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	GSW (IB) diameter (mm)	Max. installation tension ¹ (kN)	Min. bending diameter (mm)	Temperature range Operation (°C)
2 (Quad)	4.4 x 7.9	38.3	1 / 1.25	1.0	100	-10 -> +70

Note 1 = Over GSW (IB) messenger.

Electrical characteristics at 20°C				
DC resistance (Ω/km)	Insulation resistance (MΩ/km)	Mutual capacitance (nF/km)	Capacitance unbalance (pF) pair to pair	Capacitance unbalance(pF) pair to earth
56.4 max.	40,000 min.	46 max. average	170 max.*	2000 max.**

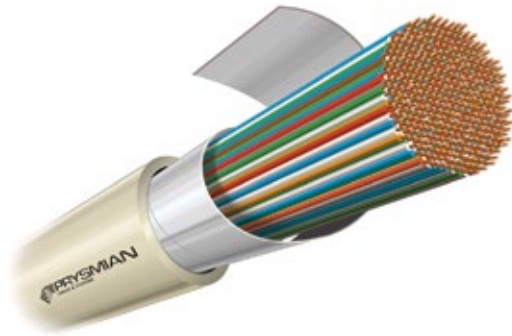
*Corrected to 1000 m length. Corresponds to be exponentially smoothed average. **Corrected to 1000 m length.

Colour code / Pair and unit identification			
Pair number	1		2
	Wire a	White	Red
Insulation colour	Wire b	Blue	Black

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.



Premises CAT 3



Internal Category 3 (CAT3) cable is designed for use indoors within the customer premises.

The conductor is 0.50 mm in diameter and the insulation is of solid polyethylene, designed to meet Class C (0.5 mm conductor only) requirements as per AS/NZS 3080 – Telecommunications Installations Cabling for Commercial Premises (ISO/IEC 11801).

Wires are twisted together to form pairs and then formed into 10 pair units the same as the external cables. Overall protection is by means of an off-white coloured fire retarding PVC sheath.

The cable has to comply with specified flame propagation requirements and as such is suitable for installation in vertical building risers and for horizontal runs.



CABLE INFORMATION

Premises CAT 3

nbn item code	Prysman equipment code	Equipment description	No. of pairs	kg/km	Min. bending diam. (mm)	Overall diam. (mm)	Standard pack length (m)	Stock/ MTO	MOQ (m)	Nominal drum dimensions (mm)	Max. hauling tension (N)
10023890	5447606	2 PAIR / 0.50MM PET / PV CAT3	2	20	39	3.9	500	Stock	500	REELEX - 360/360/215 (YELLOW)	75
10023540	5446005	25 PAIR / 0.50MM PET / PV CAT3	25	152	115	12	250	Stock	500	LW1 - 600/250/480	950
10024192	5447613	50 PAIR / 0.50MM PET / PV CAT3	50	280	158	15.8	250	MTO	250	LW1 - 600/250/480	1900
10023541	5447620	100 PAIR / 0.50MM PET / PV CAT3	100	537	213	21	250	MTO	250	LW2 - 750/250/600	3800

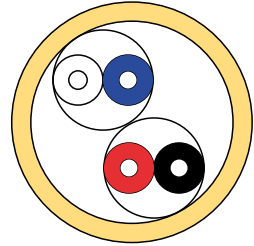
INTERNAL TELEPHONE/DATA COMMUNICATIONS CABLE - UTP CATEGORY 3

T2PI



Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.50 mm diameter (24 AWG).
- Insulation: Polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Circular.
- Sheath: PVC in compliance with AS 1049. One ripcord is provided beneath the sheath for easy removal.



These Internal cables have been upgraded to Category 3, 100Ω balanced, suitable for Local Area Network (LAN) network cabling (Up to 16 MHz). Data-grade UTP, capable of supporting transmission rates of up to 16Mbps.

Drawing not to scale.

Identification

- Sheath colour: The standard outer sheath colour is manilla (off-white).
- Sheath marking: The outer sheath is marked in 1 metre intervals as follows:

PRYSMIAN DW M@XTEL CAT3 XPR INTERNAL TELEPHONE 0.5MM Part No  N10514 J/N ##### MM/YY MADE IN AUSTRALIA *****

Logistic

- Packing: Fibreboard 'easy-pull' dispenser cartons (Reelex).
- Delivery lengths: Standard delivery length is 500 m.

Technical data

Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (N)	Min. bending diameter (mm)	Temperature range Operation (°C)
2	3.9	20	75	10 x Cable OD	0 -> +60

Attenuation and Near End Crosstalk (NEXT):

Frequency (MHz)	0.256	0.512	0.772	1.0	4.0	8.0	10.0	16.0
Max. Attenuation (dB/100 m)	1.3	1.8	2.2	2.6	5.6	8.5	9.7	13.1
Min. Pr-Pr NEXT (dB/100 m)	N/A	N/A	43.0	41.3	32.3	27.8	26.3	23.2

Electrical characteristics at 20°C

DC resistance (Ω/100 m)	Resistance unbalance (%)	Characteristic impedance (Ω)	Capacitance unbalance (pF/100 m) pair to ground @ 0.8 or 1.0 kHz
9.38 max.	5.0 max.	100 ± 15 @ 1.0-16 MHz	330 max.

Colour code / Pair and unit identification

Pair number	1	2	
Insulation colour	Wire a	White	Red
	Wire b	Blue	Black

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.



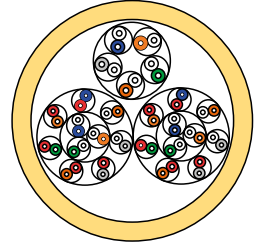
INTERNAL TELEPHONE/DATA COMMUNICATIONS CABLE - UTP CATEGORY 3

T(25-100)PI NBN



Cable design

- Multi-pair construction.
- Conductor: Annealed solid copper wire 0.50 mm diameter (24 AWG).
- Insulation: Polyethylene compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.
- Stranding of pairs: Bunched (5 and 10 units).
- Wrapping: Polyethylene terephthalate tape.
- Sheath: PVC in compliance with AS 1049. One ripcord is provided beneath the sheath for easy removal.



Drawing not to scale.

These Internal cables have been upgraded to Category 3, 100Ω balanced, suitable for Local Area Network (LAN) network cabling (Up to 16 MHz). Data-grade UTP, capable of supporting transmission rates of up to 16Mbps.

Identification

- Sheath colour: The standard outer sheath colour is manilla (off-white).
- Sheath marking: The outer sheath is marked in 1 metre intervals as follows:

PRYSMIAN DW M@XTEL CAT3 XXXPR INTERNAL TELEPHONE 0.5MM Part No N10514 J/N ##### MM/YY MADE IN AUSTRALIA *****

Logistic

- Packing: Timber drums to AS/NZS 2857 with NOLCO-FLEX protection.
- Delivery lengths: Standard delivery length is 250 m.

Technical data					
Number of pairs	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. installation tension (N)	Min. bending diameter (mm)	Temperature range Operation (°C)
25	11.5	152	950	10 x Cable OD	0 -> +60
50	15.8	280	1900	10 x Cable OD	0 -> +60
100	21.3	537	3800	10 x Cable OD	0 -> +60

Attenuation and Near End Crosstalk (NEXT):									
Frequency (MHz)	0.256	0.512	0.772	1.0	4.0	8.0	10.0	16.0	
Max. Attenuation (dB/100 m)	1.3	1.8	2.2	2.6	5.6	8.5	9.7	13.1	
Min. Pr-Pr NEXT (dB/100 m)	N/A	N/A	43.0	41.3	32.3	27.8	26.3	23.2	

Electrical characteristics at 20°C			
DC resistance (Ω/100 m)	Resistance unbalance (%)	Characteristic impedance (Ω)	Capacitance unbalance (pF/100 m) pair to ground @ 0.8 or 1.0 kHz
9.38 max.	5.0 max.	100 ± 15 @ 1.0-16 MHz	330 max.

Colour code / Pair and unit identification										
Pair number	1	2	3	4	5	6	7	8	9	10
Insulation colour	Wire a	White	White	White	White	White	Red	Red	Red	Red
	Wire b	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown
Pair number	1 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100
Group colour	White	White	White	White	White	Blue	Orange	Green	Brown	Grey
	Blue	Orange	Green	Brown	Grey	Blue	Orange	Green	Brown	Grey

Units : 5 pairs (pairs 1 to 5); 10 pairs (pairs 1 to 10).

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Jumper wire



Jumper wire is the simplest of all telephone cables, used for 'jumping' circuits in pillars and Main Distribution Frames (MDF). Available in 2 wires with either 0.40 or 0.50 mm conductors. The wires are twisted together with a short pitch to form a pair.

Conductor insulation is by means of fire retarding PVC that is tough and resistant to cutting and abrasion to prevent damage when jumpered across modular termination blocks in pillars and MDF installations.



