

ENERGY & COMMUNICATIONS

SPECIFICATION AND INSTALLATION GUIDE





The Iplex vision is to be the leading manufacturer and supplier of plastic building materials in New Zealand.



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Iplex Volta™ PVC-U Rigid Electrical Conduit & Duct

Iplex Volta™ rigid electrical conduit is a heavy duty electrical conduit suitable for above and below ground. Iplex Volta™ electrical duct is suitable for below ground.

- Conduit available from 20mm to 50mm (nominal OD sizes)
- Duct available from 80mm to 200mm
- AS/NZS 61386.21
- Bureau Veritas S-Mark Licence



Iplex 2700 Series PVC-U Rigid Electrical Duct

2700 series duct is suitable for below ground applications.

- Available from 32mm to 65mm
- AS/NZS 2053.2



Iplex PVC-U Electrical Bends and Fittings

- Coloured orange for below ground applications
- Available in sizes from 50mm to 100mm



Iplex PE-100 Flexible Electrical Duct

Iplex PE duct is designed for trenchless applications.

- Available from 32mm to 160mm
- Conforms dimensionally to AS/NZS 4130

COMMUNICATIONS - SECTION 2

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Iplex PVC-U Rigid Communications Duct

Iplex PE duct is designed for cable protection for trenched installation.

- Chorus and Non-Chorus offers



Iplex PE Flexible Communications Duct

Iplex PE duct can be used in both trenchless and trenched applications.

- Conforms dimensionally to AS/NZS 4130
- Chorus and Non-Chorus branded offers



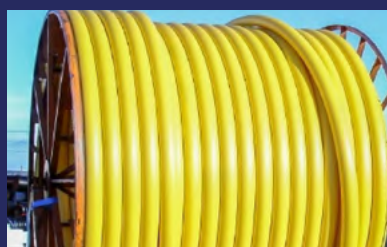
Iplex PE and PVC-U Bends and Fittings

- PVC-U and PE fittings options
- Chorus and Non-Chorus bends and fittings

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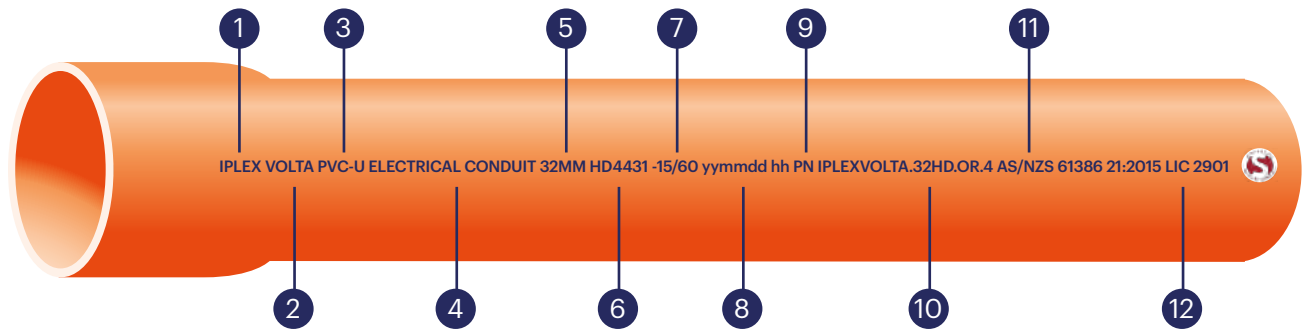


Iplex Imperial and Metric Gas Pipe

Iplex gas pipe is available in both Imperial and Metric dimensions.

- AS/NZS 4130
- Available from 25mm to 110mm (metric), or 10mm to 100mm (imperial)
- Coiled, straight length and drum coil offerings.

UNDERSTANDING PIPE CODES -EXAMPLE



- | | |
|-----------------------|---|
| ① Company Name | ⑦ Service Temperature Range |
| ② Brand Name | ⑧ Date and Hour of Manufacture |
| ③ Material Type | ⑨ Location of Manufacture (PN = Palmerston North) |
| ④ Application | ⑩ Order Code |
| ⑤ Nominal Diameter | ⑪ Manufacturing Standard |
| ⑥ Duty Classification | ⑫ 3rd Party Certification Licence |
| | ⑬ 3rd Party Certification Body Logo |

ELECTRICAL

SECTION 1

ELECTRICAL

IPLEX VOLTA™ PVC-U RIGID ELECTRICAL CONDUIT

Iplex Volta™ PVC-U rigid electrical conduit is manufactured in New Zealand to AS / NZS 61386.21 "Conduit systems for cable management Part 21: Particular requirements – Rigid Conduit Systems".

Iplex Volta™ PVC-U Rigid Electrical Conduits are available in diameters ranging from 20mm to 50mm in 4m socketed lengths, suitable for solvent cement jointing.

STANDARDS COMPLIANCE

Coloured orange or grey, Iplex Volta rigid electrical conduit is available in nominal OD diameters ranging from 20 to 50mm in Heavy Duty classification manufactured to AS/NZS 61386.21. (Bureau Veritas S-Mark Licence 2901).

Iplex Volta™ PVC-U Heavy Duty Rigid Electrical Conduit (Grey)

Grey coloured Iplex Volta™ electrical conduit, is suitable for exposed above-ground applications, or for photovoltaic (PV) panel installations and meets the standards required for photovoltaic (PV) arrays AS: NZS 5033. Grey coloured Iplex Volta™ electrical conduit is formulated for UV resistance compliant with AS/NZS 61386.1 and marked with the letter "T" and the word "SOLAR" indicating suitability for long term outdoor applications exposed to direct sunlight (AS/NZS 5033).

