TELSTRA CABLE GUIDE

By Prysmian Australia PTY LTD

prysmian

The planet's pathways

Welcome to the 2024 edition of our Telstra Cable Guide

The Telstra guide was first published in 2005. Since then, we've been through some significant changes.

Our name changed from Pirelli to Prysmian, we acquired Draka and General Cable, and Prysmian Group has become the world's largest producer of power and telecommunication cables with 112 manufacturing plants, 25 research and development centres and 30,000 employees. We have a presence in more than 50 countries around the globe.

Prysmian has been Telstra's strategic optical and metallic cable partner since 1998 and over that time has made significant investments in the Australian production facility in Dee Why NSW. This includes a $7M investment in 2022/2023 to double the loose tube capacity in Dee Why to support the roll out of the InterCity Project.

We are continually evolving our products and capabilities to maintain our leadership in telecom cables in the region. With comprehensive local manufacturing, product development, services and logistics backed by global strength, Prysmian is uniquely placed as Telstra's sole strategic supplier of cable. Telstra is one of only a small number of Prysmian's globally strategic customers.

Telstra and Australia's unique conditions drive many of the products we develop. Prysmian and Telstra developed High Strength - Enhanced (HSe) in the early 2000's, direct buried cable specifically for Australia's expansive soils. Our successful high fibre density cable, FlexTube®, has been tailored to Telstra's fibre counts and custom engineering requirements. More recently, Prysmian and Telstra have significantly enhanced the fibre used in the network by using very bend insensitive low loss fibres (BBA2 – LL) and bend insensitive ultra-low loss (ULL-AB). These fibres have been packaged in a more sustainable HSe cable design.

We are committed to providing the necessary technical, installation, safety and practical information required by designers, installers and users of our products in a comprehensive handbook that can easily be used in the field. The most up to date version is always available on-line at www.prysmiancable.com.au/downloads

Please accept this latest edition of the Telstra Cable Guide with our compliments.

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

ISO 9001:2015
Quality Management Systems
AS/NZS ISO 14001:2015
Environmental Management Systems
AS/NZS ISO 45001:2018
Occupational Health & Safety Management Systems

CONTENTS

CONNECTING THE WORLD. TODAY AND IN THE FUTURE

Prysmian Group is a world leader in the energy and telecom cables and systems industry.

With 140 years' experience, the Group is strongly positioned in high-tech markets and offers the widest possible range of products, services, technologies and know-how.

140
YEARS OF EXPERIENCE

26
R&D CENTRES AROUND THE WORLD

We specialise in underground and submarine cables and systems for power transmission and distribution, special cables for applications in many different industries, and medium and low voltage cables for the construction and infrastructure sectors.

For the telecommunications industry, the Group is the world's largest provider of cutting-edge cables and accessories for voice, video and data transmission, offering a comprehensive range of optical fibres, optical and copper cables and connectivity systems.

We are committed to environmental responsibility in our production processes, the protection of the global environment, and the responsible management of relations with the local communities in which we work.

For us, innovation means meeting the needs of our customers and communities by understanding their business drivers as quickly as they do. To do that, our team of over 900 Research & Development professionals is constantly looking to the future, predicting and identifying emerging trends in each of our industries and sectors. Acting on this intelligence from 25 R&D centres around the world, we're constantly close to our customers in their own local markets.

Sustainability is in our DNA

Our commitment to a low-carbon future

Every day, we are committed to ensuring the sustainability of our production processes and to safeguarding the environment. We work alongside local communities to ensure that the areas in which we operate are protected and to guarantee workplace safety.

Our Climate Change Ambition seeks to position Prysmian Group as one of the main technological players in the transition to low-carbon energy.
The climate strategy adopts "science-based" targets aligned with the Paris Agreement climate objectives. In particular, the Science Based Targets initiative (SBTi) defines the requirements for an effective Net-Zero strategy:

- reduction of Scope 1, 2 and 3 emissions to zero, or at least to a residual level consistent with achieving the global or sector targets set in line with the Paris Agreement (1.5°C);
- neutralisation of any residual and GHG emissions released into the atmosphere.

As part of this initiative, Prysmian has taken the following actions:

- definition of a short-term emissions-reduction target;
- definition of a long-term emissions-reduction target;
- launch of projects for the neutralisation of residual emissions.

Our commitment

1 **Decarbonize 90%** of our Scope 1 & 2 carbon footprint by 2035
- phasing out SF_6 emissions
- 100% renewable energy

2 **Decarbonize 90%** of our Scope3 carbon footprint by 2050

3 **Offset** the remaining emissions

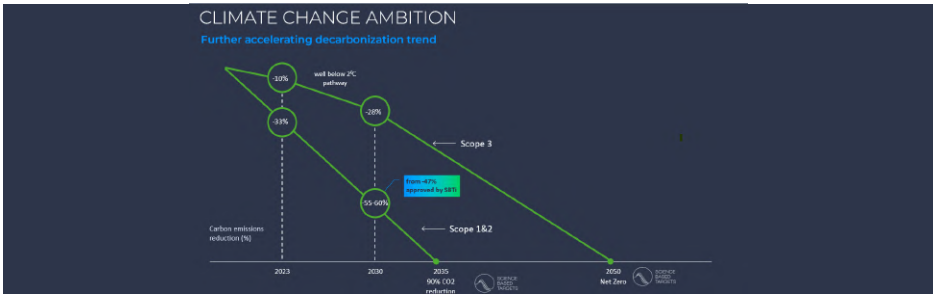
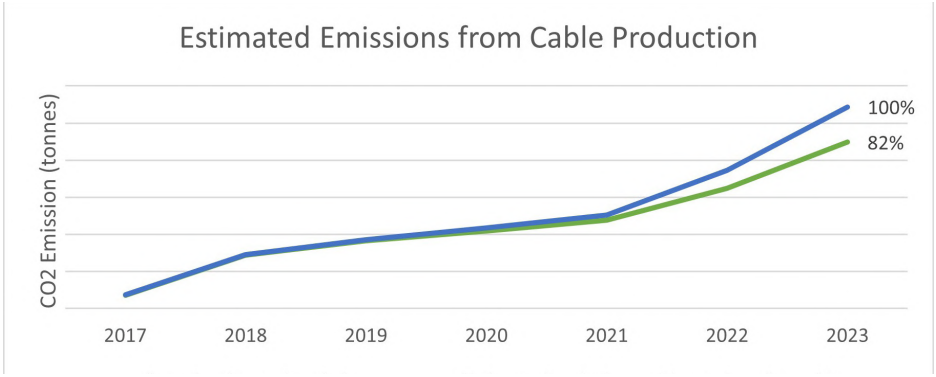



Image courtesy of Fulton Hogan

Sustainability at a Local Level

Along with contributing to meet emissions targets laid out by Prysmian Group, Prysmian Australia and Telstra have achieved notable reductions in CO2 emissions through technology choices.

The 2017 to 2019 transition from Sm@rtcore™ cable designs to SingleSm@rt™, Sm@rtlink™ and Flextube® saw a significant reduction in CO2 emissions through raw material and cable production. As these enhanced cable designs used less material and were more efficient to make, there is a reduction in the CO2 footprint.



Telstra InfraCo's intercity fibre network build was also viewed through a sustainability lens. Changing the direct buried cable design from 12 fibres per tube to 24 fibres per tube significantly reduced the size, weight and CO2 impact of the cable. When this reduction is applied across the entire network, the savings are substantial.

It is estimated that there will be a reduction of almost 33,000 tonnes of CO2 emissions

FIBRE OPTIC CABLES

Note: Fibre characteristics detail included for each fibre optic cable described in this document is limited to stating relevant standards compliance (ITU-T and IEC). Further characteristics detail for fibre used in various cable types deployed by Telstra can be found in the Telstra InfraCo Optical Fibre Cable – Product Guide.

SINGLESM@RT™ DUCT SINGLE LOOSE-TUBE CABLE

Single Loose-Tube optical fibre cables designed for installation in ducts. Cable is fully dielectric thus immune to electric shocks or magnetic interferences. The loose-tube contains 12 single mode fibres, laid parallel to a composite glass fibre reinforced plastic (GRP) strength member that provides longitudinal strength (tensile and compressive). The tube is filled with a low viscosity, non-melting gel that prevent the longitudinal passage of moisture along the tube. The cable core is protected from moisture permeation and water penetration by means of a dry water blocking system. Each individual fibre is coloured within the tube for unambiguous identification. The cable is 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.

CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
40009913	CABLE, SM, DUCT BONDED, 12 FIBRE	12	50	90	200	7.7	5000	STOCK	12000	1200

Note: Overall diameter may vary from the above nominal values between +/- 0.7mm

12 FIBRE SINGLESM@RT™ - DUCT SINGLE LOOSE-TUBE CABLE

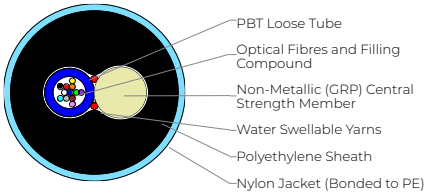
Cable description:

Cable containing 12 optical fibres in a single water blocked loose tube, laid parallel with a glass reinforced plastic (GRP) strength member, water blocked interstices, overall polyethylene sheathed and integrally bonded nylon jacket.

Construction details:

Number of elements:	1
Tube/fibre identification:	Colour coded
Strength member:	Glass reinforced plastic (GRP)
Fibre protection:	Polybutylene terephthalate (PBT)
Water blocking:	Thixotropic gel (tube)
	Water swellable yarns (interstices)
Sheath:	Polyethylene (UV stabilised)
Jacket:	Nylon (UV stabilised) – Blue

Cross sectional drawing:



Drawing not to scale

Dimensions and mass:	
Overall cable diameter (nominal):	7.7mm
Mass (nominal):	50kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	90mm
Minimum bending radius – Full load	200mm
Maximum tensile strength – Short term	1200 N
Maximum crush resistance – Short term	2000 N/10cm
Maximum crush resistance – Long term	1000 N/10cm
Operating temperature range: From -10°C to + 70°C	

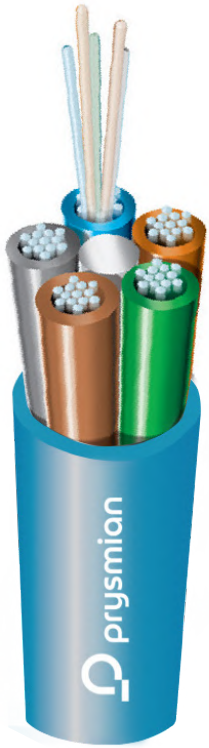
Optical fibre and tube colours:											
Fibre 1 Tube 1	Fibre 2	Fibre 3	Fibre 4	Fibre 5	Fibre 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Serial / Item number: 40009913

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

SM@RTLINK™ DUCT MULTI LOOSE-TUBE CABLE

Multi Loose-Tube optical fibre cables designed for installation in ducts. Cable is fully dielectric thus immune to electric shocks or magnetic interferences. Loose tubes, each containing 12 single mode fibres, are stranded with reversing helix around a composite glass fibre reinforced plastic (GRP) central strength member that provides longitudinal strength (tensile and compressive). The tubes are filled with a low viscosity, non-melting gel that prevent the longitudinal passage of moisture along the tube. The cable core is protected from moisture permeation and water penetration by means of a dry water blocking system. Fibre counts in the range of 36 to 144 are catered for with this construction. Each individual fibre is coloured within each tube for unambiguous identification. The cable is 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.



CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
40010738	CABLE, SM, DUCT BONDED, 36 FIBRE	36	60	86	172	8.6	-	MTO	12000	1500
40010739	CABLE, SM, DUCT BONDED, 72 FIBRE	72	60	86	172	8.6	5000	Stock	12000	1500
40012808	CABLE, BBA2-LL, DUCT BONDED, 72 FIBRE	72	60	86	172	8.6	-	MTO	12000	1500
40012812	CABLE, ULL, DUCT BONDED, 72 FIBRE	72	60	86	172	8.6	-	MTO	12000	1500
40010740	CABLE, SM, DUCT BONDED, 144 FIBRE	144	126	124	248	12.4	-	MTO	12000	3000
40012809	CABLE, BBA2-LL, DUCT BONDED, 144 FIBRE	144	126	124	248	12.4	-	MTO	12000	3000
40012813	CABLE, ULL, DUCT BONDED, 144 FIBRE	144	126	124	248	12.4	-	MTO	12000	3000

Note: Overall diameter may vary from the above nominal values between +/- 0.7mm

36 TO 72 FIBRE SM@RTLINK™ - DUCT MULTI LOOSE-TUBE CABLE

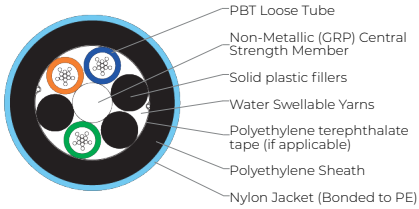
Cable description:

Cable containing up to 72 optical fibres in water blocked loose tubes (12 fibres per tube) and solid plastic fillers, laid-up around a glass reinforced plastic (GRP) central strength member, water blocked interstices, taped (where required), polyethylene overall sheathed and integrally bonded nylon jacketed.

Construction details:

Number of elements:	6
Tube/fibre identification:	Colour coded
Central Strength member:	Glass reinforced plastic (GRP)
Fibre protection:	Polybutylene terephthalate (PBT)
Fillers (solid plastic):	As required
Water blocking:	Thixotropic gel (tube) Water swellable yarns (interstices)
Core wrapping (where applicable):	Polyethylene terephthalate tape
Sheath:	Polyethylene (UV stabilised)
Jacket:	Nylon (UV stabilised) - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



Drawing not to scale

Dimensions and mass:	
Overall cable diameter (nominal):	8.6mm
Mass (nominal):	60kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2 ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	86mm
Minimum bending radius – Full load	172mm
Maximum tensile strength – Short term	1500 N
Maximum crush resistance – Short term	2000 N/10cm
Maximum crush resistance – Long term	1000 N/10cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre and tube colours:											
Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6 Tube 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series Telstra Material numbers: 40010738, 40010739, 40012808 and 40012812
The information contained in this data sheet is subject to normal manufacturing tolerances. Specifications are subject to change within the terms and conditions of the relevant Contract/Agreement.

144 FIBRE SM@RTLINK™ - DUCT MULTI LOOSE-TUBE CABLE

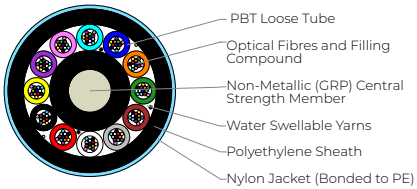
Cable description:

Cable containing 144 optical fibres in water blocked loose tubes (12 fibres per tube), laid-up around a polyethylene covered glass reinforced plastic (GRP) central strength member, water blocked interstices, polyethylene overall sheathed and integrally bonded nylon jacketed.

Construction details:

Number of elements:	12
Tube/fibre identification:	Colour coded
Central Strength member:	Glass reinforced plastic (GRP)
Fibre protection:	Polybutylene terephthalate (PBT)
Water blocking:	Thixotropic gel (tube)
	Water swellable yarns (interstices)
Sheath:	Polyethylene (UV stabilised)
Jacket:	Nylon (UV stabilised) - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



Drawing not to scale

Dimensions and mass:	
Overall cable diameter (nominal):	12.4mm
Mass (nominal):	126kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2 ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	124mm
Minimum bending radius – Full load	248mm
Maximum tensile strength – Short term	3000 N
Maximum crush resistance – Short term	2000 N/10cm
Maximum crush resistance – Long term	1000 N/10cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre and tube colours:											
Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6 Tube 6	Fibre 7 Tube 7	Fibre 8 Tube 8	Fibre 9 Tube 9	Fibre 10 Tube 10	Fibre 11 Tube 11	Fibre 12 Tube 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material numbers: 40010740, 40012809 and 40012813

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

FLEXTUBE® DUCT FLEXIBLE MODULE CABLE

Flexible Module optical fibre cables designed for installation in ducts. Cable is fully dielectric thus immune to electric shocks or magnetic interferences. Flexible modules each contain 12 single mode fibres. The modules are filled with a low viscosity, non-melting gel that prevents the longitudinal passage of moisture. The cable core is protected from moisture permeation and water penetration by means of a dry water blocking system. A layer of polymer yarns are helically applied over the cable bundle. Composite glass fibre reinforced plastic (GRP) strength members that provide longitudinal strength (tensile and compressive) are embedded in the sheath during the extrusion process. The application of a co-extruded dual layer of polyethylene sheath with an integrally bonded nylon jacket forms protection against termite attack with improved cable bending and durability.

Fibre counts of 360F and 720F are catered for with this construction. Each individual fibre is coloured within each tube for unambiguous identification.

CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
40010869	CABLE, SM DUCT BONDED, 360 FIBRE	360	145	144	288	14.4	-	MTO	10000	2500
40012744	CABLE, BBA2-LL, DUCT BONDED, 360 FIBRE	360	145	144	288	14.4	-	MTO	10000	2500
40013164	CABLE, ULL, DUCT BONDED, 360 FIBRE	360	145	144	288	14.4	-	MTO	10000	2500
40015698	CABLE, 204F BBA2-LL+156F ULL-AB, DUCT BONDED, 360 FIBRE	360	145	144	288	14.4	-	MTO	10000	2500
40007900	CABLE, BBXS DUCT BONDED, 720 FIBRE	720	200	165	330	16.5	-	MTO	7000	4000

Note: 720F comprises BBXS 200µm G657.A2
Note: Overall diameter may vary from the above nominal values between +/- 0.7mm

360 FIBRE FLEXTUBE® - DUCT FLEXIBLE MODULE CABLE

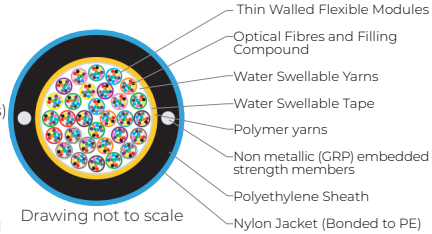
Cable description:

Cable containing 360 optical fibres in water blocked flexible modules (12 fibres per module), water blocked interstices, polymer yarn, taped, 2 glass reinforced plastic (GRP) strength members embedded, polyethylene overall sheathed and integrally bonded nylon jacketed.

Construction details:

Number of elements:	30
Module/fibre identification:	Colour coded
Fibre protection:	Thin walled thermoplastic
Water blocking:	Thixotropic gel (modules) Water swellable yarns (interstices)
Peripheral Yarns	Polymer yarns
Embedded strength member:	Diametrically opposed glass reinforced plastic (GRP)
Sheath:	Polyethylene (UV stabilised)
Jacket:	Nylon (UV stabilised) - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



Drawing not to scale

Dimensions and mass:	
Overall cable diameter (nominal):	14.4mm
Mass (nominal):	145kg/km

Fibre characteristics:

G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D
BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2
ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Mechanical and environmental performance:	
Minimum bending radius – No load	144mm
Minimum bending radius – Full load	288mm
Maximum tensile strength – Short term	2500 N
Maximum crush resistance – Short term	2000 N/10cm
Maximum crush resistance – Long term	1000 N/10cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre colours:

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

Module colours:

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	I	I	I	I	I	I	I	I	I	I	I	I
No.	13	14	15	16	17	18	19	20	21	22	23	24
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	II	II	II	II	II	II	II	II	II	II	II	II
No.	25	26	27	28	29	30						
Colour	Blue	Orange	Green	Brown	Grey	White						
	III	III	III	III	III	III						

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 40010869, 40012744, 40013164 and 40015698

720 FIBRE FLEXTUBE® - DUCT FLEXIBLE MODULE CABLE

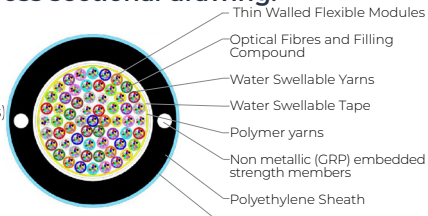
Cable description:

Cable containing 720 optical fibres in water blocked flexible modules (12 fibres per module), water blocked interstices, polymer yarns, taped, 2 glass reinforced plastic (GRP) strength members embedded, polyethylene overall sheathed and integrally bonded nylon jacketed.

Construction details:

Number of elements:	60
Module/fibre identification:	Colour coded
Fibre protection:	Thin walled thermoplastic
Water blocking:	Thixotropic gel (modules) Water swellable yarns (interstices)
Peripheral Yarns	Polymer yarns
Embedded strength member:	Diametrically opposed glass reinforced plastic (GRP)
Sheath:	Polyethylene (UV stabilised)
Jacket:	Nylon (UV stabilised) – Blue

Cross sectional drawing:



Drawing not to scale

Dimensions and mass:	
Overall cable diameter (nominal):	16.5mm
Mass (nominal):	200kg/km

Fibre characteristics:
Single-mode 1310nm optimised, 200µm bend-insensitive: In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2

Mechanical and environmental performance:	
Minimum bending radius – No load	165mm
Minimum bending radius – Full load	330mm
Maximum tensile strength – Short term	4000 N
Maximum crush resistance – Short term	2000 N/10cm
Maximum crush resistance – Long term	1000 N/10cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre colours:

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

Module colours:

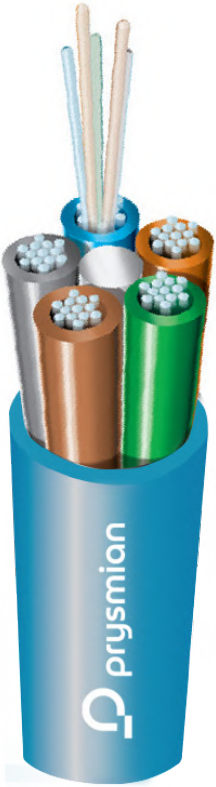
No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	I	I	I	I	I	I	I	I	I	I	I	I
No.	13	14	15	16	17	18	19	20	21	22	23	24
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	II	II	II	II	II	II	II	II	II	II	II	II
No.	25	26	27	28	29	30	31	32	33	34	35	36
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	III	III	III	III	III	III	III	III	III	III	III	III
No.	37	38	39	40	41	42	43	44	45	46	47	48
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	IIII	IIII	IIII	IIII	IIII	IIII	IIII	IIII	IIII	IIII	IIII	IIII
No.	49	50	51	52	53	54	55	56	57	58	59	60
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 40007900

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

HSE - *EXTR@CORE*® DIRECT BURIED HIGH STRENGTH CABLE

Multi Loose-Tube optical fibre cables designed for installation by direct burial. Cable fully dielectric thus immune to electric shocks or magnetic interferences. Loose tubes of increased hoop strength, each containing up to 24 single mode fibres, are stranded with reversing helix around a composite glass fibre reinforced plastic (GRP) central strength member. The dimension of the strength member has been increased to afford high longitudinal strength, particularly in compression to resist the massive forces typically 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. The cable core is protected from moisture permeation and water penetration by means of a dry water blocking system. Fibre counts in the range of 36 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 co-extruded dual layer of polyethylene sheath with an integrally bonded nylon jacket for protection against termite attack with improved cable bending and durability. The thickness of the combined polyethylene/nylon is considerably thicker than that of Duct cables.



CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
48436136	CABLE, SM, HIGH STRENGTH, 36 FIBRE	36	175	225	450	14.8	-	MTO	12000	4000
48436172	CABLE, SM, HIGH STRENGTH, 72 FIBRE	72	175	225	450	14.8	-	MTO	12000	4000
40012810	CABLE, BBA2-LL, HIGH STRENGTH, 72 FIBRE	72	175	225	450	14.8	-	MTO	12000	4000
40012814	CABLE, ULL, HIGH STRENGTH, 72 FIBRE	72	175	225	450	14.8	-	MTO	12000	4000
40012811	CABLE, BBA2-LL, HIGH STRENGTH, 144 FIBRE	144	180	225	450	14.8	-	MTO	12000	4000
40012815	CABLE, ULL, HIGH STRENGTH, 144 FIBRE	144	180	225	450	14.8	-	MTO	12000	4000

Note: Overall diameter may vary from the above nominal values between +/- 0.7mm

36 TO 72 FIBRE HSE *EXTR@CORE*® - DIRECT BURIED HIGH STRENGTH

(For Underground Direct Buried Applications)

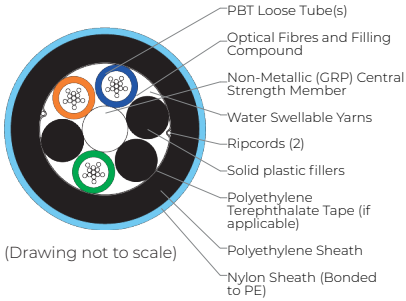
Cable description:

Cable containing up to 72 optical fibres in water blocked loose tubes (12 fibres/ tube) laid-up with fillers around a non-metallic glass reinforced plastic (GRP) central strength member, water blocked interstices, taped (if required), polyethylene overall sheath and integrally bonded, nylon jacket.

Construction details:

Number of elements:	6
Tube/Fibre identification:	Colour coded
Central strength member:	Glass reinforced plastic (GRP)
Fibre protection (tubes):	Polybutylene terephthalate (PBT)
Fillers (solid plastic):	As required
Water blocking:	Thixotropic gel (tubes) Water swellable yarns (interstices)
Core wrapping (where applicable):	Polyethylene terephthalate tape
Sheath:	Polyethylene (UV Stabilised)
Jacket:	Nylon (UV stabilised) - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	14.8 mm
Mass (nominal):	175kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2 ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	225 mm
Minimum bending radius – Full load	450 mm
Maximum tensile strength – Short term	4000 N
Maximum crush resistance – Short term	6000 N/10cm
Maximum crush resistance - Long term	3000N/10cm
Axial Compression Min. 3kN load ≤ 50±3% x cable OD lateral deviation	≥1.5%
Operating temperature range: From - 10°C to + 70°C	

Optical fibre and tube colours:

Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6 Tube 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material numbers: 48436136, 48436172, 40012810 and 40012814

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

144 FIBRE HSE *EXTR@CORE*® - DIRECT BURIED HIGH STRENGTH

(For Underground Direct Buried Applications)

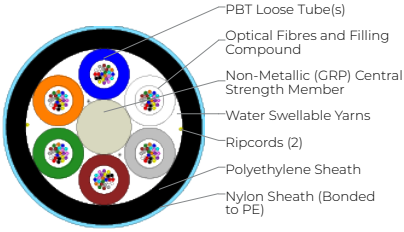
Cable description:

covered glass reinforced plastic (GRP) central strength member, water blocked interstices, polyethylene overall sheath and integrally bonded nylon jacket.

Construction details:

Number of elements:	6
Tube/Fibre identification:	Colour coded
Central strength member:	Glass reinforced plastic (GRP)
Fibre protection (tubes):	Polybutylene terephthalate (PBT)
Water blocking:	Thixotropic gel (tubes) Water swellable yarns (interstices)
Sheath:	Polyethylene (UV Stabilised)
Jacket:	Nylon (UV stabilised) - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	14.8mm
Mass (nominal):	180 kg/km

Fibre characteristics:

BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2
ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	225mm
Minimum bending radius – Full load	450mm
Maximum tensile strength – Short term	4000 N
Maximum crush resistance – Short term	6000 N/10cm
Maximum crush resistance - Long term	3000N/10cm
Axial Compression Min. 3kN load ≤ 50% x cable OD lateral deviation	≥1.5%
Operating temperature range: From - 10°C to + 70°C	

Optical fibre colours (BBA2-LL):

Fibre 1	Fibre 2	Fibre 3	Fibre 4	Fibre 5	Fibre 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
Fibre 13	Fibre 14	Fibre 15	Fibre 16	Fibre 17	Fibre 18	Fibre 19	Fibre 20	Fibre 21	Fibre 22	Fibre 23	Fibre 24
Blue	Orange	Green	Brown	Grey	White	Red	White	Yellow	Violet	Pink	Aqua

Optical fibre colours (ULL):

Fibre 1	Fibre 2	Fibre 3	Fibre 4	Fibre 5	Fibre 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
Fibre 13	Fibre 14	Fibre 15	Fibre 16	Fibre 17	Fibre 18	Fibre 19	Fibre 20	Fibre 21	Fibre 22	Fibre 23	Fibre 24
Blue	Orange	Green	Brown	Grey	White	Red	Clear	Yellow	Violet	Pink	Aqua

Tube colours:

Tube 1	Tube 2	Tube 3	Tube 4	Tube 5	Tube 6
Blue	Orange	Green	Brown	Grey	White

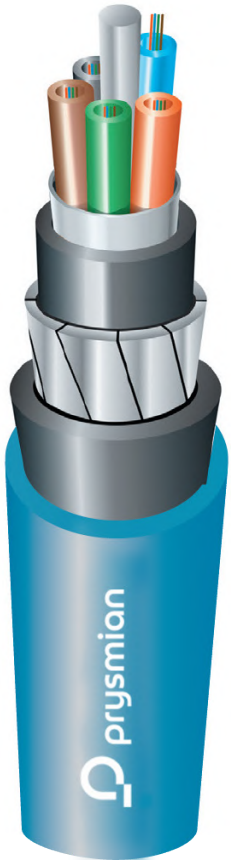
Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 40012811 and 40012815

ARM@CORE® RODENT PROOF ALL DIELECTRIC CABLE

Multi Loose-Tube optical fibre cables designed for installation by direct burial in locations subject to rodent attack. Cable is fully dielectric thus immune to electric shocks or magnetic interferences. Loose tubes each containing up to 12 single mode fibres are stranded with reversing helix around a composite glass fibre reinforced plastic (GRP) central strength member and complemented with composite GRP armouring to resist rodent attack. Fibre counts in the range of 36 to 144 are catered for with this construction.

360 fibre count is constructed in a Flextube® design, for installation in ducts. A black polyethylene inner sheath is provided to act as bedding for a layer of flat Glass Reinforced Plastic straps that are applied helically to provide an extremely effective barrier to all types and sizes of rodents. The cable is then completed by the application of a co-extruded dual layer of polyethylene sheath with an integrally bonded Nylon jacket for protection against termites.

This cable has been tested extensively for resistance to rodent attack by the Department of Natural resources and Mines and the University of Queensland to demonstrate that even after severe exposure, cable integrity is maintained.



CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
48453136	CABLE, SM RODENT PROOF, 36 FIBRE	36	185	220	440	14.7	-	MTO	12000	4000
48453172	CABLE, SM RODENT PROOF, 72 FIBRE	72	185	220	440	14.7	-	MTO	12000	4000
40013323	CABLE, BBA2-LL RODENT PROOF, 72 FIBRE	72	185	220	440	14.7	-	MTO	12000	4000
40013326	CABLE, ULL RODENT PROOF, 72 FIBRE	72	185	220	440	14.7	-	MTO	12000	4000
48453544	CABLE, SM RODENT PROOF, 144 FIBRE	144	317	295	590	19.5	-	MTO	6000	5000
40013324	CABLE, BBA2-LL RODENT PROOF, 144 FIBRE	144	317	295	590	19.5	-	MTO	6000	5000
40013327	CABLE, ULL RODENT PROOF, 144 FIBRE	144	317	295	590	19.5	-	MTO	6000	5000
40010128	CABLE, SM RODENT PROOF, 360 FIBRE	360	230	249	498	16.6	-	MTO	9000	5000
40013325	CABLE, BBA2-LL RODENT PROOF, 360 FIBRE	360	230	249	498	16.6	-	MTO	9000	5000
40013328	CABLE, ULL RODENT PROOF, 360 FIBRE	360	230	249	498	16.6	-	MTO	9000	5000
40015761	CABLE, 204F BBA2-LL+156F ULL-AB, RODENT PROOF, 360 FIBRE	360	230	249	498	16.6	-	MTO	9000	5000

*Note: Overall diameter may vary from the above nominal values between +/- 1.5mm
*Note: Rodent proof 360F cable is constructed in a Flextube design (i.e. not multi loose-tube).

36 FIBRE ARM@CORE® - RODENT PROOF ALL DIELECTRIC CABLE

(For Underground Duct or Direct Buried Applications)

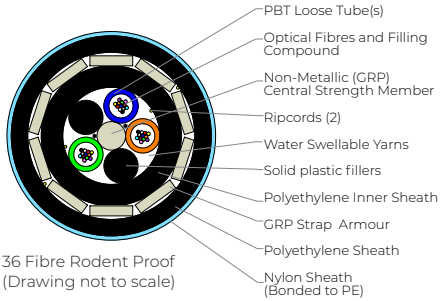
Cable description:

Cable containing up to 36 optical fibres in water blocked loose tubes (12 fibres per tube) and round plastic fillers laid-up around a glass reinforced plastic (GRP) central strength member, water blocked interstices, polyethylene inner sheath, glass reinforced plastic strap armoured, polyethylene overall sheath and integrally bonded nylon jacket.

Construction details:

Number of elements:	5
Tube/Fibre identification:	Colour coded
Central strength member:	Glass reinforced plastic (GRP)
Fibre protection (tubes):	Polybutylene terephthalate (PBT)
Water blocking:	Thixotropic gel (tubes)
	Water swellable yarns (interstices)
Inner sheath:	Polyethylene
Armouring:	Glass reinforced plastic straps
Water blocking:	Water swellable tape (over armour)
Sheath:	Polyethylene
Jacket:	Nylon (UV Stabilised)

Cross sectional drawing:



36 Fibre Rodent Proof
(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	14.7 mm
Mass (nominal):	185 kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	220 mm
Minimum bending radius – Full load	440 mm
Maximum tensile strength – Short term	4000 N
Maximum crush resistance – Short term	6000 N/10cm
Maximum crush resistance - Long term	3000N/10cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre and tube colours:

Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 48453136

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.