CABLE INFORMATION

Jumper wire

nbn item code	Prismian equipment code	Equipment description	No. of pairs	kg/km	Min. bending diam. (mm)	Overall diam. (mm)	Standard pack length (m)	Stock/MTO	MOQ (m)	Nominal drum dimensions (mm)	Max. hauling tension (N)
10023894	5445978	2 CORE / 0.40MM PVC.WH / BU JUMPER WIRE	1	3	15	1.5	400	Stock	4000	12 REELS (204/102/52), CRTN (418/208/370)	26
10023893	5445985	2 CORE / 0.50MM PVC.CN / WH JUMPER WIRE	1	4.5	20	1.8	400	Stock	4000	12 REELS (204/102/52), CRTN (418/208/370)	38
10023892	5445992	2 CORE / 0.50MM PVC.RD / WH JUMPER WIRE	1	4.5	20	1.8	400	Stock	4000	12 REELS (204/102/52), CRTN (418/208/370)	38
10024179	5447583	2 CORE / 0.50MM PVC.WH / VI JUMPER WIRE	1	4.5	20	1.8	400	Stock	4000	12 REELS (204/102/52), CRTN (418/208/370)	38



0.4/0.5 MM PVC INSULATED INTERNAL EXCHANGE JUMPER WIRE

T2W_JUMPER NBN

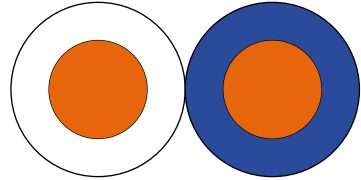
Cable design

- Single-pair construction.
- Conductor: Annealed solid copper wire 0.40 or 0.50 mm diameter.
- Insulation: PVC V-75 compound in compliance with AS1049.
- Cabling element: Twisted pair.
- Colour code: See table Colour code.

Jumper wire is used for the interconnection of terminal tags of MDF, pillars and cabinets and internal terminating boxes.

Logistic

- Packing: Plastic reels and cardboard boxes.
- Delivery lengths: Standard delivery length is 400 m.



Drawing not to scale.

Technical data

Number of wires	Cable nominal diameter (mm)	Cable nominal weight (kg/km)	Max. tensile strength (N)	Min. bending diameter (mm)	Temperature range Operation (°C)
2 x 0.40 mm	1.5	3.0	26	20	0 -> +60
2 x 0.50 mm	1.8	4.5	38	20	0 -> +60

Electrical characteristics at 20°C

Conductor diameter	Max. conductor resistance (Ω/km)	Min. insulation resistance (MΩ.km)	Max. capacitance unbalance (pF) pair to pair
0.40 mm	148	1000	300*
0.50 mm	94.5	1000	300*

*Corrected to 500 m length.

Colour code

Cable size		2 wires/0.50 mm	2 wires/0.50 mm	2 wires/0.50 mm	2 wires/0.40 mm
Insulation colour	Wire a	White	White	White	White
	Wire b	Red	Green	Violet	Blue

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.



PRODUCT INFORMATION

Joints for copper cables



Please scan to visit our web page with installation instructions for Copper joints.

nbn item code	Prysmian equipment code	Equipment description	Min/max. diam. for looped cable in main port (mm)	Min. diam. for single cable in main port (mm)	Min/max. diam. for cable in auxiliary port (mm)	Standard pack size (pcs)	Stock/ MITO	MOQ (m)	Packaging dimensions (mm)
10023498	XAU5338843	CHANNEL OPENABLE JOINT 30 SERIES - 50 PAIR	2x8 / 2x16	10	"A" ports: 5/14	150	Stock	150	10 joints in box: 340x380x470 15 cartons in pallet: 1170x1170x970
10023499	XAU5338850	CHANNEL OPENABLE JOINT 31 SERIES - 100 PAIR	2x8 / 2x22	22	"A" ports: 5/14 "B" ports: 5/16	120	Stock	120	8 joints in box: 340x380x470 15 cartons in pallet: 1170x1170x970
10024295	XAU5338942	CHANNEL OPENABLE JOINT 32 SERIES - 200 PAIR (258 MM)	2x17 / 2x42	30	"B" ports: 6/16 "C" port: 10/35	72	Stock	72	18 joints in box: 1150x550x560 4 cartons in pallet: 1170x1170x1320
10024193	XAU5338935	CHANNEL OPENABLE JOINT 32 SERIES - 400 PAIR (350 MM)	2x17 / 2x42	30	"B" ports: 6/16 "C" port: 10/35	72	Stock	72	18 joints in box: 1150x550x560 4 cartons in pallet: 1170x1170x1320
10023506	XAU5338867	CHANNEL AERIAL OPENABLE JOINT 31 SERIES - 100 PAIR	2x8 / 2x22	5	5/15 2 pair cable grommet: 1x4/4x6	240	MITO	240	8 joints in box: 340x380x470 15 cartons in pallet: 1170x1170x970
10023667	XAU5338928	CHANNEL AUXILIARY SLEEVE KIT - 30 TO 32 SERIES (10 SLEEVE SETS)	-	-	-	720	Stock	720	10 kits in box: 190x190x560 72 cartons in pallet: 1170x1170x970

Openable Joint 30 Series - 50 pair

Description

The Channell Openable Joint closure 30 Series 50 Pair is a re-enterable ready access closure suitable for distribution of underground copper networks. The 30 Series closure can accommodate up to 50 pair of jointed copper cable and utilises proven heatshrink sleeve technology to seal cables in the base.

Features

- Weatherproof and insect proof.
- Robust construction.
- UV resistant.
- All auxiliary ports sealed until required (easy knockouts).
- Main cable can be looped through large oval port.
- Re-entry is achieved without the need of special tools.
- Multiple port entry configuration.
- Suitable for pole/wall mounting, pit installation or direct buried.
- Available with lockable/re-openable sealing clamp.

Applications

- Underground distribution or termination of copper cables.



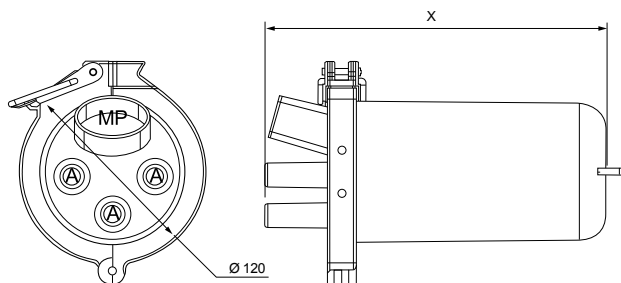
Test specifications

Test specifications		
Integrity	Air tightness	15 psi internal / 24 hours / 23°C - no pressure loss
	Head of Water (H of W)	100 hours at 2 metres head / 100 hours at 5 metres head - no leaks
	IP rating	IP 68
Environmental	Environmental cycling	50 cycles + 60/ - 30°C - pass H of W test
	Water cycling	50 cycles + 50/ + 5°C. Internal - no loss of pressure
	Alkaline resistance	72 hours in pH 12 Sodium Hydroxide - no degradation and pass H of W test
	Thermal ageing	2000 hours at 60°C
Mechanical	Flexure	Cables flexed at 0.5 m from closure plus/minus 30 degrees, 100 cycles - no physical changes and pass H of W test
	Impact	1 kg weight dropped and pass H of W test
	Torsion	plus/minus 90 deg. torsion from normal held for 5 minutes
	Re-entry	- no functional damage and pass H of W test 50 re-entries on all enterable parts - no functional damage and pass H of W test

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.



Dimensions	
Overall length 'X'	220 mm
Main port (loop) entry	Min. cable diameter 1 x 10 mm, 2 x 8 mm Max. cable diameter 1 x 20 mm, 2 x 16 mm
Auxiliary A port	Max. cable diameter 14 mm ; Min. cable diameter 5 mm



Product Schematic

- Kit contents**
- Dome/cover
 - Base
 - "O" ring
 - Standard clamp (lockable)
 - Abrasive strip
 - Foil (cable protection)
 - Protective mittens
 - Cleaning pad
 - Mastic tape (ETS)
 - Heatshrink sleeves
 - Main port glue block



- Exploded view**
1. Dome/cover
 2. "O" ring
 3. Standard clamp
 4. Base

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

Openable Joint 31 Series - 100 pair

Description

The Channell Openable Joint closure 31 Series 100 Pair is a re-enterable ready access closure suitable for distribution of underground copper networks. The 31 Series closure can accommodate up to 100 pair of jointed copper cable and utilises proven heatshrink sleeve technology to seal cables in the base.

Features

- Weatherproof and insect proof.
- Robust construction.
- UV resistant.
- All auxiliary ports sealed until required (easy knockouts).
- Main cable can be looped through large oval port.
- Re-entry is achieved without the need of special tools.
- Multiple port entry configuration.
- Suitable for pole/wall mounting, pit installation or direct buried.
- Available with lockable/re-openable sealing clamp.

Applications

- Underground distribution or termination of copper cables.