Duty Classification – HD4431

Service temperature range: -15°C to +60°C

Iplex Volta™ PVC-U Heavy Duty Rigid Electrical Conduit (Orange)

Orange coloured Iplex Volta™ electrical conduit is suitable for underground installation without further mechanical protection and offers high resistance to impact and compression.

Duty Classification – HD4431

Service temperature range: -15°C to +60°C

NB: If used unprotected from the sun above ground, orange colored Iplex Volta™ electrical conduit has limited UV /weathering resistance and colour fading (whitening) with some loss of impact strength can occur over time.

IPLEX VOLTA™ PVC-U RIGID ELECTRICAL DUCT

Iplex Volta™ PVC-U rigid electrical ducts are manufactured in New Zealand to AS / NZS 61386.21 and are coloured orange. These ducts are intended for conventional open cut (trench) methods, to identify and protect contained underground electrical cables.

Iplex Volta™ PVC-U rigid electrical ducts are available in diameters ranging from 80mm to 200mm in 6m socketed lengths, suitable for solvent cement jointing.

Nominal internal diameters 80mm (MD3331 & HD4431 duty classifications), 100mm and 200mm (MD3331, HD4431 and VHD5531 duty classifications.) manufactured to AS/NZS 61386.21

Service temperature range: -15°C to +60°C.

Manufactured to AS/NZS 61386.21. (Bureau Veritas S-Mark Licence 2901).



Iplex Volta™ PVC-U Rigid Electrical Conduit

SECTION 1

ELECTRICAL

IPLEX 2700 SERIES PVC-U RIGID ELECTRICAL DUCT

Iplex 2700 series PVC-U rigid electrical ducts are manufactured in New Zealand to AS / NZS 2053.2. This product is coloured orange, and intended for underground installation using conventional open cut (trench) methods, to identify and protect contained underground electrical cables.

Iplex 2700 Series PVC-U rigid electrical ducts are available in diameters ranging from 32mm to 65mm in 6m socketed lengths, suitable for solvent cement jointing.

Nominal internal diameters 32mm, 40mm, 50mm and 65mm manufactured to the OD and wall thickness dimensions of AS/NZS 1260.

Iplex 2700 Series PVC-U rigid electrical duct is used by major New Zealand power authorities.

NB: If used unprotected from the sun above ground, orange PVC-U electrical duct has limited UV /weathering resistance and colour fading (whitening) with some loss of impact strength can occur over time.

An alternative option used successfully above ground, such as under bridge structures, or on power poles, is Iplex Novadrain PVC-U, SN 16 DWV pipe to AS/NZS 1260, coloured light pearl grey, which has the same external dimensions as the 2700 Series orange ducts.

IPLEX PVC-U BENDS AND FITTINGS

Iplex provide PVC-U electrical duct bends in various diameters, angles and bend radii.




Iplex PVC-U Rigid Electrical Duct

SECTION 1


ELECTRICAL

PRODUCT RANGE

Iplex Volta™ PVC-U Rigid Electrical Conduit - (Grey): Above Ground Applications (to AS/NZS 61386.21)
Joint Type - Spigot/Socket SCJ

	Nominal Diameter (mm)	Order Code	**Duty Classification	Stiffness Class	Mean Outside Diameter (mm)	Minimum Internal Diameter (mm)	Bundle/Pack QTY
	20	IPLEXVOLTA.20HD.GY.4	HD4431	N/A	19.9	16.2	10/1560
	25	IPLEXVOLTA.25HD.GY.4	HD4431	N/A	24.9	20.5	10/1100
	32	IPLEXVOLTA.32HD.GY.4	HD4431	N/A	31.9	27.0	10/640
	40	IPLEXVOLTA.40HD.GY.4	HD4431	N/A	39.9	34.3	10/420
	50	IPLEXVOLTA.50HD.GY.4	HD4431	N/A	49.9	43.5	5/280

Iplex Volta™ PVC-U Rigid Electrical Conduit - (Orange): Below Ground Applications (to AS/NZS 61386.21)
Joint Type - Spigot/Socket SCJ

	Nominal Diameter (mm)	Order Code	**Duty Classification	Stiffness Class	Mean Outside Diameter (mm)	Minimum Internal Diameter (mm)	Bundle/Pack QTY
	20	IPLEXVOLTA.20.HD.OR.4	HD4431	N/A	19.9	16.2	10/1560
	25	IPLEXVOLTA.25.HD.OR.4	HD4431	N/A	24.9	20.5	10/1100
	32	IPLEXVOLTA.32.HD.OR.4	HD4431	N/A	31.9	27.0	10/640
	40	IPLEXVOLTA.40.HD.OR.4	HD4431	N/A	39.9	34.3	10/420
	50	IPLEXVOLTA.50.HD.OR.4	HD4431	N/A	49.9	43.5	5/280




SECTION 1

ELECTRICAL

Iplex Volta™ PVC-U Rigid Electrical Duct - (Orange): Below Ground Applications (to AS/NZS 61386.21)

Joint Type - Spigot/Socket SCJ

	Nominal Diameter (mm)	Order Code	**Duty Classification	Stiffness Class	Mean Outside Diameter (mm)	Minimum Internal Diameter (mm)	Bundle/Pack QTY
	80	IPEXVOLTA.80MD.OR.6	MD3331	N/A	82.5	77.1	88
	80	IPEXVOLTA.80HD.OR.6	HD4431	N/A	82.5	75.3	88
	100	IPEXVOLTA.100MD.OR.6	MD3331	SN4	110.2	103.2	67
	100	IPEXVOLTA.100HD.OR.6	HD4431	SN10	110.2	102.0	67
	100	IPEXVOLTA.100VHD.OR.6	VHD5531	SN25	110.2	96.0	67
	150	IPEXVOLTA.150MD.OR.6	MD3331	SN4	160.3	150.4	28
	150	IPEXVOLTA.150HD.OR.6	HD4431	SN10	160.3	148.8	28
	150	IPEXVOLTA.150VHD.OR.6	VHD5531	SN25	160.3	141.4	28
	200	IPEXVOLTA.200HD.OR.6	HD4431	SN10	225.3	210.3	15/1