72 FIBRE ARM@CORE® - RODENT PROOF ALL DIELECTRIC CABLE

(For Underground Duct or Direct Buried Applications)

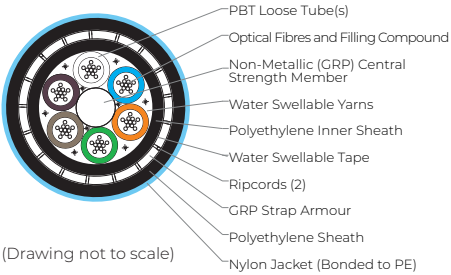
Cable description:

Cable containing 72 optical fibres in water blocked loose tubes (12 fibres per tube) laid-up around a composite glass reinforced plastic (GRP) central strength member, water blocked interstices, polyethylene inner sheath, GRP strap armour, overall polyethylene sheath and integrally bonded nylon jacket.

Construction details:

Number of elements:	6
Tube/Fibre identification:	Colour coded
Central strength member:	Glass reinforced plastic (GRP)
Fibre protection (tubes):	Polybutylene terephthalate (PBT)
Water blocking:	Thixotropic gel (tubes)
	Water swellable yarns (interstices)
Inner sheath:	Polyethylene
Armouring:	Glass reinforced plastic straps
Water blocking:	Water swellable tape (over armour)
Sheath:	Polyethylene (UV Stabilised)
Jacket:	Nylon (UV stabilised) - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	14.7 mm
Mass (nominal):	185 kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2 ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	220 mm
Minimum bending radius – Full load	440 mm
Maximum tensile strength – Short term	4000 N
Maximum crush resistance – Short term	6000 N/10cm
Maximum crush resistance - Long term	3000N/10cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre and tube colours:

Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6 Tube 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 48453172, 40013323 and 40013326

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.

144 FIBRE ARM@CORE® - RODENT PROOF ALL DIELECTRIC CABLE

(For Underground Duct or Direct Buried Applications)

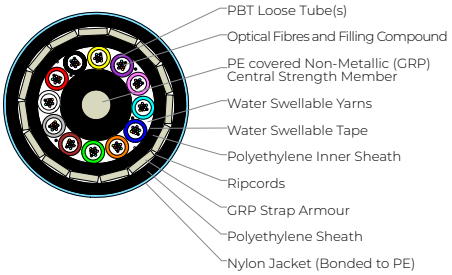
Cable description:

Cable containing 144 optical fibres in water blocked loose tubes (12 fibres per tube) laid-up around a polyethylene covered glass reinforced plastic (GRP) central strength member, water blocked interstices, polyethylene inner sheath, GRP strap armour, overall polyethylene sheath and integrally bonded nylon jacket.

Construction details:

Number of elements:	12
Tube/Fibre identification:	Colour coded
Central strength member:	Glass reinforced plastic (GRP)
Fibre protection (tubes):	Polybutylene terephthalate (PBT)
Water blocking:	Thixotropic gel (tubes)
	Water swellable yarns (interstices)
	Polyethylene
Armouring:	Glass reinforced plastic straps
Water blocking:	Water swellable tape (over armour)
Sheath:	Polyethylene (UV Stabilised)
Jacket:	Nylon (UV stabilised) - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	19.5 mm
Mass (nominal):	317 kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2 ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	295 mm
Minimum bending radius – Full load	590 mm
Maximum tensile strength – Short term	5000 N
Maximum crush resistance – Short term	6000 N/10cm
Maximum crush resistance - Long term	3000N/10cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre and tube colours:

Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6 Tube 6	Fibre 7 Tube 7	Fibre 8 Tube 8	Fibre 9 Tube 9	Fibre 10 Tube 10	Fibre 11 Tube 11	Fibre 12 Tube 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 48453544, 40013324 and 40013327

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.

360 FIBRE ARM@CORE® - RODENT PROOF ALL DIELECTRIC CABLE

(For outdoor installation in ducts or direct bury in non-reactive soil that has a shrink-swell rating between 1 and 5)

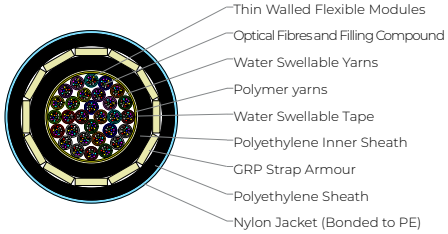
Cable description:

Cable containing 360 optical fibres in water blocked flexible modules (12 fibres per module), water blocked interstices, polymer yarns, taped, polyethylene inner sheath, GRP strap armour, overall polyethylene overall sheath and integrally bonded nylon jacket.

Construction details:

Number of elements:	30
Tube/fibre identification:	Colour coded
Fibre protection:	Thin walled thermoplastic
Water blocking:	Thixotropic gel (modules) Water swellable yarns (interstices)
Peripheral Yarns:	Polymer yarns
Inner sheath:	Polyethylene
Amouring:	Glass reinforced plastic straps
Water blocking:	Water swellable tape (over armour)
Sheath:	Polyethylene (UV stabilised)
Jacket:	Nylon (UV stabilised) - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



Drawing not to scale

Dimensions and mass:	
Overall cable diameter (nominal):	16.6mm
Mass (nominal):	230kg/km

Fibre characteristics:

G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D
BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2
ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Mechanical and environmental performance:	
Minimum bending radius – No load	249mm
Minimum bending radius – Full load	498mm
Maximum tensile strength – Short term	5000 N
Maximum crush resistance – Short term	4000 N/10cm
Maximum crush resistance - Long term	2000N/10cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre colours:

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

Module colours:

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	I	I	I	I	I	I	I	I	I	I	I	I
No.	13	14	15	16	17	18	19	20	21	22	23	24
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	II	II	II	II	II	II	II	II	II	II	II	II
No.	25	26	27	28	29	30						
Colour	Blue	Orange	Green	Brown	Grey	White						
	III	III	III	III	III	III						

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 40010128, 40013325, 40013328 and 40015761

SM@RTSPAN® AERIAL ALL DIELECTRIC SELF SUPPORTING (ADSS)

Aerial cables are of All Dielectric Self Supported (ADSS) design. Multi Loose-Tube optical fibre cables designed for installation between poles up to 150m apart. Loose tubes each containing up to 12 single mode fibres are stranded around a composite glass fibre reinforced plastic (GRP) central strength member. The cable core is protected from moisture permeation and water penetration by means of a dry water blocking system. A black polyethylene inner sheath is then applied as a bedding for a layer of high modulus aramid yarns that form the principal strength member of the cable. The cable is completed by the application of a snug fitting polyethylene sheath that has strong congruence with the aramid yarns and enables external grips to be fitted for stringing. The cable is designed for 150m span at a minimum of 2% sag under everyday conditions (no wind or ice and ambient temperature). The cable, installed as such, will withstand simultaneous wind and ice loads of 100km/h and 5 mm radial respectively. This cable withstands shot-gun blast as defined in Telstra specification. Longer span lengths up to 500 metres are available upon request.

CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
48431112	CABLE, SM AERIAL SHORT SPAN, 12 FIBRE	12	132	203	270	13.5	1000	MTO	6000	2700
48431172	ABLE, SM AERIAL SHORT SPAN, 72 FIBRE	72	159	218	290	14.5	1000	MTO	6000	3000

Note: Overall diameter tolerance is aligned with standard clamp sizes.
Note: Overall diameter may vary from the above nominal values between +/- 0.3mm

12 FIBRE SM@RTSPAN® - AERIAL ADSS

(Short Span Self – Supported Cable)

Cable description:

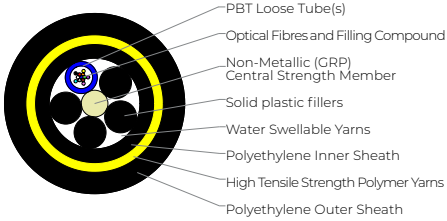
Cable containing 12 optical fibres in water blocked loose tubes (12 fibres per tube) and round plastic fillers, laid-up around a glass reinforced plastic (GRP) central strength member, water blocked interstices, polyethylene inner sheath, high tensile strength polymer yarns reinforced and polyethylene overall sheath.

Construction details:

Number of elements: 5
Tube/Fibre identification: Colour coded
Central strength member: Glass reinforced plastic (GRP)
Fibre protection (tubes): Polybutylene terephthalate (PBT)

Fillers:	As required
Water blocking:	Thixotropic gel (tubes)
	Water swellable yarns (interstices)
Sheath:	Polyethylene
Reinforcing:	High tensile strength polymer yarns
Outer sheath:	Polyethylene (UV Stabilised)

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	13.5 mm
Mass (nominal):	132 kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	203 mm
Minimum bending radius – Full load (Inc. coils in poles)	270 mm
Maximum Everyday Stress (EDS) @15°C	1.3 kN
Maximum Operating Stress (MOS)	5.4kN
Maximum crush resistance – Short term	2kN/10cm
Maximum span*	150m
Minimum sag (Installation)	2%
Operating temperature range: From -30°C to + 70°C	

(*) = Under maximum conditions of 100 km/hr wind velocity and 5mm radial ice loading

Optical fibre and tube colours:											
Fibre 1 Tube 1	Fibre 2	Fibre 3	Fibre 4	Fibre 5	Fibre 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series Telstra Material numbers: 48431112
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.

72 FIBRES SM@RTSPAN® - AERIAL ADSS

(Short Span Self – Supported Cable)

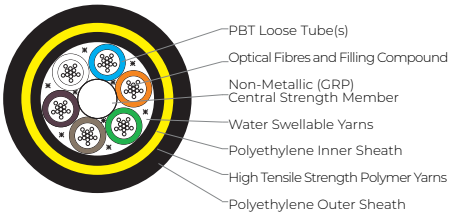
Cable description:

Cable containing 72 optical fibres in water blocked loose tubes (12 fibres per tube) laid-up around a glass reinforced plastic (GRP) central strength member, water blocked interstices, polyethylene inner sheath, high tensile strength polymer yarns reinforced and polyethylene overall sheath.

Construction details:

Number of elements: 6
Tube/Fibre identification: Colour coded
Central strength member: Glass reinforced plastic (GRP)
Fibre protection (tubes): Polybutylene terephthalate (PBT)
Water blocking: Thixotropic gel (tubes)
Water swellable yarns (interstices)
Sheath: Polyethylene
Reinforcing: High Tensile Strength Polymer Yarns
Outer sheath: Polyethylene (UV Stabilised)

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	14.5 mm
Mass (nominal):	159 kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	218 mm
Minimum bending radius – Full load (Inc. coils in poles)	290 mm
Maximum Everyday Stress (EDS) @15°C	1.5 kN
Maximum Operating Stress (MOS)	5.8 kN
Maximum crush resistance – Short term	2 kN/10cm
Maximum span*	150m
Minimum sag (Installation)	2%
Operating temperature range: From - 30°C to + 70°C	

(*) = Under maximum conditions of 100 km/hr wind velocity and 5mm radial ice loading

Optical fibre and tube colours:											
Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6 Tube 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series Telstra Material number: 48431172
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.

UNDERWATER FLEXTUBE®

Multi Flexible Module optical fibre cables designed for installation in shallow water up to 30m.

Cable has a fully dielectric core that is protected by the application of three layers of metallic armouring. Underwater Flextube is available in a fibre count of 144, 360 and 720 fibres. The cable core is fully water blocked by means of a dry water blocking system. A bedding layer of polyethylene is applied over the cable core to support a composite sheath featuring a corrugated steel tape armour/hermetic seal that is bonded to a polyethylene sheath. The space between the inner sheath and the metallic tape is protected with a swellable tape to prevent moisture permeation in case of external damage to the cable. Two contra-rotating helical layers of steel armour wires are applied flooded with a special mixture of water swelling jelly and hydrogen absorbing (Hydroget®) compound to provide long-term water blocking protection to the cable.
The cable is then completed by the application of a high density polyethylene sheath.

Each individual fibre is coloured within each tube for unambiguous identification.

CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
40013562	CABLE, BBA2-LL UNDERWATER, 144 FIBRE	144	3400	700	1045	34.8	-	MTO	Contact Prysmian	30000
40013563	CABLE, ULL UNDERWATER, 144 FIBRE	144	3400	700	1045	34.8	-	MTO	Contact Prysmian	30000
40013564	CABLE, BBA2-LL UNDERWATER, 360 FIBRE	360	3750	750	1120	37.3	-	MTO	Contact Prysmian	30000
40013565	CABLE, ULL UNDERWATER, 360 FIBRE	360	3750	750	1120	37.3	-	MTO	Contact Prysmian	30000
40007901	CABLE, BBXS UNDERWATER, 720 FIBRE	720	4400	820	1230	41.0	-	MTO	Contact Prysmian	30000

Note: Overall diameter may vary from the above nominal values between +/- 3mm

144 FIBRE UNDERWATER - FLEXTUBE®

(For Harbour, Lake, and River Crossing Applications)

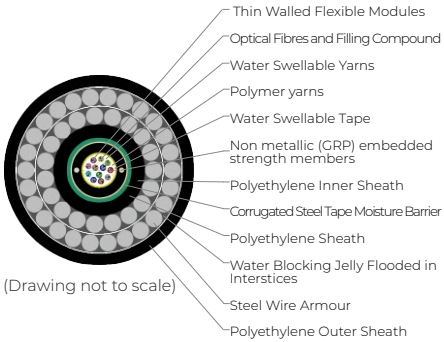
Cable description:

Cable containing 144 optical fibres in multiple water blocked flexible modules (12 fibres per module), stranded with the interstices water blocked, polymer yarns helically laid over cable bundle, non-metallic glass reinforced plastic (GRP) strength members embedded in inner most polyethylene sheath. Corrugated steel tape armour, polyethylene inner sheath, two layers steel wire armour, water blocking jelly in interstices and polyethylene overall sheath.

Construction details:

Number of elements:	12
Tube/Fibre identification:	Colour coded
Fibre protection:	Thin walled thermoplastic
Water blocking:	Thixotropic gel (modules) Water swellable yarns (interstices) Water swellable tape (under CST) Water swellable jelly (armour interstices)
Peripheral strength member:	Polymer yarns
Embedded strength member:	Diametrically opposed glass reinforced plastic
Inner sheath:	High Density Polyethylene (UV Stabilised)
Moisture barrier:	Copolymer laminated steel tape
Sheath:	Polyethylene
Armour:	Double layer steel wires
Outer sheath:	High Density Polyethylene (UV Stabilised)

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	34.8 mm
Mass (nominal):	3400kg/km

Fibre characteristics:
BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2 ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Mechanical and environmental performance:	
Minimum bending radius – No load	700mm
Minimum bending radius – Full load	1045mm
Maximum tensile strength – Short term	30000 N
Maximum crush resistance – Short term	5000 N/10cm
Maximum crush resistance – Long term	2000 N/10 cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre colours:

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

Module colours:

Fibre 1	Fibre 2	Fibre 3	Fibre 4	Fibre 5	Fibre 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Light Green	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 40013562 and 40013563

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

360 FIBRE UNDERWATER - FLEXTUBE®

(For Harbour, Lake, and River Crossing Applications)

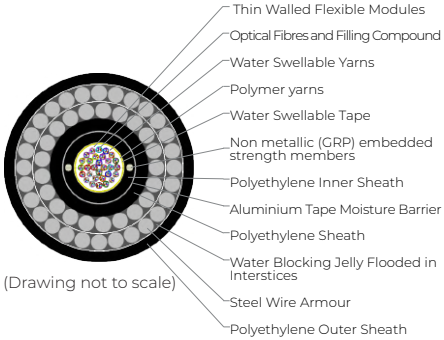
Cable description:

Cable containing 360 optical fibres in multiple water blocked flexible modules (12 fibres per module), stranded with the interstices water blocked, polymer yarns helically laid over cable bundle, non-metallic glass reinforced plastic (GRP) strength members embedded in inner most polyethylene sheath. aluminium/polyethylene laminated tape moisture barrier, polyethylene inner sheath, two layers steel wire armour, water blocking jelly in interstices and polyethylene overall sheath.

Construction details:

Number of elements:	30
Tube/Fibre identification:	Colour coded
Fibre protection:	Thin walled thermoplastic
Water blocking:	Thixotropic gel (modules) Water swellable yarns (interstices) Water swellable tape (under moisture barrier) Water swellable jelly (armour interstices)
Peripheral strength member:	Polymer yarns
Embedded strength member:	Diametrically opposed glass reinforced plastic
Inner sheath:	High Density Polyethylene (UV Stabilised)
Moisture barrier:	Copolymer laminated aluminium tape
Sheath:	Polyethylene
Armour:	Double layer steel wires
Outer sheath:	High Density Polyethylene (UV Stabilised)

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	37.3mm
Mass (nominal):	3750kg/km

Fibre characteristics:

BBA2-LL bend insensitive, low loss - In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2
ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Mechanical and environmental performance:	
Minimum bending radius – No load	750mm
Minimum bending radius – Full load	1120mm
Maximum tensile strength – Short term	30000 N
Maximum crush resistance – Short term	5000 N/10cm
Maximum crush resistance – Long term	2000 N/10 cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre colours:

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

Module colours:

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	I	I	I	I	I	I	I	I	I	I	I	I
No.	13	14	15	16	17	18	19	20	21	22	23	24
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
	II	II	II	II	II	II	II	II	II	II	II	II
No.	25	26	27	28	29	30						
Colour	Blue	Orange	Green	Brown	Grey	White						
	III	III	III	III	III	III						

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 40013564 and 40013565

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

720 FIBRE UNDERWATER - FLEXTUBE®

(For Harbour, Lake, and River Crossing Applications)

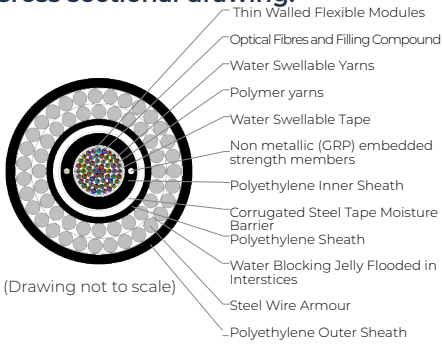
Cable description:

Cable containing 720 optical fibres in multiple water blocked flexible modules (12 fibres per module), stranded with the interstices water blocked, polymer yarns helically laid over cable bundle, non-metallic glass reinforced plastic (GRP) strength members embedded in inner most polyethylene sheath. Corrugated steel tape armour, polyethylene inner sheath, two layers steel wire armour, water blocking jelly in interstices and polyethylene overall sheath.