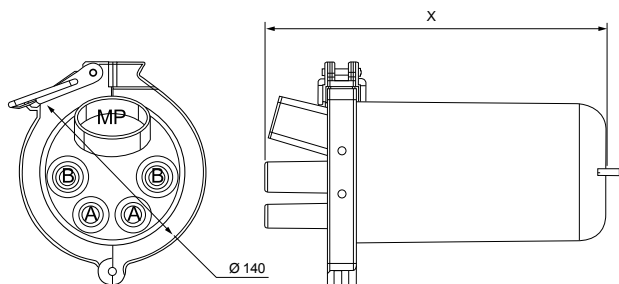


Test specifications

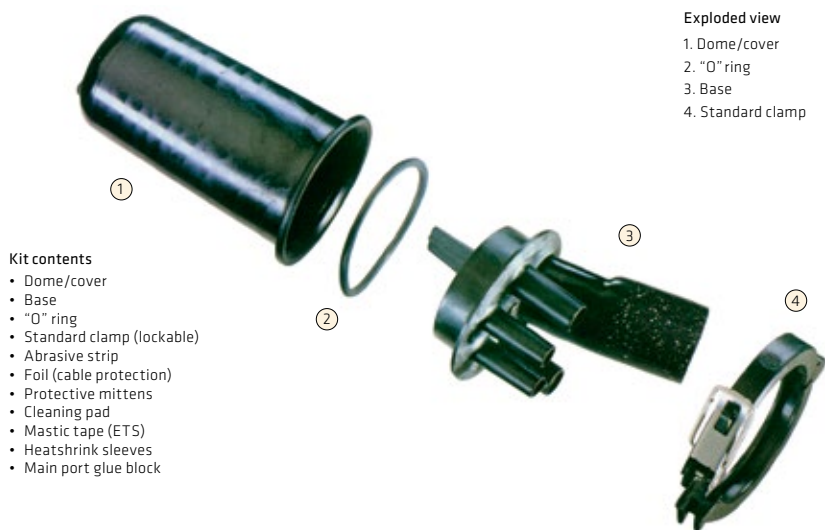
Test specifications		
Integrity	Air tightness	15 psi internal / 24 hours / 23°C - no pressure loss
	Head of Water (H of W)	100 hours at 2 metres head / 100 hours at 5 metres head - no leaks
	IP rating	IP 68
Environmental	Environmental cycling	50 cycles + 60/ - 30°C - pass H of W test
	Water cycling	50 cycles + 50/ + 5°C. Internal - no loss of pressure
	Alkaline resistance	72 hours in pH 12 Sodium Hydroxide - no degradation and pass H of W test
	Thermal ageing	2000 hours at 60°C
Mechanical	Flexure	Cables flexed at 0.5 m from closure plus/minus 30 degrees, 100 cycles - no physical changes and pass H of W test
	Impact	1 kg weight dropped and pass H of W test
	Torsion	plus/minus 90 deg. torsion from normal held for 5 minutes
	Re-entry	- no functional damage and pass H of W test 50 re-entries on all enterable parts - no functional damage and pass H of W test

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

Dimensions	
Overall length 'X'	260 mm
Main port (loop) entry	Min. cable diameter 1 x 22 mm, 2 x 8 mm Max. cable diameter 1 x 25 mm, 2 x 22 mm
Auxiliary A port	Max. cable diameter 14 mm ; Min. cable diameter 5 mm
Auxiliary B port	Max. cable diameter 16 mm ; Min. cable diameter 5 mm



Product Schematic



- Exploded view**
1. Dome/cover
 2. "O" ring
 3. Base
 4. Standard clamp

- Kit contents**
- Dome/cover
 - Base
 - "O" ring
 - Standard clamp (lockable)
 - Abrasive strip
 - Foil (cable protection)
 - Protective mittens
 - Cleaning pad
 - Mastic tape (ETS)
 - Heatshrink sleeves
 - Main port glue block

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

Openable Joint 32 Series – 200 to 400 pair

Description

The Channell Openable Joint closure 32 Series 200 to 400 Pair is a re-enterrable ready access closure suitable for distribution of underground and aerial copper networks. The 32 Series closure comes in two dome lengths and can accommodate up to 400 pair of jointed copper cable and utilises proven heatshrink sleeve technology to seal cables in the base.

Features

- Weatherproof and insect proof.
- Robust construction.
- UV resistant.
- All auxiliary ports sealed until required (easy knockouts).
- Main cable can be looped through large oval port.
- Re-entry is achieved without the need of special tools.
- Multiple port entry configuration.
- Suitable for pole/wall mounting, pit installation or direct buried.
- Available with lockable/re-openable sealing clamp.

Applications

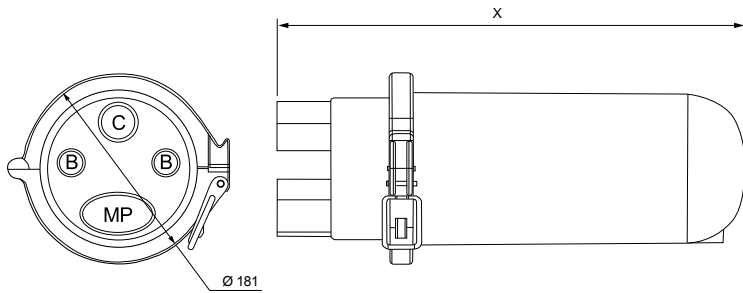
- Underground and Aerial distribution or termination of copper cables.



Test specifications

Test specifications		
Integrity	Air tightness	15 psi internal / 24 hours / 23°C - no pressure loss
	Head of Water (H of W)	100 hours at 2 metres head / 100 hours at 5 metres head - no leaks
	IP rating	IP 68
Environmental	Environmental cycling	50 cycles + 60/ - 30°C - pass H of W test
	Water cycling	50 cycles + 50/ + 5°C. Internal - no loss of pressure
	Alkaline resistance	72 hours in pH 12 Sodium Hydroxide - no degradation and pass H of W test
	Thermal ageing	2000 hours at 60°C
Mechanical	Flexure	Cables flexed at 0.5 m from closure plus/minus 30 degrees, 100 cycles - no physical changes and pass H of W test
	Impact	1 kg weight dropped and pass H of W test
	Torsion	plus/minus 90 deg. torsion from normal held for 5 minutes
	Re-entry	- no functional damage and pass H of W test 50 re-entries on all enterable parts - no functional damage and pass H of W test

Dimensions	
Overall length 'X'	200 pair version: 258 mm ; 400 pair version: 350 mm
Main port (loop) entry	Min. cable diameter 1 x 30 mm, 2 x 17 mm Max. cable diameter 1 x 50 mm, 2 x 42 mm
Auxiliary B port	Max. cable diameter 16 mm ; Min. cable diameter 6 mm
Auxiliary C port	Max. cable diameter 35 mm ; Min. cable diameter 10 mm



Product Schematic



- Kit contents**
- Dome/cover
 - Base
 - "O" ring
 - Standard clamp (lockable)
 - Abrasive strip
 - Foil (cable protection)
 - Protective mittens
 - Cleaning pad
 - Mastic tape (ETS)
 - Heatshrink sleeves
 - Main port glue block

- Exploded view**
1. Dome/cover
 2. "O" ring
 3. Standard clamp
 4. Base

The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

Aerial Openable Joint 31 Series - 100 pair

Description

The Channell Aerial Openable Joint weatherproof closure (31D) is a re-enterable ready access closure suitable for distribution of aerial copper and fibre networks. The unique looping feature of the 31D closure allows uninterrupted cable runs to be spliced to branch cables or terminated as subscriber drop wires from the one convenient location. The 31D closure can accommodate up to 100 pair of jointed copper cable.

Features

- Weatherproof and insect proof.
- Robust construction.
- UV resistant.
- No heat required for sealing cables
- Main cable can be looped through removable inserts.
- Re-entry is achieved without the need of special tools.
- Multiple port entry configuration.
- Suitable for pole or wall mounting (not underground).
- Available with lockable/re-openable sealing clamp.

Applications

- Aerial Distribution or termination of copper cables.



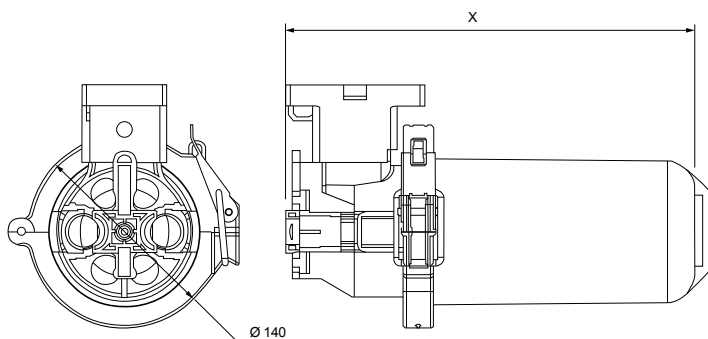
Test specifications

Test specifications		
Integrity	Designed to IP Rating 55	No water droplets found internally
	Environmental cycling	50 cycles + 60/ - 30°C - pass
Environmental	Water cycling	50 cycles + 50/ + 5°C. Internal - no loss of pressure
	Alkaline resistance	72 hours in pH 12 Sodium Hydroxide - no degradation
	Thermal ageing	2000 hours at 60°C
Mechanical	Impact	1 kg weight dropped and pass
	Re-entry	50 re-entries on all enterable parts - no functional damage and pass H of W test

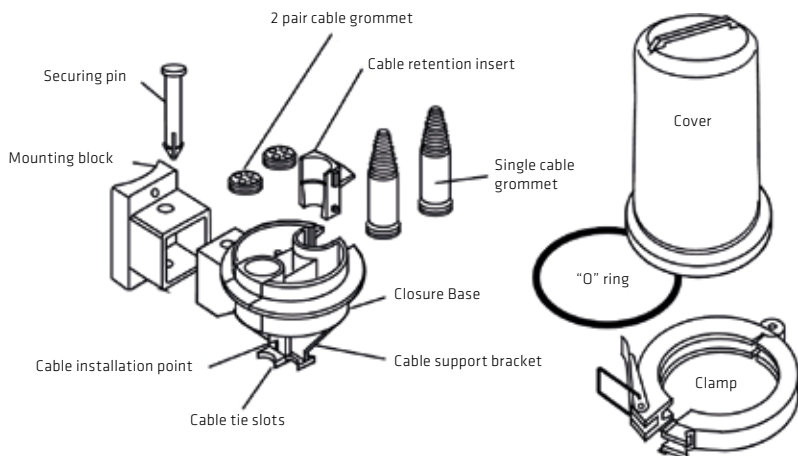
The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.