2700 Series PVC-U Rigid Electrical Duct - (Orange): Below Ground Applications (to AS/NZS 2053.2)

Joint Type - Spigot/Socket SCJ

	Nominal Diameter (mm)	Order Code	**Duty Classification	Stiffness Class	Mean Outside Diameter (mm)	Minimum Internal Diameter (mm)	Bundle/Pack QTY
	32**	2700.32.6 SOE	N/A	N/A	36.4	31.6	10/240
	40**	2700.40.6 SOE	N/A	N/A	42.9	37.6	10/180
	50**	2700.50.6 SOE	N/A	N/A	55.8	50.5	5/150
	65**	2700.65.6 SOE	N/A	N/A	68.8	62.5	10/102

**Nominal diameter 32mm, 40mm, 50mm and 65mm PVC-U ducts coloured orange are manufactured to the OD and wall thickness dimensions of AS/NZS 1260

PVC-U Electrical Bends - (Orange)

	Order Code	Size (mm/°)
	2703.50.45R250	
	2703.50.45	50 x 45°
	2703.50.90R250	
	2703.50.90	50 x 90°
	2703.80.45R250	
	2703.80.45	80 x 45°
	2703.80.90	80 x 90°
	2703.100.45R250	
	2703.100.45R250	100 x 45° ROC* 250mm
	2703.100.90R250	100 x 90° ROC* 250mm
	2703.100.90R900	100 x 90° ROC* 900mm

*ROC = Radius of Curvature

SECTION 1 ELECTRICAL

IPLEX PE 100 FLEXIBLE ELECTRICAL DUCT

Iplex supply a range of flexible PE electrical ducts for the identification and protection of buried electrical cable installations. They are designed for trenchless applications and support installation using trenchless methods, including Horizontal Directional Drilling under roads and built up areas where conventional open cut methods are difficult or impractical.

The Iplex PE flexible electrical duct range conforms dimensionally to AS/NZS 4130 and is available in nominal OD diameters from 32mm to 160mm and in various coil lengths. Iplex PE electrical duct is used by major New Zealand power authorities. **NB:** PE duct installed by

Horizontal Directional Drilling is subject to a maximum allowable axial tensile stress for each size / SDR of duct.

NB: If orange coloured PE flexible electrical duct is used unprotected from the sun above ground, UV/ weathering resistance is limited and colour fading (whitening), with some loss of mechanical strength can occur over time. An alternative option used successfully above ground such as under bridge structures, or on power poles is Iplex Poliplex PE 100 SDR 11 pipe to AS/NZS 4130, coloured black, which has the same external dimensions as the orange ducts and equivalent physical properties.

Iplex PE Flexible Electrical Duct - Free Standing Coil

Free Standing Coil



Iplex strongly recommends that mechanical straightening and mechanical re-rounding equipment be used when installing coiled DN 125, 140 and 160 PE duct.

OD (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
32	Cableduct OR 32/25.200	Orange	200m	11	32.1	3.2	2.2
32	Cableduct OR 32/25.500	Orange	500m	11	32.1	3.2	2.2
32	Cableduct OR 32/28.200	Orange	200m	17	32.1	2.0	1.5
32	Cableduct OR 32/28.500	Orange	500m	17	32.1	2.0	1.5
32	Cableduct OR 32/27.200	Orange	200m	13.6	32.1	2.6	1.8
40	Cableduct OR 40/35.100	Orange	100m	17	40.2	2.4	2.3
40	Cableduct OR 40/35.200	Orange	200m	17	40.2	2.4	2.3
50	Cableduct OR 50/44.100	Orange	100m	17	50.3	3.2	3.5
50	Cableduct OR 50/42.100	Orange	100m	13.6	50.3	3.7	4.3
50	Cableduct OR 50/44.200	Orange	200m	17	50.3	3.2	3.5
50	Cableduct OR 50/42.200	Orange	200m	13.6	50.3	3.9	4.5
63	Cableduct OR 63/55.100	Orange	100m	17	63.3	4.0	5.5
63	Cableduct OR 63/53.100	Orange	100m	13.6	63.3	5.0	6.8
63	Cableduct OR 63/55.150	Orange	150m	17	63.3	4.0	5.5
90	Cableduct OR 90/79.50	Orange	50m	17	90.5	5.8	11.3
90	Cableduct OR 90/79.100	Orange	100m	17	90.5	5.8	11.3
110	Cableduct OR 110/97.50	Orange	50m	17	110.5	7.0	16.8
110	Cableduct OR 110/97.100	Orange	100m	17	110.5	7.0	16.8
125	Cableduct OR 125/110.100	Orange	100m	17	125.5	7.8	21.7
140	Cableduct OR 140/123.100 CX	Orange	100m	17	140.6	8.8	27.3
160	Cableduct 160/140.100 CXOR	Orange	100m	17	160.4	10.0	35.6