Construction details:

Number of elements:	60
Tube/Fibre identification:	Colour coded
Fibre protection:	Thin walled thermoplastic
Water blocking:	Thixotropic gel (modules) Water swellable yarns (interstices) Water swellable tape (under CST) Water swellable jelly (armour interstices)
Peripheral strength member:	Polymer yarns
Embedded strength member:	Diametrically opposed glass reinforced plastic
Inner sheath:	Polyethylene (UV stabilised)
Moisture barrier:	Copolymer laminated steel tape
Sheath:	Polyethylene
Armour:	Double layer steel wires
Outer sheath:	High Density Polyethylene (UV Stabilised)

Cross sectional drawing:



(Drawing not to scale)

Fibre characteristics:	
Single-mode 1310nm optimised, 200µm bend-insensitive: In compliance with ITU-T recommendation G.657.A2 and IEC 60793-2-50 Category B-657.A2	
Dimensions and mass:	
Overall cable diameter (nominal):	41.0mm
Mass (nominal):	4400kg/km
Mechanical and environmental performance:	
Minimum bending radius – No load	820mm
Minimum bending radius – Full load	1230mm
Maximum tensile strength – Short term	30000 N
Maximum crush resistance – Short term	5000 N/10cm
Maximum crush resistance – Long term	2000 N/10 cm
Operating temperature range: From -10°C to + 70°C	

Optical fibre colours:

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

Module colours:

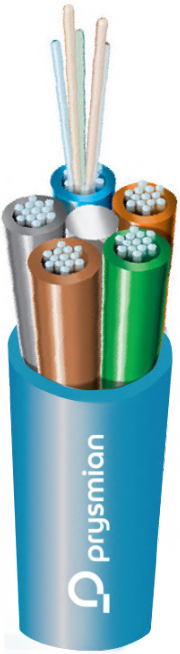
No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
No.	13	14	15	16	17	18	19	20	21	22	23	24
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
No.	25	26	27	28	29	30	31	32	33	34	35	36
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
No.	37	38	39	40	41	42	43	44	45	46	47	48
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua
No.	49	50	51	52	53	54	55	56	57	58	59	60
Colour	Blue	Orange	Green	Brown	Grey	White	Red	Light green	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 40007901

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

INTERNAL TIE SM@RTCORE® (LSOH)

Multi Loose-Tube optical fibre cables designed for intra-building cabling applications. Used within buildings and can be located in vertical riser shafts from the cable well to the main optical distribution frame (ODF) or from the main ODF to an intermediate optical distribution frame. Each loose tube containing up to 12 single mode fibres is filled with a low viscosity, non-melting gel to protect the fibres from external stresses. Fibre counts in the range of 12 to 144 are catered for with this construction. Each individual fibre is coloured within each tube for unambiguous identification. The cable is completed with the application of a zero halogen flame retardant low smoke and fume (LSOH) thermoplastic sheath that is suitable for installation within buildings due to its flame propagation limiting characteristics.



CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
48462112	CABLE, SM INTERNAL, TIE 12 FIBRE	12	74	87	174	8.7	-	MTO	12000	2000
40013329	CABLE, ULL INTERNAL TIE, 12 FIBRE	12	74	87	174	8.7	-	MTO	12000	2000
48462172	CABLE, SM INTERNAL, TIE 72 FIBRE	72	77	87	174	8.7	1000	Stock	12000	2000
40013380	CABLE, ULL INTERNAL TIE, 72 FIBRE	72	77	87	174	8.7	1000	Stock	12000	2000
48462544	CABLE, SM INTERNAL, TIE 144 FIBRE	144	167	131	262	13.1	1000	Stock	12000	2500
40013381	CABLE, ULL INTERNAL TIE, 144 FIBRE	144	167	131	262	13.1	1000	Stock	12000	2500

Note: Overall diameter may vary from the above nominal values between +/- 0.7mm

12 TO 72 FIBRES INTERNAL TIE - SM@RTCORE®

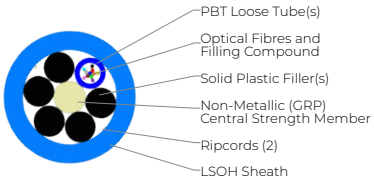
Cable description:

Cable containing up to 72 optical fibres in water blocked loose tubes (12 fibres per tube) and solid plastic fillers laid-up around a glass reinforced plastic (GRP) central strength member, dry core and LSOH (flame retardant, low smoke generation, low toxic gas emission and zero halogen) thermoplastic overall sheath.

Construction details:

Number of elements: 6
Tube/Fibre identification: Colour coded
Central strength member: Glass reinforced plastic (GRP)
Fibre protection (tubes): Polybutylene terephthalate (PBT)
Fillers (solid plastic): As required
Water blocking: Thixotropic gel (tubes)
Sheath: LSOH - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	8.7 mm
Mass (nominal):	74 - 77 kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	87 mm
Minimum bending radius – Full load	174 mm
Maximum tensile strength – Short term	2000 N
Maximum crush resistance – Short term	1000 N/10cm
Maximum crush resistance – Long term	500 N/10cm
Operating temperature range: From 0°C to + 60°C	

Optical fibre and tube colours:											
Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6 Tube 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material numbers: 48462112, 40013329, 48462172 and 40013380

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.

144 FIBRES INTERNAL TIE - SM@RTCORE®

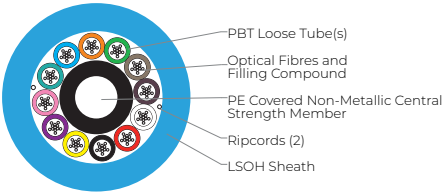
Cable description:

Cable containing 144 optical fibres in water blocked loose tubes (12 fibres per tube) laid-up around a polyethylene covered glass reinforced plastic (GRP) central strength member, dry core and LS0H (flame retardant, low smoke generation, low toxic gas emission and zero halogen) thermoplastic overall sheath.

Construction details:

Number of elements:	12
Tube/Fibre identification:	Colour coded
Central strength member:	Glass reinforced plastic (GRP)
Fibre protection (tubes):	Polybutylene terephthalate (PBT)
Water blocking:	Thixotropic gel (tubes)
Sheath:	LS0H - Blue for all cables except those using ULL fibre. ULL cable comprises a pink sheath

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:	
Overall cable diameter (nominal):	13.1 mm
Mass (nominal):	167 kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D ULL ultra low loss - In compliance with ITU-T recommendation G.654.C and IEC 60793-2-50 Category B-654.C

Note: Other fibres are available upon request

Mechanical and environmental performance:	
Minimum bending radius – No load	131 mm
Minimum bending radius – Full load	262 mm
Maximum tensile strength – Short term	2500 N
Maximum crush resistance – Short term	1000 N/10cm
Maximum crush resistance – Long term	500 N/10cm
Operating temperature range: From 0°C to + 60°C	

Optical fibre and tube colours:

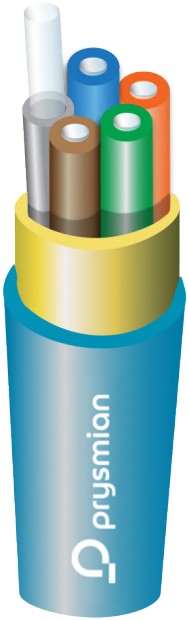
Fibre 1 Tube 1	Fibre 2 Tube 2	Fibre 3 Tube 3	Fibre 4 Tube 4	Fibre 5 Tube 5	Fibre 6 Tube 6	Fibre 7 Tube 7	Fibre 8 Tube 8	Fibre 9 Tube 9	Fibre 10 Tube 10	Fibre 11 Tube 11	Fibre 12 Tube 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; AS/CA S008 and IEC 60794 series
Telstra Material number: 48462544 and 40013381

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 RISER CUSTOMER PREMISES

Riser cable is designed for installation in riser shafts running between floors of a building or other applications where the cable is to be run vertically. Used in Local Area Networks (LAN) applications including Fibre Distribution Data Interface (FDDI). This type of cable is also suitable for installation in external environments, such as between buildings in a campus network, where the attributes of a small flexible cable with tight buffered fibres, capable of direct connectorisation, are important. Fibre counts in the range of 12 to 24 are available with individual fibre protection provided by means of a tight jacket of 0.9mm diameter, allowing an optical connector to be fitted directly. The individual fibres are then stranded into a compact core along with a combination of standard and water blocking aramid (Kevlar) yarns to provide the core with the required strength, cushioning and water blocking performance. The cable is finished with the application of a zero halogen flame retardant low smoke and fume (LSOH) thermoplastic sheath that is suitable for installation within buildings due to its flame propagation limiting characteristics.



CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Fibres	Nominal Weight (kg/ km)	Min. Bending Radius No load (mm)	Min Bending Radius Full load (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Max Drum Length (m)	Max Hauling Tension (N)
48492112	12F SM IND/ OUTDOOR RISER BLUE	12	33	62	124	6.2	-	MTO	2000	600
48492124	24F SM IND/ OUTDOOR RISER BLUE	24	61	88	176	8.8	-	MTO	2000	1100
48392312	12F M50E OM5/ OUTDOOR RISER AQUA	12	53	62	124	6.2	-	MTO	2000	600
48392324	24F M50E OM5/ OUTDOOR RISER AQUA	24	61	88	176	8.8	-	MTO	2000	1100

Note: Overall diameter may vary from the above nominal values between +/- 0.5mm

12 TO 24 FIBRE INDOOR / OUTDOOR LIGHT DUTY RISER OPTICAL CABLE

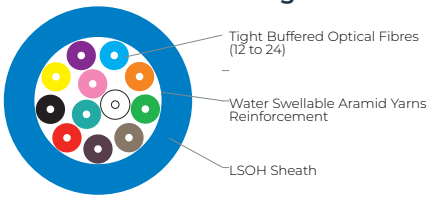
Cable description:

The cable consists of 12 to 24 fibres of 900µm tight buffered optical fibres reinforced with water swellable aramid yarns and sheathed with LS0H (flame retardant, low smoke generation, low toxic gas emission and zero halogen) compound. For Local Area Networks (LAN) applications including Fibre Distribution Data Interface (FDDI). Cable is suitable for wideband applications in customer premises in indoor and outdoor installations.
Note: Cable meets the water penetration test as per IEC 60794-1-2-F 5C as specified in AS/CA S008

Construction details:

Number of elements:	12 or 24
Fibre identification:	Colour coded
Fibre Insulation:	Tight Buffered Polymer
Reinforcing:	Water Swellable Aramid Yarns
Sheath:	LS0H – UV resistant (Blue)

Cross sectional drawing:



(Drawing not to scale)

Dimensions and mass:		
Fibre count	12	24
Overall cable diameter (nominal):	6.2mm	8.8 mm
Mass (nominal):	33 kg/km	61 kg/km

Fibre characteristics:
G.652.D - In compliance with ITU-T recommendation G.652.D and IEC 60793-2-50 Category B-652.D OM5 - In compliance with ITU-T recommendation G651 and IEC 60793-2-10 Category A1-OM5

Mechanical and environmental performance:		
Fibre Count	12	24
Minimum bending radius- No load [mm]	62	88
Minimum bending radius- Full load [mm]	124	176
Maximum tensile strength – Short term [N]	600	1100
Crush resistance – Short term [N/100mm]	500	
Crush resistance – Long term [N/100mm]	300	
Operating temperature range [°C]	-10 to + 70	
Serial / Item numbers	48492112 and 48392312	48492124 and 48392324

Flame Resistance:	
AS/NZS IEC 60332.1	Vertical flame propagation for single cable
AS/NZS IEC 60332.3.24	Vertical flame propagation for single bunched cables - Category C

Tight buffered optical fibre colours:											
Fibre 1	Fibre 2	Fibre 3	Fibre 4	Fibre 5	Fibre 6	Fibre 7	Fibre 8	Fibre 9	Fibre 10	Fibre 11	Fibre 12
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua
Fibre 13	Fibre 14	Fibre 15	Fibre 16	Fibre 17	Fibre 18	Fibre 19	Fibre 20	Fibre 21	Fibre 22	Fibre 23	Fibre 24
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Specifications: Telstra Optical Fibre Cable; ISO/IEC 11801; AS/CA S008 and IEC 60794 series
Telstra Material Number: 48492112; 48492124; 48392312; and 48392324

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.

METALLIC CABLES

IB CABLES

Integral Bearer (IB) cables are used in locations where the Customer Access Network (CAN)
is installed aerially rather than underground; typically in metropolitan locations where underground conduits are non-existent and
in rural areas. Insulation is by means of solid polyethylene that provides a higher voltage breakdown strength (better lightning resistance) compared with underground distribution cables.

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 permeation. A black UV resistant polyethylene overall sheath is applied, into which is incorporated a galvanised high tensile steel bearer wire in a “figure of 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

Telstra Material Number	Prysmian Material Description	Number of Pairs	Nominal weight (kg/km)	Min Bending Diameter (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Nominal Drum Dimensions (mm)	Max Hauling Tension (N)
46505241	CABLE, TEL EXT 10/0.64MM PEIUT IB	10	165	210	10.4 x 16.5	500	Stock	LW1 - 600/250/480	2000
46505243	CABLE, TEL EXT 30/0.64MM PEIUT IB	30	390	340	16.7 x 24.8	500	6-10 Weeks	LW3 - 1000/350/600	3500
46505244	CABLE, TEL EXT 50/0.64MM PEIUT IB	50	570	420	21.0 x 29.4	500	6-10 Weeks	LW5 - 1250/450/600	3500
46505246	CABLE, TEL EXT 100/0.64MM PEIUT IB	100	1080	590	29.2 x 39.9	500	6-10 Weeks	OF6 - 1600/800/800	5800

10 TO 100 PAIR SELF SUPPORTED AERIAL CABLE - INTEGRAL BEARER (FIGURE 8)

(For aerial self-supporting applications)

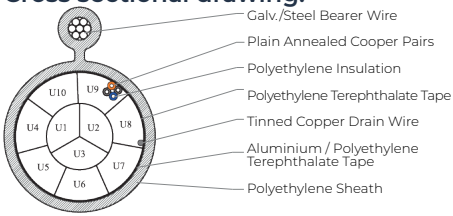
Cable description:

Cable consists of a number of plain annealed copper conductors (0.64mm), solid polyethylene insulated, twinned, bunched into 10 pair units, units laid up, taped, aluminium/polyethylene terephthalate screened with a 0.50mm tinned copper drain wire and polyethylene overall sheathed cable incorporating a galvanised steel wire integral bearer in "figure 8" construction.