Dimensions	
Overall length 'X'	305 mm
Looping port entry	Max. cable diameter 22.0 mm ; Min. cable diameter 8.0 mm
Single entry grommet	Max. cable diameter 15.0 mm ; Min. cable diameter 5.0 mm
Dropwire grommet	Max. cable diameter 4 x 6 mm ; Min. cable diameter 1 x 4 mm



Product Schematic



The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of relevant agreement and/or contract.

Choose the real deal.

Because quality pays off.



Cables might look the same on the outside. But it's the inside that counts. And that can differ enormously. We have always worked with quality as our top priority, listened to our customers and customised our cables to perfectly fit their needs. 'Cause we have and will always continue to believe that quality pays off.

Australian made? Yes, of course.

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Prysmian
Group

EQUIPMENT LIST

nbn Prismian copper equipment list

nbn code	Prismian SAP code	Equipment description	MOQ (m)	Standard pack size
10023566	5445718	2 PAIR / 0.40MM PEIFLI / PE	500	500
10024180	5447750	2 PAIR / 0.40MM PEIFLI / PEHJC BONDED	500	500
10023567	5445756	10 PAIR / 0.40MM CPFUT / PE	1000	1000
10024181	5447705	10 PAIR / 0.40MM CPFUT / PEHJC BONDED	1000	1000
10023568	5445763	30 PAIR / 0.40MM CPFUT / PE	1000	1000
10024182	5447712	30 PAIR / 0.40MM CPFUT / PEHJC BONDED	1000	1000
10016679	5447330	50 PAIR / 0.40MM CPFUT / PE	1000	1000
10024183	5447729	50 PAIR / 0.40MM CPFUT / PEHJC BONDED	1000	1000
10016650	5445787	100 PAIR / 0.40MM CPFUT / PE	1000	1000
10024184	5447736	100 PAIR / 0.40MM CPFUT / MBHJC BONDED	1000	1000
10024194	5447422	200 PAIR / 0.40MM CPFUT / PE	1000	1000
10016648	5445794	200 PAIR / 0.40MM CPFUT / MB	1000	1000
10024185	5447668	200 PAIR / 0.40MM CPFUT / MBH[S]	4000	500
10025257	5449174	400 PAIR / 0.40MM CPFUT / PE SDF (NBN)	500	500
10026423	5449488	400 PAIR / 0.4MM CPFUT / PE (Reduced Diameter)	1000	1000
10024186	5447637	400 PAIR / 0.40MM CPFUT / MB	500	500
10024169	5445800	400 PAIR / 0.40MM CPFUT / MBHJ (AIRTUBE)	500	500
10024187	5447675	400 PAIR / 0.40MM CPFUT / MBH[S]	500	500
10024293	5447538	2 PAIR / 0.64MM CPFLI / PE	500	500
10023958	5445855	2 PAIR / 0.64MM CPFLI / PEHJC BONDED	500	500
10024171	5445862	10 PAIR / 0.64MM CPFUT / PE	1000	1000
10023959	5447446	10 PAIR / 0.64MM CPFUT / MBHJC BONDED	1000	1000
10024172	5445879	30 PAIR / 0.64MM CPFUT / PE	1000	1000
10023960	5447453	30 PAIR / 0.64MM CPFUT / MBHJC BONDED	1000	1000
10024173	5445886	50 PAIR / 0.64MM CPFUT / PE	1000	1000
10023961	5447460	50 PAIR / 0.64MM CPFUT / MBHJC BONDED	1000	1000
10016651	5445893	100 PAIR / 0.64MM CPFUT / PE	1000	1000
10024174	5447743	100 PAIR / 0.64MM CPFUT / MBHJC BONDED (AIRTUBE)	4000	1000
10023962	5447477	200 PAIR / 0.64MM CPFUT / PE	500	500
10024188	5447644	200 PAIR / 0.64MM CPFUT / MB	500	500
10024189	5447682	200 PAIR / 0.64MM CPFUT / MBH[S]	500	500
10023963	5447484	400 PAIR / 0.64MM CPFUT / PE	500	500

nbn Prysmian copper equipment list

nbn code	Prysmian SAP code	Equipment description	MOQ (m)	Standard pack size
10024190	5447651	400 PAIR / 0.64MM CPFUT / MB	500	500
10023573	5445916	400 PAIR / 0.64MM CPFUT / MBHJ(AIR TUBE)	500	500
10024191	5447699	400 PAIR / 0.64MM CPFUT / MBHJ[S]	500	500
10023964	5447491	10 PAIR / 0.9MM CPFUT / PE	1000	1000
10024175	5445930	10 PAIR / 0.90MM CPFUT / MBHJ(C BONDED)	2000	1000
10023965	5447507	30 PAIR / 0.9MM CPFUT / PE	2000	500
10024176	5445947	30 PAIR / 0.90MM CPFUT / MBHJ(C BONDED)	2000	500
10023966	5447514	50 PAIR / 0.90MM CPFUT / PE	2000	500
10024177	5445954	50 PAIR / 0.90MM CPFUT / MBHJ	2000	500
10023967	5447521	100 PAIR / 0.90MM CPFUT / PE	2000	500
10024178	5445961	100 PAIR / 0.90MM CPFUT / MBHJ	2000	500
10023578	5445725	10 PAIR / 0.40MM PEUT / IB	500	500
10023579	5445732	50 PAIR / 0.40MM PEUT / IB	500	500
10023580	5445749	100 PAIR / 0.40MM PEUT / IB	500	500
10024294	5445817	2 PAIR / 0.64MM PEUT / PEIB	500	500
10024292	5445824	10 PAIR / 0.64MM PEUT / IB	500	500
10023583	5445831	30 PAIR / 0.64MM PEUT / IB	500	500
10023584	5445848	50 PAIR / 0.64MM PEUT / IB	500	500
10023585	5445923	100 PAIR / 0.64MM PEUT / IB	500	500
10023892	5445992	2 CORE / 0.50MM PVC RD / WH JUMPER WIRE	4000	400
10023893	5445985	2 CORE / 0.50MM PVC GN / WH JUMPER WIRE	4000	400
10023894	5445978	2 CORE / 0.40MM PVC WH / BU JUMPER WIRE	4000	400
10024179	5447583	2 CORE / 0.50MM PVC WH / VJ JUMPER WIRE	4000	400
10023890	5447606	2 PAIR / 0.50MM PET / PVC CAT3	500	500
10023540	5446005	25 PAIR / 0.50MM PET / PVC CAT3	500	250
10024192	5447613	50 PAIR / 0.50MM PET / PVC CAT3	250	250
10023541	5447620	100 PAIR / 0.50MM PET / PVC CAT3	250	250
10023498	XAU5338843	CHANNELL OPENABLE JOINT 30 SERIES - 50 PAIR	150	150
10023499	XAU5338850	CHANNELL OPENABLE JOINT 31 SERIES - 100 PAIR	120	120
10024295	XAU5338942	CHANNELL OPENABLE JOINT 32 SERIES - 200 PAIR (258MM)	72	72
10024193	XAU5338935	CHANNELL OPENABLE JOINT 32 SERIES - 400 PAIR (350MM)	72	72
10023506	XAU5338867	CHANNELL AERIAL OPENABLE JOINT 31 SERIES - 100 PAIR	240	240
10023667	XAU5338928	CHANNELL AUXILIARY SLEEVE KIT - 30 TO 32 SERIES (10 SLEEVE SETS)	720	720

nbn Prysmian fibre optic equipment list

nbn code	Prysmian SAP code	Equipment description	MOQ (m)	Standard pack size
10002249	5443608	72 FIBRE, RIBBON, TERMITE PROTECTION, V2, CUT LENGTH	30	2 000
10002243	5443608	72 FIBRE, RIBBON, TERMITE PROTECTION, V2, FULL DRUM	2 000	2 000
10002250	5443486	144 FIBRE, RIBBON, TERMITE PROTECTION, V2, CUT LENGTH	30	4 000
10002244	5443486	144 FIBRE, RIBBON, TERMITE PROTECTION, V2, FULL DRUM	4 000	4 000
10002251	5445404	288 FIBRE, RIBBON, TERMITE PROTECTION, V3, CUT LENGTH	30	4 000
10002245	5445404	288 FIBRE, RIBBON, TERMITE PROTECTION, V3, FULL DRUM	4 000	4 000
10002252	5448450	432 FIBRE, RIBBON, TERMITE PROTECTION, V2, CUT LENGTH	30	4 000
10002246	5448450	432 FIBRE, RIBBON, TERMITE PROTECTION, V2, FULL DRUM	4 000	4 000
10002253	5445396	576 FIBRE, RIBBON, TERMITE PROTECTION, V3, CUT LENGTH	30	3 000
10002247	5445396	576 FIBRE, RIBBON, TERMITE PROTECTION, V3, FULL DRUM	3 000	3 000
10002254	5440713	864 FIBRE, RIBBON, TERMITE PROTECTION, V2, CUT LENGTH	1 000	2 900
10002248	5440713	864 FIBRE, RIBBON, TERMITE PROTECTION, V2, FULL DRUM	2 900	2 900
10002286	5444544	72 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V2, CUT LENGTH	2 000	7 500
10002292	5444544	72 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V2, FULL DRUM	7 500	7 500
10002282	5444551	144 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V2, CUT LENGTH	2 000	5 000
10002288	5444551	144 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V2, FULL DRUM	5 000	5 000
10002283	tba	288 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V3, CUT LENGTH	2 000	3 200
10002289	tba	288 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V3, FULL DRUM	3 200	3 200
10002284	tba	432 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V2, CUT LENGTH	2 000	3 200
10002290	tba	432 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V2, FULL DRUM	3 200	3 200
10002285	5448498	576 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V3, CUT LENGTH	1 000	2 000
10002291	5448498	576 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, V3, FULL DRUM	2 000	2 000
10002287	5440966	864 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, CUT LENGTH	1 000	2 000
10002293	5440966	864 FIBRE, RIBBON, RODENT AND TERMITE PROTECTION, FULL DRUM	2 000	2 000
10002255	5441116	48 FIBRE, STRANDED, HEAVY DUTY, TERMITE PROTECTION	10 000	10 000
10002256	5441123	72 FIBRE, STRANDED, HEAVY DUTY, TERMITE PROTECTION	10 000	10 000
10002257	5441130	144 FIBRE, STRANDED, HEAVY DUTY, TERMITE PROTECTION	5 000	5 000
10010214	5441147	48 FIBRE, STRANDED, HEAVY DUTY, RODENT AND TERMITE PROTECTION	7 000	7 000
10002281	5441154	72 FIBRE, STRANDED, HEAVY DUTY, RODENT AND TERMITE PROTECTION	7 000	7 000
10002280	5441161	144 FIBRE, STRANDED, HEAVY DUTY, RODENT AND TERMITE PROTECTION	3 500	3 500

All the way.