Iplex PE Flexible Electrical Duct - Drum Coil

Drum Coil



OD (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
50	Cableduct 50/44.800 CXOR	Orange	800m	17	50.3	3.2	3.5
50	Cableduct 50/44.2000 CXOR	Orange	2000m	17	50.3	3.2	3.5
110	Cableduct 110/97.340 CXOR	Orange	340m	17	110.5	7.0	16.8
110	Cableduct 110/97.400 CXOR	Orange	400m	17	110.5	7.0	16.8
110	Cableduct 110/97.600 CXOR	Orange	600m	17	110.5	7.0	16.8
140	Cableduct 140/123.340 CXOR	Orange	340m	17	140.6	8.8	27.3
160	Cableduct 160/140.190 CXOR	Orange	190m	17	160.4	10.0	37.3

SECTION 1

ELECTRICAL

Iplex PE Flexible Electrical Duct

Straight Lengths



OD (mm)	Order Code	Colour	Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
110	Cableduct 110/97.15 CXOR	● Orange	15m	17	110.5	7.0	16.8
140	Cableduct 140/123.15 CXOR	● Orange	15m	17	140.6	8.8	27.3
160	Cableduct 160/140.15 CXOR	● Orange	15m	17	160.4	10.0	37.3
160	Cableduct 160/140.15 CXOR	● Orange	15m	17	160.4	10.0	37.3



Iplex DN 110 SDR 17 PE Flexible Electrical duct in Free Standing coils and Drum Coils

A background image of a large stack of green pipes or tubes, with a diagonal blue and white striped overlay. The word 'NOTES' is written in bold black letters at the top left.

COMMUNICATIONS

SECTION 2

COMMUNICATIONS

IPLEX PVC-U RIGID COMMUNICATIONS DUCT

Iplex PVC-U Rigid Communications Duct (Chorus Branded & Non-Chorus)

The Iplex range of PVC-U rigid communications duct is available for communications and fiber optic projects requiring cable protection for trenched installation.

Chorus Branded duct is available only to Chorus approved installers and only approved Chorus contractors can purchase and install these products. For further details please contact Iplex Pipelines.

Iplex PVC-U Communications Repair Sleeve (Chorus Branded)

Repair sleeves slide over the outside of the PVC Communications duct and are joined to the duct with PVC solvent cement.



20mm PVC-U Communications Duct
(Chorus branded)



100mm PVC Repair Sleeve

IPLEX PE FLEXIBLE COMMUNICATIONS DUCT

(Chorus Branded & Non-Chorus)

Iplex Pipeline's ability to colour-jacket or colour-stripe polyethylene ducting assists the duct asset owner with identification in multiple duct applications.

NB: Flexible PE duct installed by Horizontal Directional Drilling is subject to a maximum allowable axial tensile stress for each size / SDR of duct. Please contact Iplex for further information.



Drum Coils – DN 110 PE Communications duct SDR17

SECTION 2

COMMUNICATIONS

PRODUCT RANGE

PVC-U RIGID COMMUNICATIONS DUCT

Chorus Branded PVC-U Rigid Communications Duct

	Nominal Diameter (mm)	Order Code	Colour	Duty Classification	Stiffness Class	#Joint Type	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Bundle/ Pack QTY
	20mm x 6m	10012937	● Green	N/A	N/A	Spigot/Socket SCJ	26.7	1.9	150
	20mm x 6m	10013281	● White	N/A	N/A	Spigot/Socket SCJ	26.7	2.1	150
	50mm x 6m	P4001	● Green	N/A	N/A	Rubber Ring Joint	60.3	2.6	123
	100mm x 6m	P4000	● Green	SN6	N/A	Rubber Ring Joint	110.2	3.6	67


Chorus Branded PVC-U Repair Sleeve for Communications Duct

	Nominal Diameter (mm)	Order Code	Colour	Duty Classification	Stiffness Class	#Joint Type	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Bundle/ Pack QTY
	50mm x 2m	10013103	● Green	N/A	N/A	Plain End, SCJ	65.6	2.6	1
	100mm x 2m	10013102	● Green	N/A	N/A	Plain End, SCJ	117.3	3.6	1


Non-Chorus Branded PVC-U Rigid Communications Duct (Green)

	Nominal Diameter (mm)	Order Code	Colour	Duty Classification	Stiffness Class	#Joint Type	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Bundle /Pack QTY
	20mm x 6m	CD80020	● White	N/A	N/A	Spigot/Socket SCJ	26.7	1.7	150
	100mm x 6m	2780.100MD.6 SOE	● Green	MD	SN4	Spigot/Socket SCJ	110.2	3.1	67
	100mm x 6m	2780.100.6RRJNPGREEN	● Green	N/A	N/A	Spigot/Socket SCJ	110.2	3.6	67
	150mm x 6m	2780.150MD.6 SOE	● Green	MD	SN4	Spigot/Socket SCJ	160.3	4.5	28
	100mm x 6m	COMMSDUCT:100SN10.HD.GR.6	● Green	HD	SN10	Spigot/Socket SCJ	110.2	3.8	67
	150mm x 6m	COMMSDUCT:150SN10.HD.GR.6	● Green	HD	SN10	Spigot/Socket SCJ	160.3	5.3	28

Non-Chorus Branded PVC-U Rigid Communications Duct (Red)

	Nominal Diameter (mm)	Order Code	Colour	Duty Classification	Stiffness Class	#Joint Type	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Pack Qty
	50mm x 6m	2730.50.6 SOE	● Red	N/A	N/A	Spigot/Socket SCJ	55.8	2.4	150
	100mm x 6m	2730.100MD.6 SOE	● Red	MD	SN4	Spigot/Socket SCJ	110.2	3.1	67
	100mm x 6m	COMMSDUCT:100SN10.HD.RED.6	● Red	HD	SN10	Spigot/Socket SCJ	110.2	3.8	67

Iplex PVC-U Rigid Communications Duct (Salmon or Salmon Pink)