Construction details:

Conductor:	Plain annealed copper
Insulation:	Solid polyethylene
Cabling element:	Twisted pair
Wrapping:	Polyethylene terephthalate tape
Drain wire:	Tinned annealed copper 0.5mm nominal diameter
Screen:	Aluminium/polyethylene terephthalate tape
Bearer wire:	Galvanised steel wire
Outer sheath:	Polyethylene (UV stabilised)

Cross sectional drawing:



100 Pair 0.64mm PEIUT IB (Drawing not to scale)

Electrical characteristics*:	Conductor size
	0.64 mm
Maximum conductor resistance [Ω/km]	56.4
Minimum insulation resistance [MΩ.km]	40000
Mutual capacitance - maximum average [nF/km]	52
Max. capacitance unbalance** Pair-Pair (Corrected to 1000m length) [pF]	37
Max. capacitance unbalance Pair-Earth (Corrected to 1000m length) [pF]	600 (30, 50 & 100 Pair) 800 (10 Pair)

*Note: All electrical characteristics are given at 20°C
**Note: Corresponds to the exponentially smoothed average

Mechanical / physical characteristics:						
Cable size Number of pairs/Diameter	Material Number	GSW (IB) Diameter (mm)	Nominal Diameter (mm)	Nominal Weight (Kg/ Km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength over bearer (kN)
10 / 0.64	46505241	1/2.50	10.4 x 16.5	165	210	2.0
30 / 0.64	46505243	7/1.25	16.7 x 24.8	390	340	3.5
50 / 0.64	46505244	7/1.25	21.0 x 29.4	570	420	3.5
100 / 0.64	46505246	7/1.60	29.2 x 39.9	1080	590	5.8
Operating temperature range [°C]: From - 10 to + 70						

Specifications: Telstra PEIUT IB; AS/CA S008; AS/NZS 1125 and AS 1049

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 / GEL FILLED

Distribution Cable forms the basis of underground Customer Access Network (CAN) connections from the pillar to the final joint adjacent to the customer's premises. 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 0.40mm conductors are used in metropolitan installations where distances are short and 0.64 and 0.90mm 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 100 pairs. Protection against longitudinal moisture permeation is afforded by fully filling the cable interstices with a semi-dry gel. All cables have an overall sheath of black polyethylene with the options on some of incorporating a Nylon jacket for termite resistance and an aluminium MB tape for added moisture and lightning protection 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

Telstra Material Number	Prysmian Material Description	Number of Pairs	Nominal Weight (kg/ km)	Min. Bending Diameter (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Nominal Drum Dimensions (mm)	Max Hauling Tension (N)
46705021	CABLE, TEL EXT 10/0.40 CPFUT PE	10	50	115	7.1	1000	Stock	LW1 - 600/250/480	240
46708121	CABLE, TEL EXT 10/0.40 CPFUT PEHJC	10	57	155	7.6	1000	Stock	LW1 - 600/250/480	240
46705023	CABLE, TEL EXT 30/0.40 CPFUT PE	30	130	180	11.1	1000	Stock	LW2 - 750/250/600	720
46708123	CABLE, TEL EXT 30/0.40 CPFUT PEHJC	30	140	235	11.6	1000	Stock	LW2 750/250/600	720
46705024	CABLE, TEL EXT 50/0.40 CPFUT PE	50	200	215	13.4	1000	Stock	LW3 - 1000/350/600	1200
46708124	CABLE, TEL EXT 50/0.40 CPFUT PEHJC	50	210	280	14.0	1000	Stock	LW3 - 1000/350/600	1200
46705026	CABLE, TEL EXT 100/0.40 CPFUT PE	100	375	290	18.1	1000	Stock	LW4 - 1100/400/600	2400
46708226	CABLE, TEL EXT 100/0.40 CPFUT MBHJC	100	400	370	18.5	1000	Stock	LW4 - 1100/400/600	2400
46709226	CABLE, TEL EXT 100/0.40 CPFUT MBHJC (AIR TUBE)	100	440	420	20.9	1000	Stock	STEEL - 1200/600/1000	2400
46708241	CABLE, TEL EXT 10/0.64 CPFUT MBHJC	10	125	210	10.5	1000	Stock	LW2 - 750/250/600	600
46708243	CABLE, TEL EXT 30/0.64 CPFUT MBHJC	30	295	320	15.8	1000	Stock	LW3 - 1000/350/600	1800
46708244	CABLE, TEL EXT 50/0.64 CPFUT MBHJC	50	470	400	19.8	1000	Stock	LW5 - 1250/450/600	3100
46708246	CABLE, TEL EXT 100/0.64 CPFUT MBHJC	100	890	540	27.0	1000	Stock	STEEL - 1600/800/900	6100
46709246	CABLE, TEL EXT 100/0.64 CPFUT MBHJC (AIR TUBE)	100	900	540	27.0	1000	Stock	STEEL - 1600/800/900	6100
46708261	CABLE, TEL EXT 10/0.90 CPFUT MBHJC	10	225	290	14.4	1000	12 Weeks	LW3 - 1000/350/600	1200
46708263	CABLE, TEL EXT 30/0.90 CPFUT MBHJC	30	590	460	23.0	500	12 Weeks	STEEL - 1200/600/1000	3600
46708264	CABLE, TEL EXT 50/0.90 CPFUT MBHJ	50	905	530	26.5	500	12 Weeks	STEEL - 1600/800/900	6100
46708266	CABLE, TEL EXT 100/0.90 CPFUT MBHJ	100	1710	720	36.0	500	12 Weeks	STEEL - 2000/1200/1000	12000

10 TO 100 PAIR 0.40MM EXTERNAL CABLE – UNSCREENED

(For external underground applications)

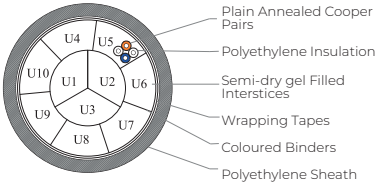
Cable description:

Cable consists of up to 100 pairs of 0.40mm diameter plain annealed copper conductors, cellular polyethylene insulated, twinned, bunched into 10 pairs units, units laid up, semi-dry gel filled interstices, taped and polyethylene overall sheathed.

Construction details:

Conductor: Plain annealed copper
Insulation: Cellular polyethylene
Cabling element: Twisted pair
Water blocking: Semi-dry gel (interstices)
Wrapping: Polyethylene terephthalate or paper tape
Outer sheath: Polyethylene (UV Stabilised)

Cross sectional drawing:



100 Pair/0.40mm CPFUT PE (Drawing not to scale)

Electrical characteristics*:	
Maximum conductor resistance [Ω/km]	139.3
Minimum insulation resistance [MΩ.km]	20000
Mutual capacitance - maximum average [nF/km]	49
Max. capacitance unbalance** Pair-Pair (Corrected to 1000m length) [pF]	70

*Note: All electrical characteristics are given at 20°C
**Note: Corresponds to the exponentially smoothed average

Mechanical / physical characteristics:					
Cable size Number of pairs / Diameter	Material Number	Nominal Diameter (mm)	Nominal Weight (kg/km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength (N)
10 / 0.40	46705021	7.1	50	115	240
30 / 0.40	46705023	11.1	130	180	720
50 / 0.40	46705024	13.4	200	215	1200
100 / 0.40	46705026	18.1	375	290	2400
Operating temperature range [°C]: From - 10 to + 70					

Specifications: Telstra CPFUT; AS/CA S008; AS/NZS 1125 and AS 1049
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.

10 TO 100 PAIR EXTERNAL CABLE – SCREENED HARD JACKETED

(For external underground applications)

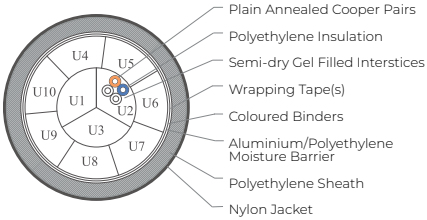
Cable description:

Cable consists of a number of plain annealed copper conductors (0.40mm, 0.64mm or 0.9mm diameter), cellular polyethylene insulated, twinned, bunched into 10 pair units, units laid up, semi-dry gel filled interstices, taped, aluminium polylaminated moisture barrier, polyethylene overall sheathed and intrinsically bonded nylon jacketed.

Construction details:

Conductor:	Plain annealed copper
Insulation:	Cellular polyethylene
Cabling element:	Twisted pair
Water blocking:	Semi-dry gel (interstices)
Wrapping:	Polyethylene terephthalate tape
Moisture barrier:	Aluminium/Polyethylene laminated tape
Sheath:	Polyethylene (UV Stabilised)
Jacket:	Nylon (UV Stabilised)

Cross sectional drawing:



100 Pair CPFUT MBHJC (Drawing not to scale)

Electrical characteristics*:	Conductor size (mm)		
	0.40	0.64	0.90
Maximum conductor resistance [Ω/km]	139.3	56.4	27.9
Minimum insulation resistance [MΩ.km]	20000	20000	20000
Mutual capacitance - maximum average [nF/km]	49	49	49
Max. capacitance unbalance** Pair-Pair (Corrected to 1000m length) [pF]	70	37	32

*Note: All electrical characteristics are given at 20°C
**Note: Corresponds to the exponentially smoothed average

Mechanical / physical characteristics:					
Cable size Number of pairs/Diameter	Material Number	Nominal Diameter (mm)	Nominal Weight (kg/km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength (N)
100 / 0.40	46708226	18.5	400	370	2400
10 / 0.64	46708241	10.5	125	210	600
30 / 0.64	46708243	15.8	295	320	1800
50 / 0.64	46708244	19.8	470	400	3100
100 / 0.64	46708246	27.0	890	540	6100
10 / 0.90	46708261	14.4	225	290	1200
30 / 0.90	46708263	23.0	590	460	3600
50 / 0.90*	46708264	26.5	905	530	6100
100 / 0.90*	46708266	36.0	1710	720	12000
Operating temperature range [°C]: From - 10 to + 70					

*Note: Bonded nylon is not available for these items

Specifications: Telstra CPFUT; AS/CA S008; AS/NZS 1125 and AS 1049
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.

10 TO 50 PAIR 0.40MM EXTERNAL CABLE – UNSCREENED HARD JACKETED

(For external underground applications)

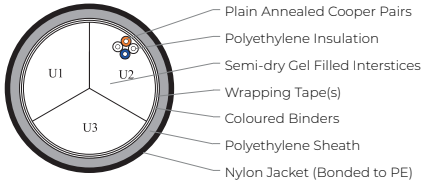
Cable description:

Cable consists of up to 50 pairs of 0.40mm diameter plain annealed copper conductors, cellular polyethylene insulated, twinned, bunched into 10 pair units, units laid up, semi-dry gel filled interstices, taped, polyethylene overall sheathed and intrinsically bonded nylon jacketed.

Construction details:

Conductor:	Plain annealed copper
Insulation:	Cellular polyethylene
Cabling element:	Twisted pair
Water blocking:	Semi-dry gel (interstices)
Wrapping:	Polyethylene terephthalate or paper tape
Sheath:	Polyethylene (UV Stabilised)
Jacket:	Nylon (UV Stabilised)

Cross sectional drawing:



30 Pair CPFUT PEHJC (Drawing not to scale)

Electrical characteristics*	
Maximum conductor resistance [Ω/km]	139.3
Minimum insulation resistance [MΩ.km]	20000
Mutual capacitance - maximum average [nF/km]	49
Max. capacitance unbalance** – Pair to pair (corrected to 1000m length) [pF]	70

*Note: All electrical characteristics are given at 20°C
**Note: Corresponds to the exponentially smoothed average

Mechanical / physical characteristics:					
Cable size Number of pairs/Diameter	Material Number	Nominal Diameter (mm)	Nominal Weight (kg/km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength (N)
10 / 0.40	46708121	7.6	55	155	240
30 / 0.40	46708123	11.6	140	235	720
50 / 0.40	46708124	14.0	210	280	1200
Operating temperature range [°C]: From - 10 to + 70					

Specifications: Telstra CPFUT; AS/CA S008; AS/NZS 1125 and AS 1049
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100 PAIR EXTERNAL CABLE WITH AIRTUBE – SCREENED HARD JACKETED

(For external underground applications)

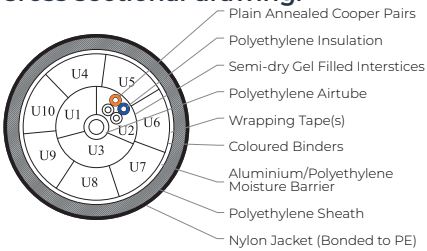
Cable description:

Cable consists of a number of plain annealed copper conductors (0.40mm or 0.64mm), cellular polyethylene insulated, twinned, bunched into 10 pair units, units laid up, semi-dry gel filled interstices, taped, aluminium polylaminated moisture barrier, polyethylene overall sheathed and integrally bonded nylon jacketed. Cable is fitted with a polyethylene tube running along its central axis for pressurized air flow.

Construction details:

Conductor:	Plain annealed copper
Insulation:	Cellular polyethylene
Cabling element:	Twisted pair
Water blocking:	Semi-dry gel (interstices)
Airtube:	Polyethylene 6/8mm ID/OD
Wrapping:	Polyethylene terephthalate tape
Moisture barrier:	Aluminium/Polyethylene laminated tape
Sheath:	Polyethylene (UV Stabilised)
Jacket:	Nylon (UV Stabilised)

Cross sectional drawing:



Drawing not to scale

Electrical characteristics*:	Conductor Size [mm]	
	0.40	0.64
Maximum conductor resistance [Ω/km]	139.3	56.4
Minimum insulation resistance [MΩ.km]	20000	20000
Mutual capacitance - maximum average [nF/km]	49	49
Max. capacitance unbalance** Pair-Pair (Corrected to 1000m length) [pF]	70	37

*Note: All electrical characteristics are given at 20°C
**Note: Corresponds to the exponentially smoothed average

Mechanical / physical characteristics:					
Cable size Number of pairs/Diameter	Material Number	Nominal Diameter (mm)	Nominal Weight (kg/km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength (N)
100 / 0.40	46709226	20.9	440	420	2400
100 / 0.64*	46709246	27.0	900	540	6100
Operating temperature range [°C]: From - 10 to + 70					

*Note: Bonded nylon is not available for this item

Specifications: Telstra CPFUT; AS/CA S008; AS/NZS 1125 and AS 1049
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 access network to the customer's house.

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

Lead-in cables are available for installation either underground or aerially. Typically in metropolitan applications the lead-in is quite short, simply running from a street distribution cable to the first socket in the customer's premises that forms the network boundary.

However, in rural installations lead-in cables may be run for many kilometres in situations where a single dwelling is located a long distance from the road. In this circumstance the 2 pair 0.64mm conductor cable with Nylon termite resistant jacket is utilised.

CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Pairs	Nominal Weight (kg/ km)	Min. Bending Diameter (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Nominal Drum Dimensions (mm)	Max Hauling Tension (N)
49005023	CABLE, TEL LEAD-IN 2/0.40 PEIFLI PE	2	18.5	80	4.6	500	Stock	REELEX - 415/415/225 (MAGENTA)	50
49008123	CABLE, TEL LEAD-IN 2/0.40 PEIFLI PEHJC	2	19.5	100	4.7	500	Stock	1xREEL (338/102/230), CRTN (340/340/245)	50
49005741	CABLE, TEL LEAD-IN 2/0.64 PEILI PEIB	2	38	100	4.4 x 7.9	500	Stock	1xREEL (338/102/230), CRTN (340/340/245)	1000
49008142	CABLE, TEL LEAD-IN 2/0.64MM CPFLI PEHJC	2	35	100	6.2	500	Stock	1xREEL (422/102/306), CRTN (435/435/320)	120

2 PAIR 0.40MM EXTERNAL GEL FILLED LEAD-IN CABLE

(For external underground applications)

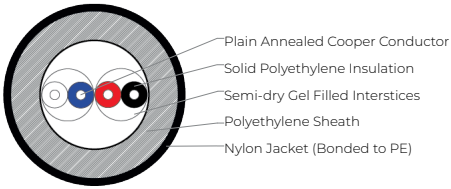
Cable description:

Cable consists of 2 pairs 0.4mm diameter plain annealed copper conductors, solid polyethylene insulated, twinned pairs, semi-dry gel filled interstices, polyethylene sheathed and intrinsically bonded nylon jacketed (Alternative).

Construction details:

Conductor:	Plain annealed copper – 0.4mm
Insulation:	Solid polyethylene
Cabling element:	Twisted pairs
Water blocking:	Semi-dry gel (interstices)
Sheath:	Polyethylene (UV Stabilised)
Jacket (Alternative):	Nylon (UV Stabilised)

Cross sectional drawing:



2 Pair PEFLI PEHJ (Drawing not to scale)

Electrical characteristics*:	
Maximum conductor resistance [Ω/km]	139.3
Minimum insulation resistance [MΩ.km]	40000
Mutual capacitance - maximum [nF/km]	48
Max. capacitance unbalance (corrected to 1000m length) – Pair to pair [pF]	1200

*Note: All electrical characteristics are given at 20°C

Mechanical / physical characteristics:					
Cable size Number of pairs/Diameter	Material Number	Nominal Diameter (mm)	Nominal Weight (kg/km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength (N)
2	49005023	4.6	18.5	80	50
2 (Hard jacket)	49008123	4.7	19.5	100	50
Operating temperature range [°C]: From - 10 to + 70					

Specifications: Telstra PEIFLI and CPFLI; AS/CA S008; AS/NZS 1125 and AS 1049
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

2 PAIR 0.64MM EXTERNAL JELLY FILLED LEAD-IN CABLE – HARD JACKETED

(For external underground applications)

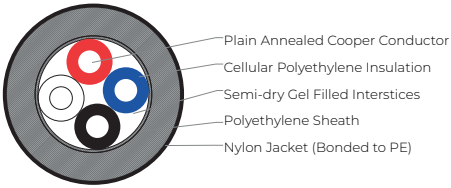
Cable description:

Cable consists of 2 pairs 0.64mm diameter plain annealed copper conductors, cellular polyethylene insulated, twisted quad, semi-dry gel filled interstices, polyethylene sheathed and intrinsically bonded nylon jacketed.