Services beyond the ordinary.



You probably already know that we're world leading in quality cables. But did you know that we also provide you services from start to finish – and beyond. In our offer you'll find everything from cables cut to length to the best technical support on the market. Doing business with us pays off.

Australian made? Yes, of course.

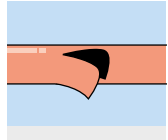
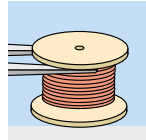
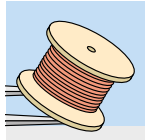
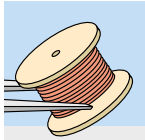
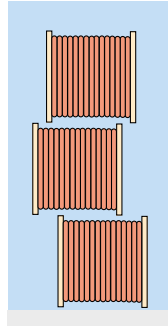
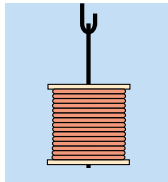
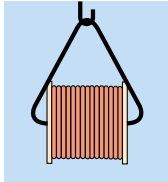
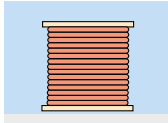
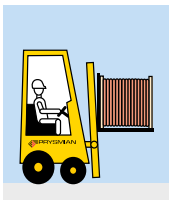
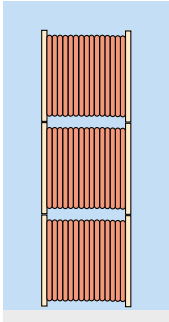
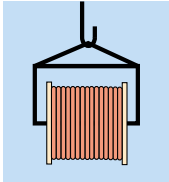
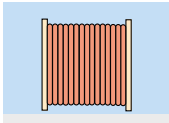
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GENERAL INFORMATION

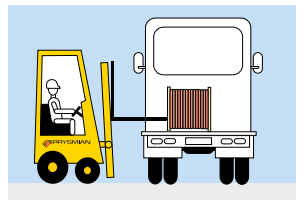
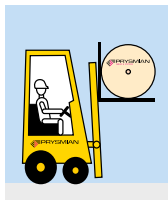
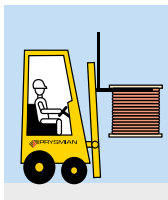
Transport, handling and storage guidelines

Always use appropriate safety.

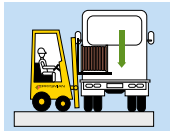


Do not attempt to lift drums of cable without inserting the fork lift tynes fully under both flanges as the tynes can damage the cable, making it unserviceable. Do not attempt to lift drums by the flange or to lift drums into the upright (correct) position by lifting the top flanges as it may break the flange from the drum barrel. The drum will then be undeliverable. Use a length of steel pipe through the centre of the drum to provide leverage and control.

This cable has been rendered unserviceable through fork lift tyne damage and may necessitate the scrapping of the whole drum.

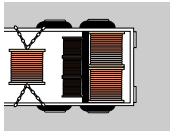


Do not use the fork lift tynes to push cable drums sideways on a truck tray or the ground as damage to the flanges can result in the drum being unacceptable to customers.

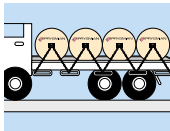


Prior to lifting any drums, ensure the site has suitably rated mechanical handling equipment to handle the drum.

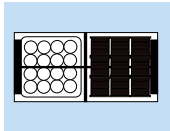
Lower drums gently onto the ground or transport.



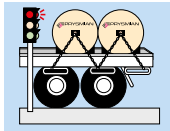
Always protect cable from rubbing or damage. Adjust load or consider using separators such as carpet, ply or corflute between products for protection.



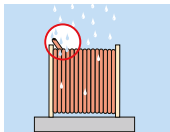
Heavy drums should be chained appropriately for transit, with protection from the chain rubbers or carpet for the spindle hole in the centre of the drum. Under no circumstances are drums to be transported on their side.



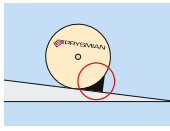
Always protect product, especially spools, against load restraint damage during tying down of load. Consider using angles or carpet under straps, chains and rope.



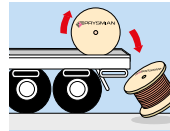
Ensure drums are restrained to restrict movement during sudden stop/starts.



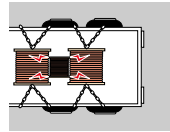
Ensure cable sealing is intact so moisture cannot seep into cable. Report damage.



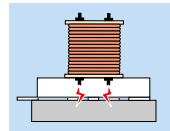
When placing drums on an uneven surface be prepared to chock drums to prevent rolling if required.



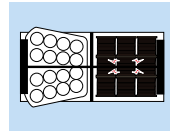
Avoid impact force loadings. Never drop drums.



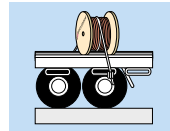
Never let drum flanges contact cable on adjacent drums.



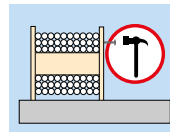
Never lay drums on their side, even on top of pallets, as protruding bolts damage spools and cable.



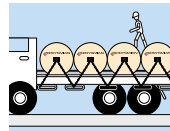
Never use rope directly over shrink-wrapped cable.



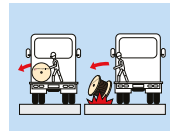
When securing drums for transit, do not place ropes or chains over cable as damage can occur to the outer insulation rendering the cable unserviceable.



Avoid use of additional nails on drums or cable. Flange thicknesses vary and some customers prohibit their use.



Never climb or walk over products loaded on the truck. If you must get onto the tray, do not go higher than the deck height.



Do not roll cable drums from the back of a delivery truck to the ground as the resulting flange damage will be unacceptable to the customer as the cable will not be able to be rolled off the drum and the drum will need to be returned.



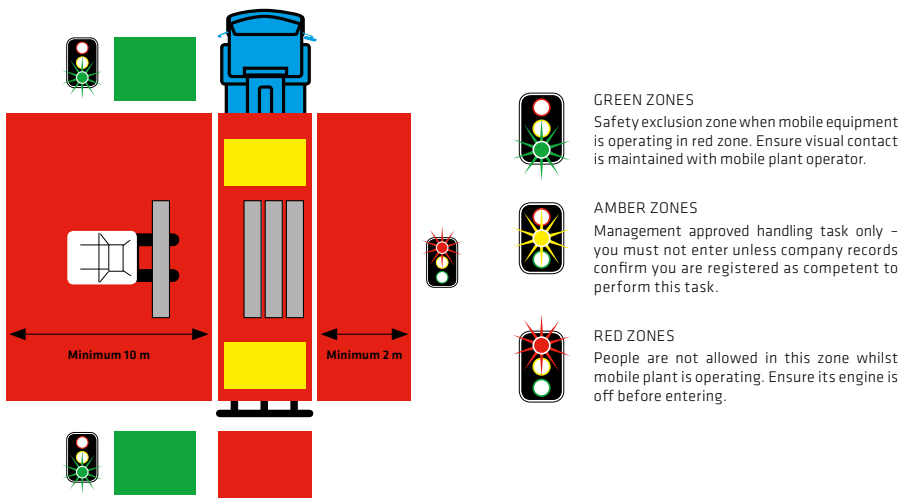
Before lifting or rolling any product, first confirm there isn't any mechanical aids to do the task. If there isn't, always assess its weight and size to ensure it is safe to manually handle. If you believe there is a risk of injury DO NOT attempt. Report to supervisor.

When rewinding cables, drums shall be of suitable construction and in good condition. All drums shall be held firmly in appropriate pay-off stands to prevent vibration and ensure smooth, even rotation to minimise inner end cable grow-out and tangling. Cables shall be wound evenly and uniformly, then secured.

Unloading – safety exclusion zones

At all sites, you should determine if the area is safe to undertake the loading and unloading task, that you can establish a safety exclusion zone with cooperation of site representatives, and that appropriate lifting equipment is available. If it isn't, contact your manager for further advice so alternative arrangements can be made.

Use this guide to set up your safety exclusion zone.