	Nominal Diameter (mm)	Order Code	Colour	Duty Classification	Stiffness Class	#Joint Type	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Pack Qty
	50mm x 6m	COMMSDUCT.50.SAP.6	● Salmon Pink	N/A	N/A	Spigot/Socket SCJ	55.8	2.4	150
	50mm x 6m	2720.50.6 SOE	● Salmon	N/A	N/A	Spigot/Socket SCJ	55.8	2.4	150
	100mm x 6m	2720.100MD.6 SOE	● Salmon	MD	SN4	Spigot/Socket SCJ	110.2	3.1	67
	100mm x 6m	COMMSDUCT:100SN10.HD.SA.6	● Salmon	HD	SN10	Spigot/Socket SCJ	110.2	3.8	67
	150mm x 6m	COMMSDUCT:150SN10.HD.SA.6	● Salmon	HD	SN10	Spigot/Socket SCJ	160.3	5.3	28
	100mm x 6m	COMMSDUCT:100SN10.HD.SAP.6	● Salmon Pink	HD	SN10	Spigot/Socket SCJ	110.2	3.8	67


SECTION 2

COMMUNICATIONS

PRODUCT RANGE

PVC-U RIGID COMMUNICATIONS DUCT

Vodafone/Telstraclear branded PVC-U Rigid Communications Duct

	Nominal Diameter (mm)	Order Code	Colour	Duty Classification	Stiffness Class	#Joint Type	Mean Outside Diameter (mm)	Wall Thickness (mm)	Pack Qty
	50	CLEAR 50C SOE	● Clear Blue	N/A	N/A	Spigot/Socket SCJ	60.3	2.6	123
	100	TCSN6.100.6 SOE	● Clear Blue	N/A	SN6	Spigot/Socket SCJ	110.2	3.2	67
	50	TC50.6 SOE	● Lilac	N/A	N/A	Spigot/Socket SCJ	55.8	2.6	150
	80	TC80.6 SOE	● Lilac	N/A	N/A	Spigot/Socket SCJ	82.6	3.0	88

PRODUCT RANGE

PE FLEXIBLE COMMUNICATIONS DUCT

Iplex PE Flexible Communications Duct (Salmon)

	Nominal Diameter (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	25mm	Cableduct SA 25/22100	● Salmon	100m	17	25.1	1.7	1.0
	32mm	Cableduct SA 32/25500	● Salmon	500m	11	32.1	3.2	2.2
	63mm	Cableduct SA 63/55100	● Salmon	100m	17	63.3	4.0	5.5
	110mm	Cableduct SA 110/97100	● Salmon	100m	17	110.5	7.0	16.8
	110mm	Cableduct SA 110/97340**	● Salmon	340m	17	110.5	7.0	16.8

** Supplied as a Drum Coil

Iplex PE Flexible Communications Duct (Red)

	Nominal Diameter (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	25mm	COMMSDUCT Red 25/20200	● Red	200m	11	25.1	2.5	1.3
	25mm	COMMSDUCT Red 25/20500	● Red	500m	11	25.1	2.5	1.3
	32mm	COMMSDUCT Red 32/25500	● Red	500m	11	32.1	3.2	2.2
	32mm	COMMSDUCT Red 32/27200	● Red	200m	13.6	32.1	2.6	1.8
	50mm	COMMSDUCT Red 50/44100	● Red	100m	17	50.2	3.2	3.5
	63mm	Cableduct Red 63/55100	● Red	100m	17	63.3	4.0	5.5
	110mm	Cableduct Red 110/97100	● Red	100m	17	110.5	7.0	16.8
	110mm	Cableduct Red 110/97340**	● Red	340m	17	110.5	7.0	16.8

** Supplied as a Drum Coil

Iplex PE Flexible Communications Duct (Colour RAL 3015 - Light Pink)

	Nominal Diameter (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	32mm	COMMSDUCT SAP 32/28600	● Light Pink	600m	17	32.1	2.0	1.5
	63mm	Cableduct SAP 63/55100	● Light Pink	100m	17	63.3	4.0	5.5

Iplex PE Flexible Communications Duct (Black/White Stripes)

	Nominal Diameter (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	32mm	Cable Duct 32/27200 WTS	● Black /White stripes	200m	13.6	32.1	2.6	1.8
	32mm	Cable Duct 32/27500 WTS	● Black /White stripes	500m	13.6	32.1	2.6	1.8

SECTION 2

COMMUNICATIONS

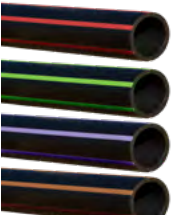
PRODUCT RANGE

PE FLEXIBLE COMMUNICATIONS DUCT

Chorus Branded PE Flexible Communications Duct

	Size	Order Code	Colour	SDR Rating	Coil Length	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	20mm	20021792	● Green	11	100	20.1	2.1	0.8
	20mm	20021793	● Green	11	200	20.1	2.1	0.8
	32mm	10012829	● Black with red stripes	13.6	1000	32.1	2.6	1.8
	32mm	10012829500	● Black with red stripes	13.6	500	32.1	2.6	1.8
	32mm	10012830	● Black with green stripes	13.6	1000	32.1	2.6	1.8
	32mm	10012830500	● Black with green stripes	13.6	500	32.1	2.6	1.8
	32mm	10012831	● Black with violet stripes	13.6	1000	32.1	2.6	1.8
	32mm	10012831500	● Black with violet stripes	13.6	500	32.1	2.6	1.8
	32mm	10012832	● Black with brown stripes	13.6	1000	32.1	2.6	1.8
	32mm	10012832500	● Black with brown stripes	13.6	500	32.1	2.6	1.8