Construction details:

Conductor:	Plain annealed copper – 0.64mm
Insulation:	Cellular polyethylene
Cabling element:	Quad
Water blocking:	Semi-dry gel (interstices)
Sheath:	Polyethylene (UV Stabilised) - Black
Jacket:	Nylon (UV Stabilised) - Black

Cross sectional drawing:



2 Pair CPFLI PEHJC (Drawing not to scale)

Electrical characteristics*:	
Maximum conductor resistance [Ω/km]	56.4
Minimum insulation resistance [MΩ.km]	20000
Mutual capacitance - maximum [nF/km]	48
Max. capacitance unbalance** (corrected to 1000m length) – Pair to pair [pF]	100

*Note: All electrical characteristics are given at 20°C
**Note: Corresponds to the exponentially smoothed average

Mechanical / physical characteristics:					
Cable size Number of pairs/Diameter	Material Number	Nominal Diameter (mm)	Nominal Weight (kg/km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength (N)
2 / 0.64	49008142	6.2	35	100	120
Operating temperature range [°C]: From - 10 to + 70					

Specifications: Telstra PEIFLI and CPFLI; AS/CA S008; AS/NZS 1125 and AS 1049
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

2 PAIR 0.64MM EXTERNAL AERIAL CABLE - INTEGRAL BEARER (FIGURE 8)

(For aerial self-supported applications)

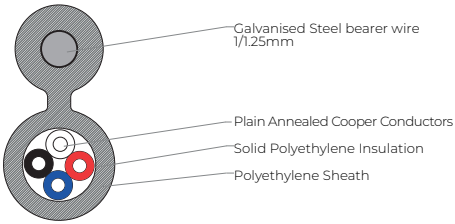
Cable description:

Cable consists of 2 pairs 0.64mm diameter plain annealed copper conductors, solid polyethylene insulated, twisted quad and overall polyethylene sheathed incorporating a galvanised steel bearer wire in “figure 8” formation.

Construction details:

Conductor:	Plain annealed copper – 0.64mm
Insulation:	Solid polyethylene
Cabling element:	Quad
Bearer Wire:	Galvanised steel wire – 1/1.25mm
Sheath:	Polyethylene (UV Stabilised)

Cross sectional drawing:



2 Pair PEILI IB (Drawing not to scale)

Electrical characteristics*:	
Maximum conductor resistance [Ω/km]	56.4
Minimum insulation resistance [MΩ.km]	40000
Mutual capacitance - maximum [nF/km]	48
Max. capacitance unbalance (corrected to 1000m length) – Pair to pair [pF]	170
Max. capacitance unbalance (corrected to 500m length) - Pair to earth [pF]	2000

*Note: All electrical characteristics are given at 20°C

Mechanical / physical characteristics:					
Cable size Number of pairs/Diameter	Material Number	Nominal Diameter (mm)	Nominal Weight (kg/km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength (N)
2 / 0.64	49005741	4.4 x 7.9	38	100	1000*
Operating temperature range [°C]: From - 10 to + 70					

* Tensile applied to the bearer

Specifications: Telstra PEILI; AS/CA S008; AS/NZS 1125 and AS 1049
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

JUMPER WIRE

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

Conductor insulation is by means of flame retarding PVC that is tough and resistant to cutting and abrasion to prevent damage when jumpered across MDF blocks and sharp edges that are often encountered in some installations.

CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Pairs	Nominal Weight (kg/km)	Min. Bending Diameter (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Nominal Drum Dimensions (mm)	Max Hauling Tension (N)
00300244	WIRE, JUMPER 2/0.4 WHITE - BLUE	1	3	15	1.5	400	6-10 Weeks	12 REELS (204/102/52), CRTN (418/208/370)	24
00300249	WIRE, JUMPER 2/0.5 GREEN -WHITE	1	5	20	1.8	400	Stock	12 REELS (204/102/52), CRTN (418/208/370)	38
00300250	WIRE, JUMPER 2/0.5 RED - WHITE	1	5	20	1.8	400	Stock	12 REELS (204/102/52), CRTN (418/208/370)	38

Note: A standard carton contains 10 reels (4000m) and weighs approximately 20kg. A pallet contains 24 cartons (240 reels or 96,000m) and weighs approximately 525kg

PVC INSULATED INTERNAL JUMPER WIRE

(For interconnection within telephone exchanges and allied internal applications)

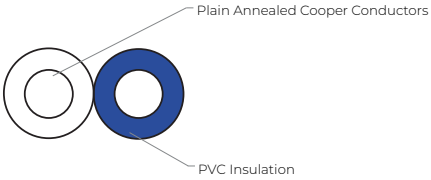
Cable description:

Cable consists of a number of plain annealed copper conductors (0.4mm or 0.5mm diameter), PVC insulated and twisted.

Construction details:

Conductor: Plain annealed copper
Insulation: PVC
Cabling element: Twisted pair

Cross sectional drawing:



(Drawing not to scale)

Electrical characteristics*:	Conductor Size [mm]	
	0.40	0.50
Maximum conductor resistance [Ω/km]	147.6	94.5
Minimum insulation resistance [MΩ km]	1000	1000

*Note: All electrical characteristics are given at 20°C

Mechanical / physical characteristics:					
Cable size Number of pairs/Diameter	Material Number	Nominal Diameter (mm)	Nominal Weight (Kg/Km)	Minimum Bend Diameter (mm)	Maximum Tensile Strength (N)
2 Wires/0.40	00300244	1.5	3	15	24
2 Wires/0.50	00300249	1.8	5	20	38
2 Wires/0.50	00300250	1.8	5	20	38
Operating temperature range [°C]: From - 10 to + 60					

Specifications: Telstra PVC Insulated Jumper Wire; AS/CA S008; AS/NZS 1125 and AS 1049

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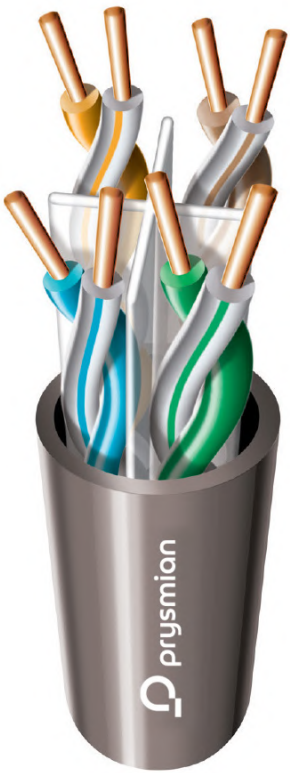
Specifications are subject to change within the terms and conditions of relevant agreement and/or contract

LAN

Local Area Network (LAN) cable is supplied as unshielded twisted pairs (UTP) in either Category 5e (Class D) and Category 6 (Class E) as required. The construction and performance of these cables is defined in AS 11801.1 Generic Cabling for Customer Premises (ISO/IEC 11801). Cables have 4 twisted pairs of nominally 0.51mm conductor diameter, insulated with polyethylene and flame retardant PVC sheathed.

The cable is designed for all LAN applications where gigabit ethernet, broadband digital video, etc. at distances of up to 90m is required. Cable is UL listed.



CABLE INFORMATION

Telstra Material Number	Prysmian Material Description	Number of Pairs	Nominal Weight (kg/km)	Min. Bending Diameter (mm)	Overall Diameter (mm)	Standard Pack Length (m)	Stock/ MTO	Nominal Drum Dimensions (mm)	Max Hauling Tension (N)
57200256	CABLE, CAT6 UTP 4/0.51 GREY	4	40	50	6.0	305	Stock	REEL IN A BOX - 270/300/310 (RED)	190
4008467	CABLE, CAT6 UTP 4/0.51 BLUE	4	40	50	6.0	305	Stock	REEL IN A BOX - 270/300/310 (RED)	190

4PAIR/0.51MM UNSHIELDED TWISTED PAIR (UTP) CATEGORY 6

(For transmissions equipment applications)

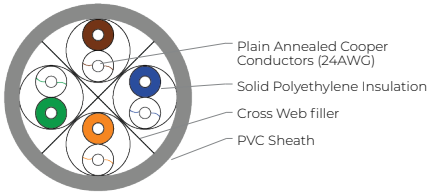
Cable description:

Plain annealed copper conductors, polyethylene insulated, twisted pair, flame retardant PVC overall sheathed. 100Ω balanced cable suitable for Local Area Network (LAN) for high-speed horizontal distribution network cabling (250 MHz). Suitable for 100 Mbps TPDDI, 622 Mbps ATM, 1000 Base T, IEEE 802.3 & IEEE 802.5, Gigabit Ethernet, broadband digital video, etc. Cable is UL listed.

Construction details:

Conductor:	Plain annealed copper - 24 AWG
Insulation:	Solid polyethylene
Core Identification:	Pair 1 White-Blue stripes/Blue
	Pair 2 White-Orange stripes/Orange
	Pair 3 White-Green stripes /Green
	Pair 4 White-Brown stripes /Brown
Outer sheath:	PVC 75°C
Sheath colour:	Grey – Standard
	Blue – Alternative

Cross sectional drawing:



(Drawing not to scale)

Electrical characteristics*:	
DC resistance [Ω/100m]	9.38 Max.
Resistance unbalance [%]	5.0 Max.
Characteristic impedance [Ω]	100 @ 1-250 MHz
Mutual capacitance [nF/100m]	5.6 Max. @ 1kHZ
Capacitance unbalance [pF/100m]	330 Max. (pair to earth) @ 1kHZ
Delay skew [ns/100m]	45 Max. @ 1-250 MHz
Propagation delay [ns/100m]	536 Max. @ 250 MHz

*Note: All electrical characteristics are given at 20°C

Dimensions and mass:	
Overall cable diameter (nominal):	6.0 mm
Mass (nominal):	40 kg/km

Mechanical / physical characteristics:	
Minimum bending radius [mm]	50
Maximum pulling tension [N]	190
Operating temperature range [°C]	- 20 to + 60

Flame resistance characteristics:

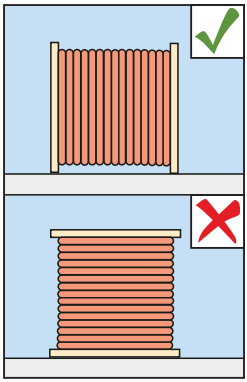
Cable meets AS/NZS IEC 60332.1: "Test for vertical flame propagation for a single insulated wire or cable"

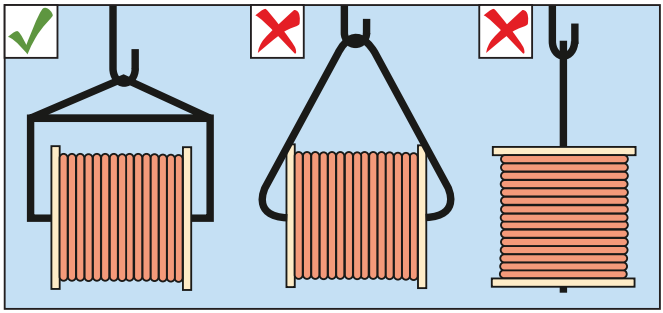
Freq.	Attenuation @ 20°C Max	NEXT Min	Power Sum NEXT Min	ACRF Min	Power Sum ACRF Min	Return Loss Min
[MHz]	[dB/100m]	[dB/100m]	[dB/100m]	[dB/100m]	[dB/100m]	[dB/100m]
1	2.0	74.3	72.3	67.8	64.8	20.0
4	3.8	65.3	63.3	55.8	52.8	23.0
10	6.0	59.3	57.3	47.8	44.8	25.0
16	7.6	56.2	54.2	43.7	40.7	25.0
20	8.5	54.8	52.8	41.8	38.8	25.0
31.25	10.7	51.9	49.9	37.9	34.9	23.6
62.5	15.4	47.4	45.4	31.9	28.9	21.5
100	19.8	44.3	42.3	27.8	24.8	20.1
200	29.0	39.8	37.8	21.8	18.8	18.0
250	32.8	38.3	36.3	19.8	16.8	17.3

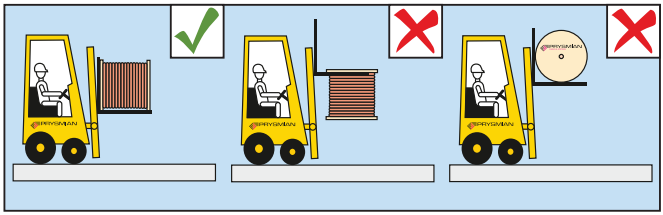
Specifications: EIA/TIA 568; ISO/IEC 11801 (Class E); AS/CA S008;
Material number: 57200256 and 4008467 - Available in 305m length in dispenser cartons (Reelex boxes)

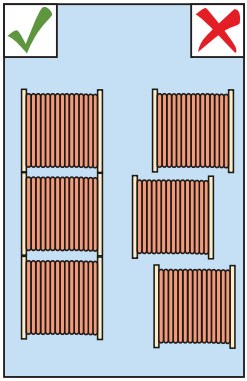
GENERAL INFORMATION

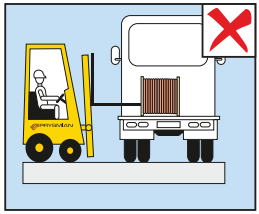
TRANSPORT, HANDLING AND STORAGE GUIDELINES





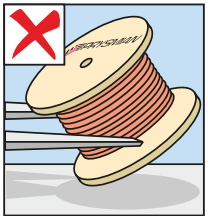


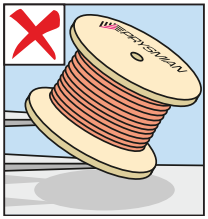


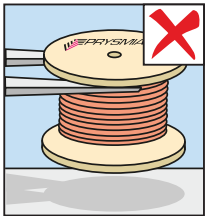


Do not use the fork lift tynes to push cable drums sideways on a truck tray or the ground as damage to the flanges can result in the drum being unacceptable to customers.

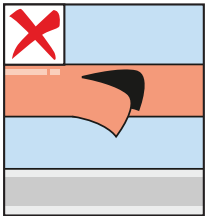
Always use appropriate safety







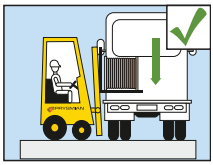
Do not attempt to lift drums of cable without inserting the fork lift tynes fully under both flanges as the tynes can damage the cable, making it unserviceable. Do not attempt to lift drums by the flange or to lift drums into the upright (correct) position by lifting the top flanges as it may break the 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.



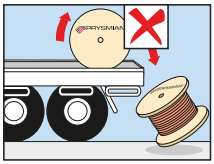
This cable has been rendered unserviceable through fork lift tyne damage and may necessitate the scrapping of the whole drum.

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.

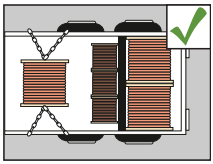
TRANSPORT, HANDLING AND STORAGE GUIDELINES



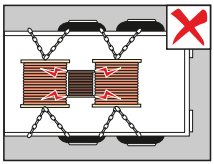
Lower drums gently onto the ground or transport.



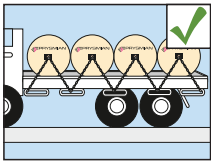
Lower drums gently onto the ground or transport.



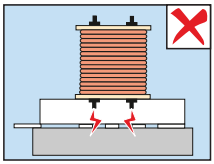
Always protect cable from rubbing or damage. Adjust load or use separators.



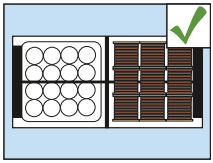
Never let drum flanges contact cable on adjacent drums.



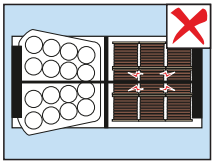
Heavy drums should be chained appropriately for transit, with protection from the chain rubbers for the spindle hole in the centre of the drum. Under no circumstances are drums to be transported on their side.



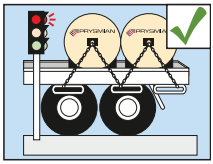
Never lay drums on their side, even on top of pallets, as protruding bolts damage spools and cable.



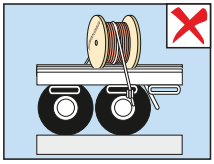
Always protect product, especially spools, against rope damage during tying down of load.



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.



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



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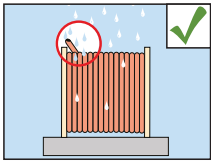
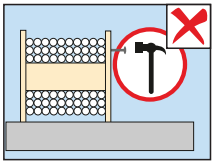
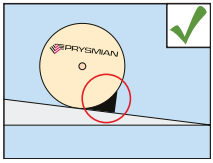


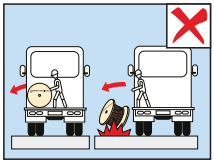
Ensure cable sealing is intact so moisture cannot seep into cable. Report damage.



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



When placing drums on an uneven surface beprepared to check drums against rolling and chock if required.

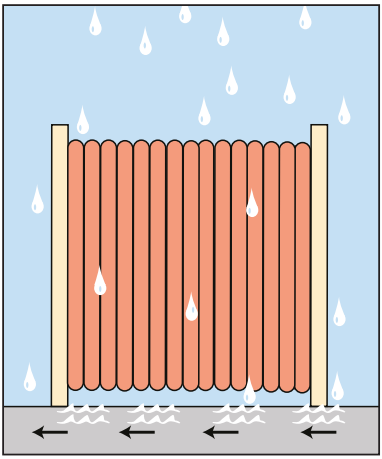


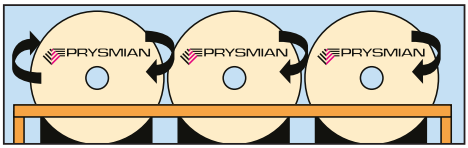
Do not roll cable drums from the back of a delivery truck to the ground as the resulting flange damage will be unacceptable to the customer as the cable will not be able to be rolled off the drum and the drum will need to be returned.