Storage recommendations

When storing cable drums for long periods, please take the following guidelines into consideration:

- ✓ Select a site for storage that is level and dry, preferably indoors with a concrete surface, with no risk of falling objects, chemical spills (oil, grease, etc.) open flames and excessive heat (see fig. 1).
- ✓ If concrete hard storage is not available, select a well-drained surface that will prevent the reel flanges sinking into it (see fig. 1).
- ✓ The drums must always be stored with their flanges vertical.
- ✓ Leave enough space between stored drums for air circulation (see fig. 2).
- ✓ If drums are stored in a high traffic area (fork lifts frequent transit) suitable barriers should be erected to prevent damage from moving equipment (see fig. 2).
- ✓ The bolts should be tightened at regular intervals.
- ✓ During storage, the drums should be rolled to an angle of 90° every three months (see fig. 3).
- ✓ When only a portion of the cable is used, the open end of the cable remaining on the drum should immediately be re-sealed to prevent the entrance of moisture. Once it has been re-sealed, the cut end should be fixed to the inside edge of the drum flange to prevent the end from extending beyond the flanges during drum movement.

- ✓ When it is required to rewind the cable on to another drum, always consider that the diameter of the new drum barrel should be at least the same size of the original drum barrel diameter (see fig. 4).

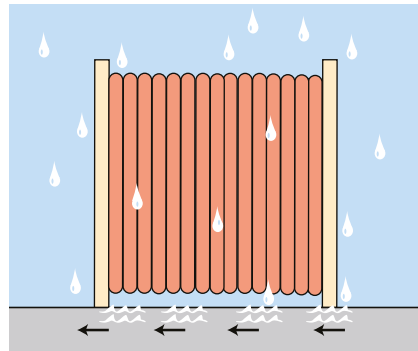


Fig. 1

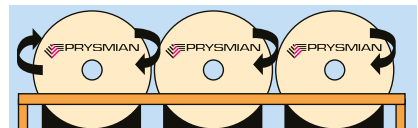


Fig. 2

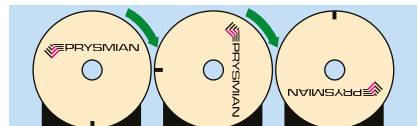


Fig. 3

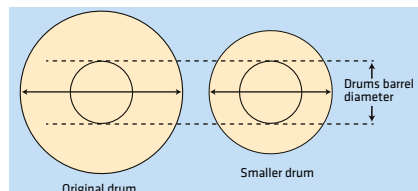


Fig. 4

Security identification & collection system for cable drums

Prysmian Group has security measures designed to safeguard cable drums and ensure their return after use. Cable drums, both steel and timber, supplied by Prysmian are assets and their return ensures that costs can be contained and helps conserve valuable natural resources.

The asset identification system from DataDot Technology (Australia) Pty Ltd, whose Australian clients include BMW, Subaru and Holden Special Vehicles is being applied to all cable drums and cannot be seen by the naked eye. The drums are sprayed with micro dots contained in a clear solution and many hundreds are effectively applied to each drum. The unique micro dot code is registered on a national database to provide proof of ownership.

A national drum collection service has also been established which can be accessed by a toll free telephone number. Simon National Carriers, as Prysmian's transport service partner, is the only company authorised to collect empty cable drums. A suitable time for collection can be arranged by contacting them on the toll free telephone number which can be found on the identifying label (example below) applied to each drum.

To arrange for collection of empty cable drums, please call 1800 334 091 or email drums.au@prysmiangroup.com



Cable packaging

Prysmian Group uses NOLCO-FLEX packaging to protect your valuable cable investment during transportation and delivery.

NOLCO-FLEX is a strong, flexible packaging material manufactured from environmentally friendly impregnated wood fibre board. Together with the outer laminate, the product becomes a powerful, weatherproof shock absorber which can lie directly on the cable as opposed to timber lagging.

NOLCO-FLEX is an extremely quick, simple and safe material to work with. It takes only a few seconds to remove it and the strapping from the drum and does not pose the same safety risk as removing timber lagging containing nails and splinters.

NOLCO-FLEX is already used across Europe and has been tested by the German institute, BFSV. Their report provides evidence of its high quality properties, including mechanical protection, and water and UV resistance during transport, handling and storage of cable drums.



Drum dimensions

Plastic and timber drums						
Drum type		Flange	Barrel	Internal width	Overall	Weight (kg)
PL1	Plastic	450	250	300	H=450 x W=380	3
PL2	Plastic	580	250	300	H=580 x W=380	5
PL3	Plastic	580	250	380	H=580 x W=460	7
LW1	Timber	600	250	480	H=650 x W=580	15
LW2	Timber	750	250	600	H=800 x W=710	22
LW3	Timber	1000	350	600	H=1050 x W=730	51
LW4	Timber	1100	400	600	H=1150 x W=730	61
LW5	Timber	1250	450	600	H=1300 x W=740	70
OF2A	Timber	1100	600	600	H=1100 x W=700	62
OF2	Timber	1200	800	560	H=1200 x W=700	89
OF4	Timber	1300	800	800	H=1300 x W=920	121
OF5	Timber	1400	800	800	H=1400 x W=920	125
OF6	Timber	1600	800	800	H=1600 x W=920	132
OF7	Timber	1800	800	800	H=1800 x W=950	261
OF8	Timber	2000	900	800	H=2000 x W=950	349
OF9	Timber	2200	900	850	H=2200 x W=1000	354

Steel drums						
Drum type		Flange	Barrel	Internal width	Overall	Weight (kg)
LW1	Steel	600	250	480	H=650 x W=580	22
LW2	Steel	750	250	600	H=800 x W=710	34
LW3	Steel	1000	350	600	H=1050 x W=730	50
LW4	Steel	1100	400	600	H=1150 x W=730	58
LW5	Steel	1250	450	600	H=1300 x W=740	70
MT1	Steel	1200	600	1000	H=1250 x W=1110	140
MT2	Steel	1400	700	1000	H=1450 x W=1110	205
MT3	Steel	1400	800	900	H=1450 x W=1010	225
MT4	Steel	1500	1000	1000	H=1550 x W=1110	235
MT5	Steel	1600	800	900	H=1650 x W=1010	250
MT6	Steel	1700	1200	900	H=1750 x W=1010	305
MT7	Steel	1800	1000	900	H=1850 x W=1010	360
MT8	Steel	1800	1200	1000	H=1850 x W=1110	405
MT9	Steel	2000	1000	1000	H=2050 x W=1110	420
MT10	Steel	2000	1200	1000	H=2050 x W=1110	395
MT11	Steel	2100	1400	1000	H=2150 x W=1110	550
MT12	Steel	2250	1050	1030	H=2300 x W=1140	700
MT13	Steel	2250	1400	1000	H=2300 x W=1110	750
MT14	Steel	2400	1400	840	H=2450 x W=950	650
MT15	Steel	2400	1400	1000	H=2450 x W=1110	700
MT16	Steel	2400	1200	1000	H=2450 x W=1110	700
MT17	Steel	2400	1400	1500	H=2450 x W=1610	900

Customer Service

At Prysmian, we place the customer at the centre of everything we do. We value your feedback and are committed to responding appropriately within 48 hours. Whenever possible, we will do our best to resolve your issue promptly at the first point of contact.

In order to ensure the issue is dealt with quickly, when possible, please ensure you have either the **Cable Batch/Ticket number** which can be found on the sheath marking:



Or, if the cable is still packed on the drum, please quote the **Production/Cutting Order** and **Batch Number**.

 PRYSMIAN	Material# 5434989	500 Mtrs
484/62112 144F SM FNPEHJC STD BONDED SM@RTCORE		
		
 (01) 9 9310835 43498 2 (3110) 000500 (10) 47202		
Production Order: 47202 Batch No: 47202a	Metre Marks:	
Catalogue Code: 484/62112 Approx Cable Kg: 38		
4 THORN PARADE DRE WHV NSW 2099 ABN 36 056 594 080		MADE IN AUSTRALIA MANUFACTURED WEEK 32/15 RELEASED 16Dec15 by 99999 G-drm1-1-int

In the case of non-conformances, we may require a sample of the affected cable.

You can contact us through:

Ph: 1800 808 902

Email: sales.nbn.au@prysmiangroup.com

NON-Hazardous Substance, NON-Dangerous Goods**1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION****Product name:** nbn External Copper Cable**Synonyms:**

Distribution Cable (including CPFUT, CPEUIT, CPIUT & PEIUT)

Lead-in Cable (including PEIFLI, CPFLI & PEILI)

Recommended use: Cable is for the transmission of voice and data in a range of frequencies.**Supplier:** Prysmian Australia Pty Ltd**ACN:** 096 594 080**Street Address:** 1 Heathcote Road
Liverpool NSW 2170
Australia**Telephone:** +612 9600-0777**Emergency telephone number:** Quality & HSE Manager: 0429 538 517**2. HAZARDS IDENTIFICATION****AUSTRALIA CLASSIFICATION**

Based on available information, this material is not classified as hazardous according to criteria of Safe Work Australia.

Poisons Schedule (Aust): Not applicable**NEW ZEALAND CLASSIFICATION**

Based on available information, this material is not classified as hazardous according to criteria of ERMA New Zealand.