Non - Chorus Branded PE Flexible Communications Duct

	Nominal Diameter (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	32mm	COMMSDUCT.32/271000RMS	● Black with red multistripe	1000m	13.6	32.1	2.6	1.8
	32mm	COMMSDUCT.32/271000GMS	● Black with green multistripe	1000m	13.6	32.1	2.6	1.8
	32mm	COMMSDUCT.32/271000LMS	● Black with violet multistripe	1000m	13.6	32.1	2.6	1.8
	32mm	COMMSDUCT.32/271000BRMS	● Black with brown multistripe	1000m	13.6	32.1	2.6	1.8

Non - Chorus PE Flexible Communications Duct

	OD (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	32	Teleduct PE32/25.100	● Lime Green	100m	11	32.1	3.2	2.2
	32	Teleduct PE32/25.200	● Lime Green	200m	11	32.1	3.2	2.2
	32	Teleduct PE32/25.500	● Lime Green	500m	11	32.1	3.2	2.2
	32	Teleduct PE32/27.200	● Lime Green	100m	13.6	32.1	2.6	1.8
	32	Teleduct PE32/27.500	● Lime Green	500m	13.6	32.1	2.6	1.8
	32	Teleduct PE32/28.200	● Lime Green	200m	17	32.1	2.0	1.5
	32	Teleduct PE32/28.500	● Lime Green	500m	17	32.1	2.0	1.5
	40	Teleduct PE40/35.200	● Lime Green	200m	17	40.1	2.6	2.3
	40	Teleduct PE40/35.300	● Lime Green	300m	17	40.1	2.6	2.3
	50	Teleduct PE50/44.100	● Lime Green	100m	17	50.2	3.2	3.5
	63	Teleduct PE63/55.50	● Lime Green	50m	17	63.3	4.0	5.5
	63	Teleduct PE63/55.100	● Lime Green	100m	17	63.3	4.0	5.5
	63	Teleduct PE63/55.150	● Lime Green	150m	17	63.3	4.0	5.5
	110	Teleduct PE110/97.50	● Lime Green	50m	17	110.5	7.0	17.8
	110	Teleduct PE110/97.100	● Lime Green	100m	17	110.5	7.0	17.8

SECTION 2

COMMUNICATIONS

PRODUCT RANGE

PE FLEXIBLE COMMUNICATIONS DUCT

Spark Branded PE Flexible Communications Duct (Colour: Pink RAL4010)

	OD (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Internal Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	110	SPARK DUCT PE110/97100	● Magenta	100m	17	110.5	96.5	7.0	5.5

Vodafone/Telstraclear Branded PE Flexible Communications Duct

	OD (mm)	Order Code	Colour	Coil Length	SDR Rating	Mean Outside Diameter (mm)	Mean Internal Diameter (mm)	Mean Wall Thickness (mm)	Maximum safe axial pulling load (KN)
	110	CLEAR 110/97100	● Light Blue	100m	17	110.5	96.5	7.0	17.8
	110	CLEAR 110/97340	● Light Blue	340m**	17	110.5	96.5	7.0	17.8

** Drum Coil

IPLEX PE AND PVC-U

COMMUNICATIONS BENDS & FITTINGS

Iplex Pipelines has a range of fittings for use with PVC-U and PE Communications ducting. These include post formed PVC bends, couplers and reducing saddles. Chorus Branded fittings are compatible for use with Chorus Branded Communications ducts. Standard duct fittings are compatible with Iplex Communications cable ducts.

Chorus Branded PVC-U Communications Bends

		Size	Order Code	Colour	Pack Qty
20mm Formed Bend F&F		20mm x 90° ROC* 240	10012582	● Green	1
		20mm x 90° ROC* 400	10013280	● Green	1
		20mm x 90° ROC* 530	10012939	● Green	1
		20mm x 90° ROC* 100	10013279	● White	1
		20mm x 90° ROC* 300	10012940	● White	1
50mm Formed Bend M&F		50mm x 30° ROC* 350	10013084	● Green	1
		50mm x 45° ROC* 200	10013087	● Green	1
		50mm x 45° ROC* 350	10013086	● Green	1
		50mm x 45° ROC* 900	10013100	● Green	1
		50mm x 90° ROC* 350	10013088	● Green	1
		50mm x 90° ROC* 900	10013099	● Green	1
100mm Formed Bend M&F		100mm x 22° ROC* 900	10013098	● Green	1
		100mm x 30° ROC* 300	10013091	● Green	1
		100mm x 45° ROC* 300	10013093	● Green	1
		100mm x 90° ROC* 350	10011337**	● Green	1
		100mm x 90° ROC* 400	10013095	● Green	1
		100mm x 90° ROC* 900	10013094	● Green	1
		100mm x 90° ROC* 601	10013096	● Green	1

*ROC = Radius of Curvature **Female / Female (F&F) Bend


SECTION 2

COMMUNICATIONS



Chorus Branded PVC-U Communications Fittings

Coupler		Size	Order Code	Colour	Pack Qty
		50mm	10013109	● Green	1
Reducing Saddle		50mm x 20mm	10012938	● Green	1
Dust Cap		50mm	P4004	● Black	1
		100mm	P4005	● Black	1

White PVC-U Communications Bends

 <div> CD8032045 CD8032090 </div>	Size	Order Code	Colour	Pack Qty
	20 x 45°	CD8032045	● White	1
	20 x 90°	CD8032090	● White	1

Plasson Compression Couplings for PE Communications Ducts

Plain Coupling		Size (mm)	Order Code	Colour	End load restrained	Full pipe bore available
		32	2510.32	● Black	Yes	Yes
		63	2510.63	● Black	Yes	Yes
		110	2510.110	● Black	Yes	Yes
		125	2510.125	● Black	Yes	Yes
Slip (Repair) Coupling		32	2511.32	● Black	Yes	Yes
		63	2511.63	● Black	Yes	Yes