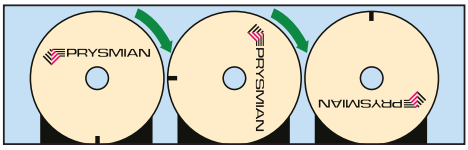
STORAGE RECOMMENDATIONS

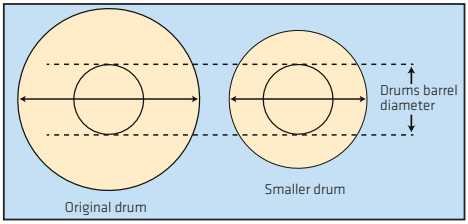
When storing cable drums for long periods, please take the following guidelines into consideration:

- ✓ 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.
- ✓ If indoors, and concrete storage is not available, select a well-drained surface that will prevent the reel flanges sinking into it.
- ✓ The drums must always be stored with their flanges vertical.
- ✓ Leave enough space between stored drums for air circulation.
- ✓ If drums are stored in a high traffic area (fork lifts frequent transit) suitable barriers should be erected to prevent damage from moving equipment.
- ✓ The bolts should be tightened at regular intervals.
- ✓ During storage, the drums should be rolled to an angle of 90° every three months.
- ✓ 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.









PRYSMIAN CABLE RETURNS

Prysmian Drum Pick Up Details

The following conditions apply for Metal and Wooden drum pick up from the field.

	Metal Drums	Timber Drums
Condition of drum	Good drums only	Good drums only
Minimum drum size	Any size	Minimum 1.1m flange diameter
Location of pick up	ACT: Canberra Metro NT: Darwin Metro NSW: Sydney Metro, Newcastle (2300), Coffs Harbour (2450), Dubbo (2830) QLD: Brisbane Metro, Toowoomba (4350), Rockhampton (4700), Mackay (4740), Townsville (4810), Cairns (4870). SA: Adelaide Metro TAS: Hobart Metro VIC: Melbourne Metro, Ballarat (3350), Bendigo (3550) WA: Perth Metro	ACT: Canberra Metro NSW: Sydney Metro, Newcastle (2300), Dubbo (2830) QLD: Brisbane Metro SA: Adelaide Metro VIC: Melbourne Metro, Ballarat (3350), Bendigo (3550)
Minimum quantity for pick up location	Prysmian reserves the right to limit pick-ups to full truck load at each location. Prysmian will not unreasonably reject a partial truck load pick up for low volume sites or where its impractical to achieve a full truck load in a reason time frame.	Prysmian reserves the right to limit pick-ups to full truck load at each location. For drum pick ups less than full truck loads, a third party drum merchant can be engaged directly. Prysmian recommends the Reelmen for this service. Their details can be found at: https://reelmen.com.au/
Disposal of residual cable	Cost for scrapping is $120/100m	Cost for scrapping is $120/100m

Following these conditions, Prysmian will pick up cable drums without charge.

Prysmian Drum Tracking

Prysmian has implemented a tag tracking system for metals drums. This allows Prysmian to individually identify drums sent to the field and identify them when they are returned.

Damaged, Delayed and Lost Drums

Prysmian reserves the right to charge for metal drums that are:

a. Damaged, other than fair wear and tear, that can no longer be used; or
b. Drums that have not been returned before 12 months from the date of goods issue. If Telstra are aware of project delays which prevent the drum to be made available for pick before the 12 month return date, then Telstra must notify Prysmian of the delay and an expected availability date. The Supplier will work in good faith with Telstra to manage this delay and minimise any charges.
c. Where Prysmian decides to wait for full truck load, 12 month return date does not apply.

The charge amount is $2,000/metal drum represents the replace cost of the drums. For clarity, there is no charge for wooden drums that have not been returned.

Drum Return Process

Where pick-up of Prysmian drums is requested, the Drum Return Request Form on the next page must be completed and only contain Prysmian drums that have been used for transport of Telstra cable.
Please mark the form "Prysmian/Telstra drums only".

Email the form to drums.au@prysmiangroup.com with cc: to sales.telecom.au@prysmiangroup.com.

Upon receipt of the completed Drum Return Request Form, details of the drums to be collected and pick-up location will be validated and a transport provider will be assigned by Prysmian to pick up the empty drums. A representative from one of these transport providers will contact the name given on the Drum Return Request Form to arrange pick up.

Should anyone from Telstra or its contractors need to speak with someone from Prysmian, a contact number 1300 300 304 is provided on the form.

DRUM PICK UP REQUEST FORM

prysmian

Prysmian Australia Pty Ltd 4 Thew Parade CROMER NSW 2099
A.B.N. 36 096 594 080
For empty drum collection email: drums.au@prysmiangroup.com (Cc: sales.telecom.au@prysmiangroup.com)
For commercial enquiries call **1300 300 304** or visit: www.prysmiancable.com.au

Prysmian Drums Only

DRUMS RETURN FORM

DRUM MATERIAL	New code	TYPE	Flange H x Barrel x Int. wide	Kg	Min Qty NSW - Metro*	Min Qty Other Accepted Areas*
METAL	DSA120J	MT1	1200 x 600 x 1000	140	8	10
METAL	DSA140I	MT2	1400 x 700 x 1000	205	8	10
METAL	DSA140N	MT3	1400 x 800 x 900	225	8	10
METAL	DSA140K	MT3A	1400 x 900 x 900	235	8	10
METAL	DSA150A	MT4	1500 x 1000 x 1000	235	6	8
METAL	DSA160B	MT5	1600 x 800 x 900	250	6	8
METAL	DSA160H	MT5A	1600 x 800 x 750	230	6	8
METAL	DSA170C	MT6	1700 x 1200 x 900	305	6	8
METAL	DSA180E	MT7	1800 x 1000 x 900	360	6	8
METAL	DSA180H	MT8	1800 x 1200 x 1000	405	6	8
METAL	DSA200D	MT9	2000 x 1000 x 1000	420	6	8
METAL	DSA200G	MT10	2000 x 1200 x 1000	395	6	8
METAL	DSA210A	MT11	2100 x 1400 x 1000	550	6	8
METAL	DSA210B	MT11A	2100 x 1000 x 1000	500	6	8
METAL	DSA210C	MT11B	2100 x 1200 x 1040	525	6	8
METAL	DSA225A	MT12	2250 x 1050 x 1030	700	6	8
METAL	DSA225B	MT13	2250 x 1400 x 1000	750	6	8
METAL	DSA240J	MT14	2400 x 1400 x 840	650	6	8
METAL	DSA240K	MT15	2400 x 1400 x 1000	700	6	8
METAL	DSA240A	MT16	2400 x 1200 x 1000	700	6	8
METAL	DSA240L	MT17	2400 x 1400 x 1500	900	6	8
METAL	DSA220F	MF9	2200 x 1000 x 1000	490	8	10
METAL	DSA2209	PINK	2200 x 800 x 930	370	8	10
WOODEN	DWA110A	LW4	1100 X 400 X 600	61	30	40
WOODEN	DWA110G	OF2A	1100 X 600 X 600	62	30	40
WOODEN	DWA120I	OF3	1200 X 600 X 800	105	20	30
WOODEN	DWA120K	OF2	1100 X 800 X 600	75	20	30
WOODEN	DWA125A	LW5	1250 x 450 x 600	70	20	30
WOODEN	DWA130A	OF4	1300 X 800 X 800	118	12	20
WOODEN	DWA140J	OF5	1400 X 800 X 800	130	12	20
WOODEN	DWA160F	OF6	1600 X 800 X 800	157	12	20
WOODEN	DWA180B	OF7	1800 X 800 X 800	290	8	10
WOODEN	DWA200A	OF8	2000 X 900 X 800	362	8	10
WOODEN	DWA220B	OF9	2200 X 900 X 850	438	8	10

Date	
Customer	
Street Address	
Suburb	
Postcode	***State***

Quantity	Drum number	Drum Type	Prysmian Drum? (Y/N)	Total Drum Weight (Kg)	Does drum have cable on it? (Y/N)	Qty Cable left on Drum < 300m (Y/N)		Note
0	TOTAL DRUMS			0	0	0		
REQUESTED BY:								
SIGNATURE:								
DATE:	/ /							
TELCO NETWORK (NBN/TELSTRA/OTHER?)								

*Notes:

- *Drum types can be mixed to achieve a minimum full truck load.
- Prysmian reserve the right to limit pick-up to full truck load
- Non Prysmian drums will not be picked up
- Non Prysmian drums will incurr additional charge of $1000 per drum

SNC signature: ____________________ Position: ____________________

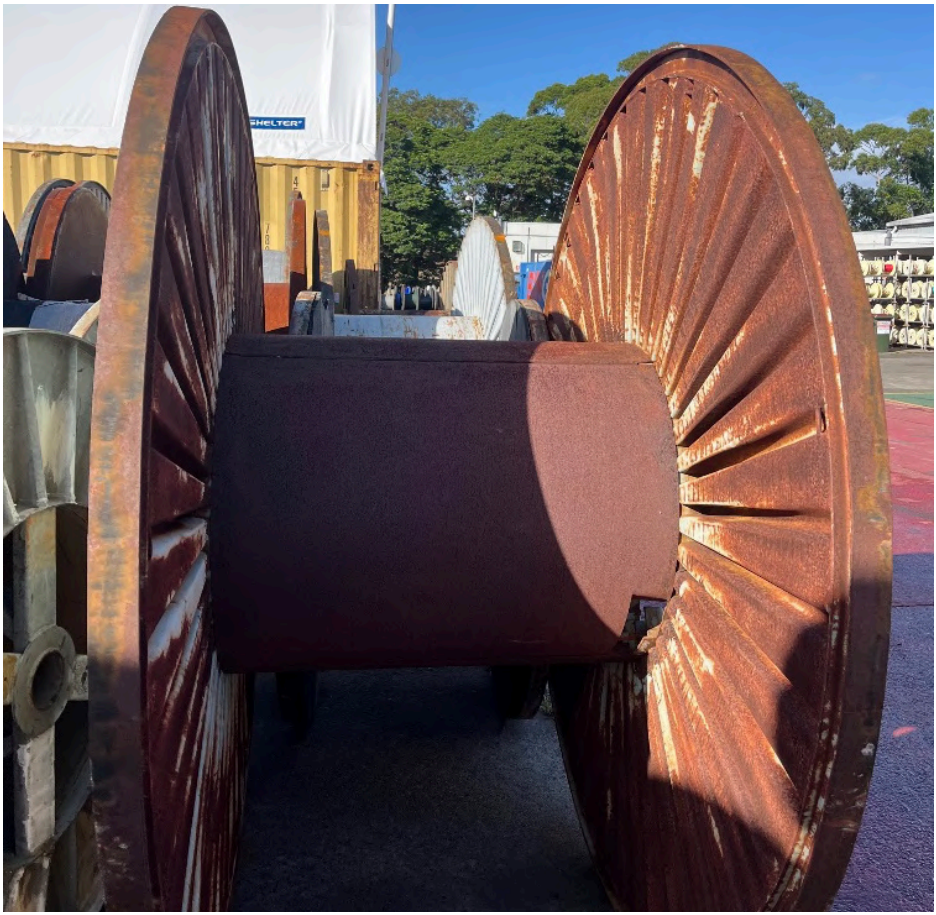
Name: ____________________ Date: ____________ Time: ____________

DRUM CONDITION OF DRUMS REQUESTED FOR PICK UP

The purpose of drum returns/pick up's is to collect drums that can be used again to reduce cost and impact to the environment. The drum pick up system is not designed to collect drums that cannot be reused. As such, the condition of each drum is important in determining whether the drum can be picked up.
Prysmian will not pick up drums that are in poor condition and cannot be reused.
Prysmian will only pick up drums that have been supplied by Prysmian. Prysmian will not pick up cable drums supplied by other manufacturers.
The following guide can be used to determine what is acceptable damage and what is not. This differs for metallic and wooden drums.

Steel Drums Return Check List

✓ Check for Rust
Major rust not acceptable as it cannot be repaired. Unacceptable for collection.



✓ Check for Cracks on the Flanges

Minor cracks in the flange can be repaired and are acceptable for drum collection.

Major cracks in the flange or complete detachment cannot be repaired and is unacceptable for collection.

✓ Check the Barrel

If there is gap, this can be repaired. Acceptable for drum collection.

If there is any protruding metal, this can generally be repaired. Acceptable for drum collection.

✓ Check the Bolts

Rusty, loose or missing bolts can generally be repaired. Acceptable for drum collection.

✓ Check if Flange is Bent

If the flange is bent slightly, this can generally be repaired. Acceptable for drum collection.
If the deformation of the flange is more severe, this cannot be repaired. Unacceptable for collection.

Timber Drums Return Check List

✓ Check the Flange

Medium to large missing sections of the flange cannot be repaired. Unacceptable for collection.

Small missing panel sections can be repaired. Acceptable for drum collection.

✓ Check the Flange
All barrel damages are not cost effective to repair. Unacceptable for collection.

✓ Timber Quality
Rotten drums cannot be repaired and cannot carry any weight. Drum can still look visually ok. Rot can be checked by tapping with a hammer on the drum. Unacceptable for collection.

An important part in checking for rot is the centre of the drum (see picture below). If the drum is rotten in this part the drum, it can collapse under the weight of the cable. Unacceptable for collection.

✓ Check the Bolts
Rusty, loose or missing bolts can generally be repaired. Acceptable for drum collection.

CABLE PACKAGING

Prysmian Group uses a robust packaging to protect your valuable cable investment during transportation and delivery.

The cable wrap is made entirely of Polyethylene (PE) material and is 100% recyclable.

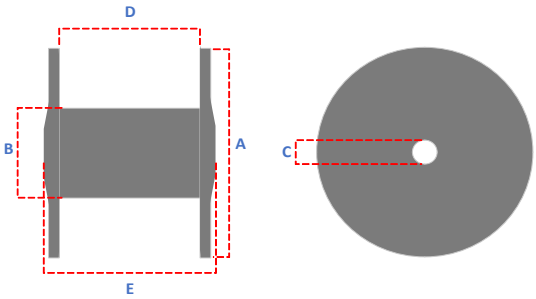
The polymer material is a strong, light weight, flexible packaging that acts as a shock absorber for the cable. The wrap is UV stabilised and moisture and weather proof so it enables longer term outside storage.

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

DRUM DIMENSIONS

Drum Type		Nominal Flange Diameter (mm)	Nominal Barrel Diameter (mm)	Spindle Diameter (mm)	Nominal Internal Flange Width (mm)	Nominal Overall Width (mm)	Nominal Drum Weight (kg)
		A	B	C	D	E	
DPA045A	Plastic	450	250	83	300	380	4
DPA058A	Plastic	580	250	83	300	380	4
DPA058C	Plastic	580	250	83	400	480	4
DWA075A	Timber	750	250	110	600	730	22
DWA100A	Timber	1000	350	110	600	730	61
DWA110A	Timber	1100	400	110	600	730	61
DWA110G	Timber	1100	600	110	600	730	61
DWA120K	Timber	1200	800	110	600	730	75
DWA120I	Timber	1200	600	110	800	950	105
DWA125A	Timber	1250	450	110	600	730	70
DWA130A	Timber	1300	800	110	800	950	118
DWA140J	Timber	1400	800	110	800	950	130
DWA160F	Timber	1600	800	110	800	950	157
DWA180B	Timber	1800	800	110	800	980	350
DWA200A	Timber	2000	900	110	800	980	400
DWA220B	Timber	2200	900	110	850	1000	480

Drum Type		Nominal Flange Diameter (mm)	Nominal Barrel Diameter (mm)	Spindle Diameter (mm)	Nominal Internal Flange Width (mm)	Maximum External Width (mm)	Nominal Drum Weight (kg)
		A	B	C	D	E	
DSA220A	Metal	2230	800	110	930	1160	380
DSA220F	Metal	2200	1000	110	950	1160	480
DSA2209	Metal	2200	800	110	940	1117	370
DSA200D	Metal	2000	1000	110	1000	1140	420
DSA225B	Metal	2250	1400	110	1000	1140	750
DSA240K	Metal	2400	1400	110	1000	1140	700
DSA240A	Metal	2400	1200	110	1000	1140	700