DANGEROUS GOODS CLASSIFICATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	PROPORTION
Copper	7440-50-8	20-80%
Cable may contain any or all of the following compounds	-	20-80%
Polyethylene insulation	-	
Polyvinyl chloride (PVC) insulation	-	
Filling compound	-	
Polyethylene terephthalate (PET) yarns/tapes	-	
Paper tapes	-	
Aluminium moisture barrier tape	-	

Product name: nbn External Copper Cable**Substance Key:** SDS-ME14**Issued:** 22/10/15**Version:** 1.1**Page:** 1 of 5

Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

Bonding agent	-	
Polyethylene sheath	-	
Polyamide sheath (Nylon)	-	
Polyvinyl chloride sheath	-	
Steel wire	-	
Ingredients determined to be non-hazardous	-	Balance
		100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Not an expected route of exposure. However, if dust exposure occurs during cutting, remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin contact: If puncture wounds, cuts or irritation occurs, flush skin with running water. Seek medical assistance if bleeding from puncture wounds or cuts cannot be stemmed. Seek medical assistance if irritation occurs.

Eye contact: If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion: Not an expected route of exposure. However, if material is ingested, rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Specific hazards: PVC, PE, Filling compound, PET, Tapes, Bonding agents and Nylon components will burn if ignited.

Fire fighting further advice: On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Hazchem Code: Not applicable.

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder). If material is in service use foam or dry agents (carbon dioxide, dry chemical powder).

6. ACCIDENTAL RELEASE MEASURES

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of dust if present. Collect for reuse or recycling.

Dangerous Goods – Initial Emergency Response Guide No: Not applicable.

Product name: nbn External Copper Cable	Substance Key: SDS-ME14
Issued: 22/10/15	Version: 1.1
	Page: 2 of 5

Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

7. HANDLING AND STORAGE

Handling: All staff shall be suitably trained in the handling of metallic cables. Avoid eye contact. Avoid skin contact with cut ends of cable.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:
No value assigned for this specific material by Safe Work Australia or Department of Labour New Zealand.

However for:

	TWA		STEL		CARCINOGEN CATEGORY	NOTICES
	ppm	mg/m3	ppm	mg/m3		
Copper (dust & mist) (as Cu)	-	1	-	-	-	-

As published by the Safe Work Australia or Department of Labour New Zealand.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering measures: Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES.

Wear overalls, safety glasses and impervious gloves. Available information suggests that gloves made from leather should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. If risk of inhalation of exists (copper dust & mist), wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Product name: nbn External Copper Cable	Substance Key: SDS-ME14
Issued: 22/10/15	Version: 1.1
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Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Circular and figure 8 cables in a range of outside diameters.

Solubility:	Insoluble in water
Specific Gravity (20 °C):	N Av
Relative Vapour Density (air=1):	N App
Vapour Pressure (20 °C):	N App
Flash Point (°C):	N App
Flammability Limits (%):	N App
Autoignition Temperature (°C):	N Av
Melting Point/Range (°C):	N Av
Boiling Point/Range (°C):	N App
Decomposition Point/Range (°C):	>200
pH:	N App
Viscosity:	N App
Evaporation Rate (n-Butyl acetate=1):	N App
Total VOC (g/Litre):	N Av

(Typical values only - consult specification sheet)
 N Av = Not available, N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability: This material is thermally stable when stored and used as directed.

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible Materials: Oxidising agents.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

Hazardous reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this SDS and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Not expected to be a route of exposure. However, exposure to fine material due to mechanical cutting or abrading may be irritant to mucous membranes and respiratory tract.

Skin contact: Cut ends of copper wire and cable may cause abrasive irritation, cuts or puncture wounds. Contact with skin may result in irritation.

Eye contact: May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Ingestion: Not expected to be a route of exposure. Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Long Term Effects: No information available for product.

Acute toxicity / Chronic toxicity: No LD50 data available for the product.

Product name: nbn External Copper Cable

Substance Key: SDS-ME14

Issued: 22/10/15

Version: 1.1

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12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority.

14. TRANSPORT INFORMATION**ROAD AND RAIL TRANSPORT**

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

MARINE TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

Poisons Schedule (Aust): Not applicable

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

<u>Issue</u>	<u>Date</u>	<u>Reason(s) For Issue:</u>
1.0	01/09/15	First Issue.
1.1	22/10/15	Emergency contact details updated

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Prysmian Australia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.

Product name: nbn External Copper Cable

Substance Key: SDS-ME14

Issued: 22/10/15

Version: 1.1

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NON-Hazardous Substance, NON-Dangerous Goods**1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION****Product name:** nbn Premises Equipment Cable**Synonyms:**CAT3 Cable
Internal Distribution Cable
LAN Cable**Recommended use:** Cable is for the transmission of voice and data in a range of frequencies.**Supplier:** Prysmian Australia Pty Ltd**ACN:** 096 594 080**Street Address:** 1 Heathcote Road
Liverpool NSW 2170
Australia**Telephone:** +612 9600-0777**Emergency telephone number:** Quality & HSE Manager: 0429 538 517**2. HAZARDS IDENTIFICATION****AUSTRALIA CLASSIFICATION**

Based on available information, this material is not classified as hazardous according to criteria of Safe Work Australia.

Poisons Schedule (Aust): Not applicable**NEW ZEALAND CLASSIFICATION**

Based on available information, this material is not classified as hazardous according to criteria of ERMA New Zealand.

DANGEROUS GOODS CLASSIFICATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	PROPORTION
Copper	7440-50-8	30-60%
Cable may contain any or all of the following compounds	-	40-70%
Polyethylene insulation	-	
Polyethylene terephthalate (PET) yarns/tapes	-	
Polyvinyl chloride (PVC) sheath	-	
Low smoke zero halogen (LSOH) sheath	-	
Ingredients determined to be non-hazardous	-	Balance
		100%

Product name: nbn Premises Equipment Cable**Substance Key:** SDS-ME13**Issued:** 22/10/15**Version:** 1.1**Page:** 1 of 5

Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Not an expected route of exposure. However, if dust exposure occurs during cutting, remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin contact: If puncture wounds, cuts or irritation occurs, flush skin with running water. Seek medical assistance if bleeding from puncture wounds or cuts cannot be stemmed. Seek medical assistance if irritation occurs.

Eye contact: If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion: Not an expected route of exposure. However, if material is ingested, rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Specific hazards: PVC, PE, PET and LSOH components will burn if ignited.

Fire fighting further advice: On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Hazchem Code: Not applicable.

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder). If material is in service use foam or dry agents (carbon dioxide, dry chemical powder).

6. ACCIDENTAL RELEASE MEASURES

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of dust if present. Collect for reuse or recycling.

Dangerous Goods – Initial Emergency Response Guide No: Not applicable.

7. HANDLING AND STORAGE

Handling: All staff shall be suitably trained in the handling of metallic cables. Avoid eye contact. Avoid skin contact with cut ends of cable.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10.

Product name: nbn Premises Equipment Cable

Substance Key: SDS-ME13

Issued: 22/10/15

Version: 1.1

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:

No value assigned for this specific material by Safe Work Australia or Department of Labour New Zealand.

However for:

	TWA		STEL		CARCINOGEN CATEGORY	NOTICES
	ppm	mg/m3	ppm	mg/m3		
Copper (dust & mist) (as Cu)	-	1	-	-	-	-

As published by the Safe Work Australia or Department of Labour New Zealand.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering measures: Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES.

Wear overalls, safety glasses and impervious gloves. Available information suggests that gloves made from leather should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. If risk of inhalation of exists (copper dust & mist), wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Circular cables in a range of outside diameters.

Solubility:	Insoluble in water
Specific Gravity (20 °C):	N Av
Relative Vapour Density (air=1):	N App
Vapour Pressure (20 °C):	N App
Flash Point (°C):	N App
Flammability Limits (%):	N App
Autoignition Temperature (°C):	N Av
Melting Point/Range (°C):	N Av
Boiling Point/Range (°C):	N App

Product name: nbn Premises Equipment Cable	Substance Key: SDS-ME13
Issued: 22/10/15	Version: 1.1
	Page: 3 of 5

Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

Decomposition Point/Range (°C): >200
pH: N App
Viscosity: N App
Evaporation Rate (n-Butyl acetate=1): N App
Total VOC (g/Litre): N Av

(Typical values only - consult specification sheet)
 N Av = Not available N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability: This material is thermally stable when stored and used as directed.
Conditions to avoid: Elevated temperatures and sources of ignition.
Incompatible Materials: Oxidising agents.
Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.
Hazardous reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this SDS and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Not expected to be a route of exposure. However, exposure to fine material due to mechanical cutting or abrading may be irritant to mucous membranes and respiratory tract.

Skin contact: Cut ends of copper wire and cable may cause abrasive irritation, cuts or puncture wounds. Contact with skin may result in irritation.

Eye contact: May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Ingestion: Not expected to be a route of exposure. Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Long Term Effects: No information available for product.

Acute toxicity / Chronic toxicity: No LD50 data available for the product.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Mobility: No information available.

Product name: nbn Premises Equipment Cable **Substance Key:** SDS-ME13
Issued: 22/10/15 **Version:** 1.1 **Page:** 4 of 5

13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

MARINE TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

Poisons Schedule (Aust): Not applicable

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Issue	Date	Reason(s) For Issue:
1.0	01/09/15	First Issue.
1.1	22/10/15	Emergency contact details updated

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Prysmian Australia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.

Product name: nbn Premises Equipment Cable	Substance Key: SDS-ME13
Issued: 22/10/15	Version: 1.1
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Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

NON-Hazardous Substance, NON-Dangerous Goods**1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION****Product name:** nbn PVC Insulated Jumper Wire**Synonyms:**
Connecting wire**Recommended use:** Cable is for the transmission of voice and data in a range of frequencies.**Supplier:** Prysmian Australia Pty Ltd
ACN: 096 594 080
Street Address: 1 Heathcote Road
Liverpool NSW 2170
Australia
Telephone: +612 9600-0777**Emergency telephone number:** Quality & HSE Manager: 0429 538 517**2. HAZARDS IDENTIFICATION****AUSTRALIA CLASSIFICATION**

Based on available information, this material is not classified as hazardous according to criteria of Safe Work Australia.