Plasson Line 7 Mechanical coupler (order code 2510 Series) joining Iplex PE Communication Ducts

SECTION 2

COMMUNICATIONS - INSTALLATION

COMPRESSION FITTINGS FOR IPLEX PE ELECTRICAL DUCTS AND COMMUNICATIONS DUCTS

Plasson Line 7 Fittings - Assembly Instructions (20mm - 63mm)

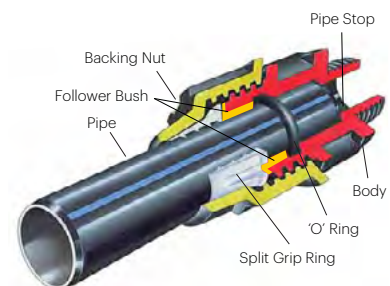


General Instructions

Follow these assembly Instructions for a secure, connection.

- Ensure the pipe end to be inserted into the fitting, and the fitting itself, are both totally free of dirt, grit, scratches and any other damage
- **Do not overtighten the Backing Nut** when closing. NEVER use wrenches with handle lengths longer than 22cm – excessive torque during tightening can spread the Backing Nut cone and result in pullouts.
- If fittings are reused, ensure the Split Grip Ring is sharp and can bite into the pipe to avoid pull outs. Alternatively replace the Split Grip Ring.

20mm - 63mm



STEP 1

Cut the pipe square and remove burrs. It is good trade practice to chamfer (with a file or Plasson 2555 chamfering tool) and lubricate the pipe ends. (use Medlube or an approved equivalent). Chamfering and lubrication will ease insertion, particularly for sizes DN 40, DN 50 and DN 63, however these steps are optional.



STEP 2

Undo the nut up to the last thread. **Do not remove the Backing Nut** from the fitting body.



STEP 3

Twist the pipe into the fitting through the Backing Nut and through the Split Grip Ring until it meets the first resistance – pushing against the captive O-ring. Then push and twist the pipe **through and past the O-ring** until it stops at the pipe stop inside the fitting – the final stop.



STEP 4

Twist the pipe into the fitting through the Backing Nut and through the Split Grip Ring until it meets the first resistance – pushing against the captive O-ring. Then push and twist the pipe through and past the O-ring until it stops at the pipe stop inside the fitting – the final stop.

SECTION 2

COMMUNICATIONS - INSTALLATION

COMPRESSION FITTINGS FOR IPLEX PE ELECTRICAL DUCTS AND COMMUNICATIONS DUCTS

Plasson Line 7 Fittings - Assembly Instructions (75mm - 125mm)



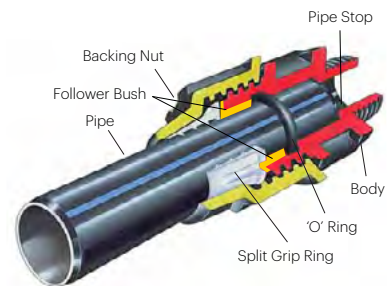
General Instructions

75mm - 125mm



STEP 1

Cut the pipe, square. Unscrew the Backing Nut and **remove the Split Grip ring**. Reposition Backing Nut, Follower Bush and O ring on the pipe, two diameters back. Lubricate pipe and O ring, with Medlube.



STEP 2

Push the pipe fully into the fitting body, up to the internal stop. Push the O ring and Follower Bush forward until they rest against the fitting (They will not enter the body of the fitting).



STEP 3

Tighten the Backing Nut to drive the Follower Bush and O ring together, right into the fitting until the Follower Bush is flush with fitting mouth. Use a Plasson C ring spanner to assist as needed.



STEP 4

Fully unscrew the Backing Nut, and pull back along the pipe.

Now, open the Split Grip Ring and place directly over and onto the pipe, with the lugs and flat end, **facing and touching** the Follower Bush.



STEP 5

Firmly tighten the Backing Nut with only a Plasson "C-ring" spanner. (Max handle length = 46cm) Do not overtighten.

An aerial photograph of a suburban neighborhood with various houses, trees, and a large semi-transparent white triangle overlaid on the left side. The triangle contains horizontal lines for notes. The word 'NOTES' is written in bold black text at the top left of the triangle.

GAS

SECTION 3



GAS

IPLEX POLIGAS™ PE GAS PIPE

The Iplex Poligas™ range of polyethylene gas pipe for Natural Gas (fuel gas) applications includes both Imperial (nominal ID) and Metric (OD) dimension sizes. Poligas™ pipe is made in PE 80 material externally coloured yellow for easy identification as gas pipe. PE 100 material is also available either externally coloured yellow or as yellow multistripe.

- Poligas™ PE Metric Dimension Gas Pipe is manufactured to AS/NZS 4130 Series 1.
- Poligas™ PE Imperial Dimension Gas Pipe is manufactured to AS/NZS 4130 Series 3.