TELSTRA / PRYSMIAN OPTICAL CONTRACT ITEMS

Telstra Material Number	Product Description	Maximum Drum Length (Metres)
48436136	36F SM HIGH STRENGTH BONDED	12000
48436172	72F SMHIGH STRENGTH BONDED	12000
40012810	72F BBA2-LL HIGH STRENGTH BONDED	12000
40012814	72F ULL-AB HIGH STRENGTH BONDED	12000
40012811	144F BBA2-LL 24F/T HIGH STRENGTH BONDED	12000
40012815	144F ULL-AB 24F/T HIGH STRENGTH BONDED	12000
40009913	12F SM DUCT SINGLESM@RT	12000
40010738	36F SM DUCT SM@RTLINK	12000
40010739	72F SM DUCT SM@RTLINK	12000
40012808	72F BBA2-LL DUCT SM@RTLINK	12000
40012812	72F ULL-AB DUCT SM@RTLINK	12000
40010740	144F SM DUCT SM@RTLINK	12000
40012809	144F BBA2-LL DUCT SM@RTLINK	12000
40012813	144F ULL-AB DUCT SM@RTLINK	12000
40010869	360F SM DUCT FLEXTUBE	10000
40012744	360F BBA2-LL DUCT FLEXTUBE	10000
40013164	360F ULL-AB DUCT FLEXTUBE	10000
40007900	720F BBXS DUCT FLEXTUBE	7000
48453136	36F SM RODENT DIELEC ARM@CORE	12000
48453172	72F SM RODENT DIELEC ARM@CORE	12000
40013323	72F BBA2-LL RODENT DIELEC ARM@CORE	12000
40013326	72F ULL-AB RODENT DIELEC ARM@CORE	12000
48453544	144F SM RODENT DIELEC ARM@CORE	7000
40013324	144F BBA2-LL RODENT DIELEC ARM@CORE	7000
40013327	144F ULL-AB RODENT DIELEC ARM@CORE	7000
40010128	360F SM RODENT DIELEC ARM@CORE	5000
40013325	360F BBA2-LL RODENT DIELEC ARM@CORE	5000
40013328	360F ULL-AB RODENT DIELEC ARM@CORE	5000
48462112	12F SM SM@RTCORE INTERNAL TIE	12000
40013329	12F ULL-AB SM@RTCORE INTERNAL TIE	12000
48462172	72F SM SM@RTCORE INTERNAL TIE	12000
40013380	72F ULL-AB SM@RTCORE INTERNAL TIE	12000
48462544	144F SM SM@RTCORE INTERNAL TIE	12000
40013381	144F ULL-AB SM@RTCORE INTERNAL TIE	12000
48492112	12F SM INDOOR/OUTDOOR RISER	2000

TELSTRA / PRYSMIAN OPTICAL CONTRACT ITEMS

Telstra Material Number	Product Description	Maximum Drum Length (Metres)
48492124	24F SM INDOOR/OUTDOOR RISER	2000
48392312	12F OM5 INDOOR/OUTDOOR RISER	2000
48392324	24F OM5 INDOOR/OUTDOOR RISER	2000
48431112	12F SM AERIAL	6000
48431172	72F SM AERIAL	6000
40013562	144F BBA2-LL FLEXTUBE UNDERWATER	Contact Prysmian
40013563	144F ULL-AB FLEXTUBE UNDERWATER	Contact Prysmian
40013564	360F BBA2-LL FLEXTUBE UNDERWATER	Contact Prysmian
40013565	360F ULL-AB FLEXTUBE UNDERWATER	Contact Prysmian
40007901	720F BBXS FLEXTUBE UNDERWATER	Contact Prysmian

TELSTRA / PRYSMIAN METALLIC CONTRACT ITEMS

Telstra Material Number	Product Description	Maximum Drum Length (Metres)
49005023	2PAIR/0.40MM PEIFLI/PE	500
49005741	2PAIR/0.64MM PEILI/PEIB	500
49008123	2PAIR/0.40MM PEIFLI/PEHJC BONDED	500
49008142	2PAIR/0.64MM CPFLI/PEHJC BONDED	500
300244	2CORE/0.40MM PVC WH/BU JUMPER WIRE	400
300249	2CORE/0.50MM PVC GN/WH JUMPER WIRE	400
300250	2CORE/0.50MM PVC RD/WH JUMPER WIRE	400
32300165	2PAIR/0.50MM PET/PV Cat 3	500
32300167	25PAIR/0.50MM PET/PV Cat 3	250
32300168	100PAIR/0.50MM PET/PV Cat 3	250
35300344	1 PAIR/0.50MM SCREENED STATION	250
35300348	32 PR / 0.50 SCR. STATION	250
35300360	1 PR / 0.50 UNSCR. STATION JUMPER WIRE	250
35300614	10 PR / 0.50 SCR. STATION	250
57200256	CAT6 UTP 4 PAIR 305M GREY	305
4008467	CAT6 UTP 4 PAIR 305M BLUE	305
47707025	800PR/0.40MM CPEIUT-MB	1680
47707045	800PAIR/0.64MM CPEIUT-MB	750
47707027	1200PR/0.40MM CPEIUT-MB	1200
46709226	100PR/0.40MM CPFUT/MBHJC AIRTUBE	3000
46709228	200PR/0.40MM CPFUT/MBHJ AIRTUBE	2000
46709230	400PR/0.40MM CPFUT/MBHJ AIRTUBE	2000
46709246	100PR/0.64MM CPFUT/MBHJC AIRTUBE	2000
46709248	200PR/0.64MM CPFUT/MBHJ AIRTUBE	2000
46709250	400PR/0.64MM CPFUT/MBHJ AIRTUBE	1150
46505241	10PAIR/0.64MM PEIUT-IB	500
46505243	30PAIR/0.64MM PEIUT-IB	2000
46505244	50PAIR/0.64MM PEIUT-IB	500
46505246	100PAIR/0.64MM PEIUT/IB	500
46705021	10PAIR/0.40MM CPFUT-PE	1000
46705023	30PAIR/0.40MM CPFUT-PE	1000
46705024	50PAIR/0.40MM CPFUT/PE	1000
46705026	100PAIR/0.40MM CPFUT/PE	1000
46708121	10PAIR/0.40MM CPFUT/PEHJ BONDED	1000
46708123	30PAIR/0.40MM CPFUT/PEHJC BONDED	1000
46708124	50PAIR/0.40MM CPFUT/PEHJC BONDED	1000
46708226	100PAIR/0.40MM CPFUT/MBHJC BONDED	1000
46708241	10PAIR/0.64MM CPFUT/MBHJC BONDED	1000
46708243	30PAIR/0.64MM CPFUT/MBHJC BONDED	1000
46708244	50PAIR/0.64MM CPFUT/MBHJ BONDED	1000
46708246	100PAIR/0.64MM CPFUT/MBHJC BONDED	1000
46708261	10PAIR/0.90MM CPFUT/MBHJC BONDED	1000
46708263	30PAIR/0.90MM CPFUT/MBHJC BONDED	3500
46708264	50/0.90 CPFUT MBHJ	2000
46708266	100/0.90 CPFUT MBHJ	1000

QUALITY CLAIMS

Whilst we, at Prysmian Group, continually strive to deliver what our customers want every time, on time in the correct quantity and according to specification, occasionally we fail to meet customer expectations. On these occasions, we value your feedback to help us identify the problems and implement change to ensure that they are not repeated.

Every complaint we receive is treated seriously and investigated until the cause is identified and corrective actions put in place.

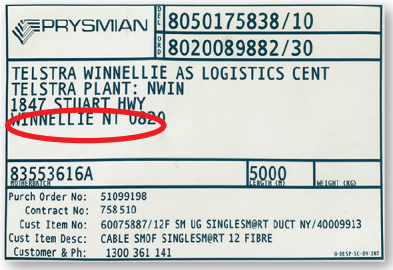
To enable us to do this and to process the claim effectively we need a certain amount of information and, in the case of a product non-conformance, we may require a sample of the affected cable so that we can analyse what went wrong.

There are two ways to lodge a complaint. The simplest and most effective way is to use the aforementioned Cable@Prysmian website. Alternatively, you may call our Customer Service office on 1300 300 304. Please have the following information available to speed up the process.

- ✓ Your contact details
- ✓ Description of product and Prysmian product code
- ✓ Nature of complaint
- ✓ Quantity affected
- ✓ Cable Number
- ✓ Drum number
- ✓ Your order number
- ✓ Invoice number or delivery advice
- ✓ Any other relevant information

The cable number or ticket number is the most important piece of information required to identify the affected cable. It can be found in the sheath printing on the cable as per the example below:

Alternatively, if cable is still packed on drum, the contract number on the drum label must be quoted for traceability.



Upon receipt of a claim, Prysmian Group will conduct an initial investigation and assess risk providing a response within 24 hours. A full investigation will follow and a formal report issued.

SAFETY DATA SHEETS

NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: # Telstra PVC Insulated Jumper Wire

Synonyms:
Telstra PVC Insulated Jumper Wire

Item Number(s)
300 series

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 Director: 0412 054 611**

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%

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.

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	NOTICES
	ppm	mg/m3	ppm	mg/m3	CATEGORY	
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
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.

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. Supersedes MSDS-ME01
1.1	22/10/15	Emergency contact details updated
1.2	24/01/20	Emergency contact details & item numbers updated. No other technical changes.

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.

NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: Telstra Internal Copper Cables

Synonyms:
Telstra Internal Distribution Cables, CAT5E (UTP) & CAT6 (UTP)

Item Number(s)
323 series, 572 series

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 Director: 0412 054 611**

2. HAZARDS IDENTIFICATION

AUSTRALIA CLASSIFICATION

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

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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%

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.

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	NOTICES
	ppm	mg/m3	ppm	mg/m3	CATEGORY	
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
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.

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. Supersedes MSDS-ME02.
1.1	22/10/15	Emergency contact details updated
1.2	24/01/20	Emergency contact details & item numbers updated. No other technical changes.

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.

NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: # Telstra External Copper Cables

Synonyms:
Telstra External Cables including CPFUT, CPEIUT, CPIUT, PEIUT-IB (aerial), air-tube cables and PEIFLI, CPFLI & PEILI (Lead-in)

Item Number(s)
465 series, 476 series, 477 series, 490 series

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 Director: 0412 054 611**

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	-	
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.

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	NOTICES
	ppm	mg/m3	ppm	mg/m3	CATEGORY	
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 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 product is mishandled & 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.

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. Supersedes MSDS-ME03 and includes semi dry filling compound.
1.1	22/10/15	Emergency contact details updated
1.2	01/05/16	Synonym clause updated (IB cable ref. added) to align with existing serial numbers.
1.3	24/01/20	Emergency contact details & item numbers updated. No other technical changes.

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.

NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **Telstra Station Cable**

Synonyms:
Telstra Station Cable

Item Number(s)
353 series

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 Director: 0412 054 611**

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	-	
Polyamide (nylon) insulation	-	
Polyethylene terephthalate (PET) yarns/tapes	-	
Metallic screen (aluminium & polyethylene combination)	-	
Low smoke zero halogen (LSOH) sheath	-	
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, Nylon, PET, PE, Metallic screen 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 with cut ends of copper wire.

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	NOTICES
	ppm	mg/m3	ppm	mg/m3	CATEGORY	
Copper (dust & mist) (as Cu)	-	1	-	-	-	-
Aluminium (metal dust) (elemental)	-	10	-	-	-	-

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
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.

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. Supersedes MSDS-ME10.
1.1	22/10/15	Emergency contact details updated
1.2	24/01/20	Emergency contact details & item numbers updated. No other technical changes.

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.

NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: # Telstra Underwater Copper Cable

Synonyms:
Underwater cable, river crossing cable

Item Number(s)
Not Allocated

Recommended use: Cable is for the transmission of voice and transfer 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 Director: 0412 054 611**

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	-	
Flooding compound	-	
Polyethylene terephthalate (PET) yarns/tapes	-	
Paper tapes	-	
Aluminium moisture barrier tape	-	
Water-swellable filling / armour flooding compound	-	
Polyethylene sheath	-	

Steel wire	-	
Bitumen	8052-42-4	
Bituminised hessian tape	-	
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: Flooding compound, PET, Tapes, Water-swellable filling / amour flooding compound, Bitumen and Bituminised hessian tape 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.

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	NOTICES
	ppm	mg/m3	ppm	mg/m3	CATEGORY	
Copper (dust & mist) (as Cu)	-	1	-	-	-	-
Bitumen	-	5	-	-	-	-

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 or bitumen), 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
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.

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. Supersedes MSDS-ME11.
1.1	22/10/15	Emergency contact details updated
1.2	24/01/20	Emergency contact details & item numbers updated. No other technical changes.

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.

NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: # Telstra Underwater Optical Fibre Cable

Synonyms:	**Serial Number(s)**
Underwater Cable/ Rover Crossing Cable:	
Flextube	40007901 (720 fibre) / 40013564 and 40013565 (360 fibre) / 40013562 and 40013563 (144 fibre)
SM@RTCORE Loose tube	48450 series

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 Director: 0412 054 611**

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	-	
Tube filling compound	-	
Polybutylene terephthalate (PBT) tubes	-	
Glass reinforced plastic (GRP) rod	-	
Interstitial flooding compound	-	
Polyethylene terephthalate (PET) yarns/ tapes	-	
Polyethylene (PE) sheath	-	
Water swellable yarns/tapes	-	
Aramid yarns	-	
Coated steel tape	-	
Water-swellable filling / armour flooding compound	-	
Steel wire	-	
Bitumen	8052-42-4	
Bituminised hessian tape	-	

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, Flooding compound, PET, PE, Aramid yarns, Water-swellable filling / amour flooding compound, Bitumen and Bituminised hessian tape 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 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.

However for:

	TWA		STEL		CARCINOGEN	NOTICES
	ppm	mg/m3	ppm	mg/m3	CATEGORY	
Bitumen	-	5	-	-	-	-

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 (bitumen), 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

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 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.

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. Supersedes MSDS-OF01
1.1	22/10/15	Emergency contact details updated
1.2	04/01/19	Emergency contact details updated. Flextube cables added
1.3	24/01/20	Emergency contact details & item numbers updated. No other technical changes.

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.

NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: # Telstra External Optical Fibre Cables

Synonyms:	**Serial Number(s)**
Duct Cables:	
SingleSM@RT	40009913
SM@RTLink	40010738-40, 40011878-79, 40012808-09, 40012812-13
Flextube	40007900, 40010869, 40012744, 40013164
Direct Buried/High Strength:	
EXTR@CORE HSe	48436 series, 40011871-72, 40012810-11, 40012814-15
Aerial Cable:	
SM@RTSPAN	48431 series, 40012488
Rodent Proof:	
ARM@CORE	48453 series, 40011873-74, 40013323-24, 40013326-27
Flextube	40010128, 40013325, 40013328

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 Director: 0412 054 611**

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	-	
Tube filling compound	-	
Polybutylene terephthalate (PBT) tubes	-	
Glass reinforced plastic (GRP) rods or strips	-	
Polyethylene terephthalate (PET) yarns/tapes	-	

Water-swellable yarns/tapes	-	
Polyethylene (PE) sheath	-	
Aramid yarns	-	
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, Flooding compound, PET, Water-swellable filling / amour flooding compound, 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.

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

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 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.

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. Supersedes MSDS-OF02
1.1	22/10/15	Emergency contact updated
1.2	04/01/19	Emergency contact updated. SingleSM@RT, MiniSM@RT & Flextube cables added.
1.3	25/06/19	SM@RTCORE 2019 replaces MiniSM@RT. No other change in content.
1.4	24/01/20	Emergency contact & item nos. updated. Sm@rtLink brand added. No other changes.
1.5	09/02/23	Various G657.A1-LL, G657.A2-LL, G654C-ULL-AB cables and 36F Aerial 525m span cable added to synonyms list.

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.

NON-Hazardous Substance, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: # Telstra Internal Optical Fibre Cables

Synonyms:	**Serial Number(s)**
Internal TIE Cable	48462 series, 40013329, 40013380-81
Sm@rtFlex Internal TIE Cable	40012105
Internal Riser/Distribution Cable (Premises Cable)	48492 series, 48392 series
Internal Breakout Cable	48393 series
Patchcord & Zipcord Cables	4841000, 4842000, 48300 series
Bare Fibre	Not available

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 Director: 0412 054 611**

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	-	
Polyamide (nylon) tight buffering	-	
Polyvinyl chloride (PVC) tight buffering	-	
Low smoke zero halogen (LSOH) tight buffering	-	
Tube filling compound		

Polybutylene terephthalate (PBT) tubes		
Glass reinforced plastic (GRP) rod	-	
Polyethylene terephthalate (PET) yarns/tapes	-	
Water-swellable yarns/tapes	-	
Aramid yarns	-	
Polyvinyl chloride (PVC) sheath	-	
Low smoke zero halogen sheath (LSOH)	-	
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, Nylon, PVC, PBT, Water-swellable yarns / tapes, Aramid yarns and LSOH 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 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 or 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 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.

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-OF05
1.1	22/10/15	Emergency contact details updated
1.2	24/01/20	Emergency contact details & item numbers updated. No other technical changes.
1.3	20/06/21	Sm@rtFlex TIE cable added to synonyms list.
1.4	09/02/23	Sm@rtcore TIE ULL-AB cables and OM4+ Riser added to synonyms list.

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.

PRYSMIAN AUSTRALIA PTY LTD
1 Heathcote Road, Liverpool 2170
NSW, Australia
Ph: 1300 300 304
Email: sales.au@prysmiangroup.com
www.prysmiancable.com.au

PRYSMIAN NEW ZEALAND LTD
30 Binsted Road, New Lynn 0600
Auckland, New Zealand
Ph: (09) 827 3109
Toll Free: 0800 492 225
Email: sales.nz@prysmiangroup.com
www.prysmiancable.co.nz

prysmian

www.prysmian.com

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