Poisons Schedule (Aust): Not applicable**NEW ZEALAND CLASSIFICATION**

Based on available information, this material is not classified as hazardous according to criteria of ERMA New Zealand.

DANGEROUS GOODS CLASSIFICATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	PROPORTION
Copper	7440-50-8	>60%
Polyvinyl chloride (PVC) insulation	-	<30%
Ingredients determined to be non-hazardous	-	Balance
		100%

Product name: nbn PVC Insulated Jumper Wire**Substance Key:** SDS-ME12**Issued:** 22/10/15**Version:** 1.1**Page:** 1 of 5

Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Not an expected route of exposure. However, if dust exposure occurs during cutting, remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin contact: If puncture wounds, cuts or irritation occurs, flush skin with running water. Seek medical assistance if bleeding from puncture wounds or cuts cannot be stemmed. Seek medical assistance if irritation occurs.

Eye contact: If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion: Not an expected route of exposure. However, if material is ingested, rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Specific hazards: PVC component will burn if ignited.

Fire fighting further advice: On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Hazchem Code: Not applicable.

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder). If material is in service use foam or dry agents (carbon dioxide, dry chemical powder).

6. ACCIDENTAL RELEASE MEASURES

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of dust if present. Collect for reuse or recycling.

Dangerous Goods – Initial Emergency Response Guide No: Not applicable.

7. HANDLING AND STORAGE

Handling: All staff shall be suitably trained in the handling of metallic cables. Avoid eye contact. Avoid skin contact with cut ends of cable.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10.

Product name: nbn PVC Insulated Jumper Wire

Substance Key: SDS-ME12

Issued: 22/10/15

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Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:

No value assigned for this specific material by Safe Work Australia or Department of Labour New Zealand.

However for:

	TWA		STEL		CARCINOGEN CATEGORY	NOTICES
	ppm	mg/m3	ppm	mg/m3		
Copper (dust & mist) (as Cu)	-	1	-	-	-	-

As published by the Safe Work Australia or Department of Labour New Zealand.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering measures: Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES.

Wear overalls, safety glasses and impervious gloves. Available information suggests that gloves made from leather should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. If risk of inhalation of exists (copper dust & mist), wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Twisted pairs and quads of copper wire in a range of outside diameters.

Solubility:	Insoluble in water
Specific Gravity (20 °C):	N Av
Relative Vapour Density (air=1):	N App
Vapour Pressure (20 °C):	N App
Flash Point (°C):	N App
Flammability Limits (%):	N App
Autoignition Temperature (°C):	N Av

Product name: nbn PVC Insulated Jumper Wire

Substance Key: SDS-ME12

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Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

Melting Point/Range (°C): N Av
Boiling Point/Range (°C): N App
Decomposition Point/Range (°C): >200
pH: N App
Viscosity: N App
Evaporation Rate (n-Butyl acetate=1): N App
Total VOC (g/Litre): N Av

(Typical values only - consult specification sheet)
 N Av = Not available N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability: This material is thermally stable when stored and used as directed.

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible Materials: Oxidising agents.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

Hazardous reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this SDS and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Not expected to be a route of exposure. However, exposure to fine material due to mechanical cutting or abrading may be irritant to mucous membranes and respiratory tract.

Skin contact: Cut ends of copper wire and cable may cause abrasive irritation, cuts or puncture wounds. Contact with skin may result in irritation.

Eye contact: May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Ingestion: Not expected to be a route of exposure. Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Long Term Effects: No information available for product.

Acute toxicity / Chronic toxicity: No LD50 data available for the product.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Mobility: No information available.

Product name: nbn PVC Insulated Jumper Wire	Substance Key: SDS-ME12
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Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority.

14. TRANSPORT INFORMATION**ROAD AND RAIL TRANSPORT**

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

MARINE TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

Poisons Schedule (Aust): Not applicable

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Issue	Date	Reason(s) For Issue:
1.0	01/07/15	First Issue. Supersedes MSDS-ME12.
1.1	22/10/15	Emergency contact details updated

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Prysmian Australia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.

Product name: nbn PVC Insulated Jumper Wire

Substance Key: SDS-ME12

Issued: 22/10/15

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NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: nbn Outside Plant Fibre Optic Cable

Synonyms:

Termite resistant underground cable
Rodent & termite resistant underground cable

Reference(s)

Fusionlink RCLT/Masslink RILT

Termite resistant heavy duty cable
Rodent & termite resistant heavy duty cable

EXTR@CORE HSe

Recommended use: Cable is for the transmission of voice and data at a range of frequencies.

Supplier: Prysmian Australia Pty Ltd
ACN: 096 594 080
Street Address: 1 Heathcote Road
Liverpool NSW 2170
Australia
Telephone: +612 9600-0777

Emergency telephone number: Quality & HSE Manager: 0429 538 517

2. HAZARDS IDENTIFICATION

AUSTRALIA CLASSIFICATION

Based on available information, this material is not classified as hazardous according to criteria of Safe Work Australia.

Poisons Schedule (Aust): Not applicable

NEW ZEALAND CLASSIFICATION

Based on available information, this material is not classified as hazardous according to criteria of ERMA New Zealand.

DANGEROUS GOODS CLASSIFICATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	PROPORTION
Cable may contain any or all of the following compounds	-	100%
Optical fibres	-	
Optical fibre ribbon matrix material	-	
Tube filling compound	-	
Polyethylene (PE) tubes	-	
Glass reinforced plastic (GRP) rod and strips	-	

Product name: nbn Outside Plant Fibre Optic Cable

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Polyethylene terephthalate (PET) yarns/tapes	-	
Water-swellable yarns/tapes	-	
Aramid yarns	-	
Glass yarns	-	
Polyethylene (PE) sheath	-	
Bonding agent	-	
Polyamine sheath (Nylon)	-	
Ingredients determined to be non-hazardous	-	Balance
		100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Not an expected route of exposure. However, if dust exposure occurs during cutting, remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin contact: If puncture wounds, cuts or irritation occurs, flush skin with running water. Seek medical assistance if bleeding from puncture wounds or cuts cannot be stemmed. Seek medical assistance if irritation occurs.

Eye contact: If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion: Not an expected route of exposure. However, if material is ingested, rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Specific hazards: Optical Fibre, Tube filling compound, PBT, PET, Water-swellable yarns / tapes, PE, Aramid yarns, Bonding agent and Nylon will burn if ignited.

Fire fighting further advice: On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Hazchem Code: Not applicable.

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder). If material is in service use foam or dry agents (carbon dioxide, dry chemical powder).

6. ACCIDENTAL RELEASE MEASURES

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of dust if present. Collect for reuse or recycling.

Dangerous Goods – Initial Emergency Response Guide No: Not applicable.

Product name: nbn Outside Plant Fibre Optic Cable

Substance Key: SDS-OF03

Issued: 22/10/15

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7. HANDLING AND STORAGE

Handling: All staff shall be suitably trained in the handling of optical cables. Avoid eye contact. Avoid skin contact with cut ends of cable.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:
No value assigned for this specific material by Safe Work Australia or Department of Labour New Zealand.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering measures: Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES.

Wear overalls, safety glasses and impervious gloves. Available information suggests that gloves made from leather should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Circular cables in a range of outside diameters.

Solubility:	Insoluble in water
Specific Gravity (20 °C):	N Av
Relative Vapour Density (air=1):	N App
Vapour Pressure (20 °C):	N App
Flash Point (°C):	N App
Flammability Limits (%):	N App
Autoignition Temperature (°C):	N Av
Melting Point/Range (°C):	N Av
Boiling Point/Range (°C):	N App
Decomposition Point/Range (°C):	>200
pH:	N App
Viscosity:	N App
Evaporation Rate (n-Butyl acetate=1):	N App
Total VOC (g/Litre):	N Av

(Typical values only - consult specification sheet)
N Av = Not available N App = Not applicable

Product name: nbn Outside Plant Fibre Optic Cable	Substance Key: SDS-OF03
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Material safety data sheet hardcopies are not maintained. Up to date originals may be obtained from our office or website.

10. STABILITY AND REACTIVITY

Chemical stability: This material is thermally stable when stored and used as directed.

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible Materials: Oxidising agents.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

Hazardous reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this SDS and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Not expected to be a route of exposure. However, exposure to fine material due to mechanical cutting or abrading may be irritant to mucous membranes and respiratory tract.

Skin contact: Cut ends of optical fibre and cable may cause abrasive irritation, cuts or puncture wounds. Contact with skin may result in irritation.

Eye contact: May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Ingestion: Not expected to be a route of exposure. Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Long Term Effects: No information available for product.

Acute toxicity / Chronic toxicity: No LD50 data available for the product.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority.

Product name: nbn Outside Plant Fibre Optic Cable

Substance Key: SDS-OF03

Issued: 22/10/15

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14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

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AIR TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

Poisons Schedule (Aust): Not applicable

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Issue	Date	Reason(s) For Issue:
1.0	01/09/15	First Issue. Supersedes MSDS-OF03
1.1	22/10/15	Emergency contact details updated

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If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.

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Issued: 22/10/15	Version: 1.1
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Please scan for the latest version
of the nbn™ cable guide.

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A brand of the

Prysmian
Group