Iplex Poligas® PE Gas Pipe - Metric (OD) Dimension

 	Nominal Outside Diameter (mm)	Order Code	Coil Length	Outside Diameter (mm)	Colour	SDR
	25mm	230.25SDR11.150	150m	25.1	● Yellow	11
	32mm	230.32SDR11.150	150m	32.1	● Yellow	11
	63mm	230.63SDR11.150	150m	63.3	● Yellow	11
	110mm**	230.110SDR11.15BY	15m	110.5	● Black with Yellow Stripes	7

Manufactured to AS/NZS 4130 Series 1

** Straight lengths

PE Gas Pipe- Imperial (Nominal ID) Dimension

	Nominal Internal Diameter (mm)	Order Code	Coil Length	Outside Diameter (mm)	Colour	SDR
	10mm	200.10.150.9 IMP	150m	15.7 - 16.0	● Yellow	9
	15mm	200.15.150.9 IMP SPL*	150m	21.4 - 21.7	● Yellow	9
	20mm	200.20.150.11 IMP	150m	26.6 - 26.9	● Yellow	11
	25mm	200.25.150.11 IMP	150m	33.4 - 33.7	● Yellow	11
	32mm	200.32.50.11 IMP	50m	88.7 - 89.2	● Yellow	11
	32mm	200.32.150.11 IMP	150m	42.1 - 42.4	● Yellow	11
	50mm	200.50.100.11 IMP	100m	60.2 - 60.5	● Yellow	11
	80mm	200.80.100.11 IMP	100m	88.7 - 89.2	● Yellow	11
	100mm	200.100.100.11 IMP	100m	114.1 - 114.7	● Yellow	11

Manufactured to AS/NZS 4130 Series 3 (Nominal Internal Diameter Series)

*This SDR not included in AS/NZS4130, but is fully mechanically compliant with AS/NZS4130

SECTION 3

GAS

Iplex Poligas™ PE80 Gas Pipe - Imperial (Nominal ID) Dimension: Drum Coil

Drum Coil	Nominal Internal Diameter (mm)	Order Code	Coil Length	Outside Diameter (mm)	Colour	SDR
	100mm	200.100.430.11 IMP	430m	114.1 - 114.7	● Yellow	11

Drum Coils may be available in other sizes subject to minimum order quantity. Contact Iplex NZ for availability.

Iplex Poligas™ PE80 Gas Pipe - Imperial (Nominal ID) Dimension, Straight Lengths

Straight Lengths	Nominal Outside Diameter (mm)	Order Code	Length	Outside Diameter (mm)	Colour	SDR	Pack Qty
	32mm	200.32.6.11 IMP*	6m	42.1 - 42.4	● Yellow	11	5
	50mm	200.50.6.11 IMP*	6m	60.2 - 60.5	● Yellow	11	3
	80mm	200.80.6.11 IMP*	6m	88.7 - 89.2	● Yellow	11	1
	80mm	200.80.12.11 IMP*	12m	88.7 - 89.2	● Yellow	11	1
	100mm	200.100.6.11 IMP*	6m	114.1 - 114.7	● Yellow	11	1
	100mm	200.100.12.11 IMP*	12m	114.1 - 114.7	● Yellow	11	1
	150mm	200.150.12.11 IMP*	12m	168.4	● Yellow	11	1

* Manufactured to AS/NZS 4130 Series 3 (Nominal Internal Diameter Series)

Manufactured to AS/NZS 4130 Series 1

IPLEX QUALITY MANAGEMENT SYSTEMS

Quality Assurance

Creating products of consistently high quality is at the forefront of the Iplex manufacturing process, and central to the customer promise that Iplex product quality meets or exceeds standards claimed.

All Iplex manufacturing plants operate under a strict ISO 9001 Quality Management System (QMS). External certifying bodies carry out regular audits to provide third-party certification of the Company's QMS. Continued third-party product certification of Iplex plastic pipeline products to relevant Australian & New Zealand standards, is also provided by these bodies.

The Iplex laboratory is an IANZ accredited facility, providing added assurance that any measurement and testing is carried out professionally and in a technically reliable manner in accordance with international standards.



APPLICABLE STANDARD	LICENCE TYPE	LICENCE NUMBER	CONFORMITY ASSESSMENT BODY
ISO 9001:2015	QMS Accreditation	QEC4169	SAI Global
ISO/IEC 17025:2017	IANZ Accreditation	ACCREDITATION NUMBER 61	IANZ
BEST ENVIRONMENTAL PRACTICE-PVC	BEP-PVC	BEP-PVC-0067	ApprovalMark International
AS/NZS 1254:2010	StandardsMark™	SMKP20126 & SMKP20180	SAI Global
AS/NZS 1260:2017	StandardsMark™	SMKP20184, SMKP20185 & SMK1305	SAI Global
AS/NZS 1260:2017	WaterMark	WM 74530	ApprovalMark International
AS/NZS 1477:2017	StandardsMark™	SMK02569 & SMKP20181	SAI Global
AS/NZS 1477:2017	WaterMark	WM 74868	ApprovalMark International
AS/NZS 4130:2018	StandardsMark™	SMKP20400	SAI Global
AS/NZS 4130:2018	ISO Type 5	AMI 74891	ApprovalMark International
AS/NZS 4441:2017	StandardsMark™	SMKP20682	SAI Global
AS/NZS 4765:2017	StandardsMark™	SMK02570	SAI Global
AS/NZS 61386.21:2015	S-Mark	LIC 2901 & LIC 2910	Bureau Veritas

IPLEX PIPELINES NZ THE COMPANY

Iplex is one of New Zealand's leading manufacturers and suppliers of plastic pipeline systems. Iplex provides products and services throughout New Zealand and to export markets around the Pacific and other international markets. Iplex has manufacturing operations in Palmerston North, Christchurch and Ashburton, as well as access to the Iplex Australian network.

Iplex has been manufacturing plastic pipelines since 1938 and with over 80 years of industry service and technical experience, Iplex is well positioned to ensure that projects are delivered successfully.

Energy and Communications is an important sector for Iplex NZ and there is a wide range of conduits, ducts and fittings available for new development and maintenance projects. The range covers electrical, communication and gas.

Iplex also services the following industry sectors:

Civil: Iplex provides a wide range of solutions for wastewater, drainage and potable water pipeline projects. Manufacturing both PE (Polyethylene) & PVC (Polyvinylchloride) for both pressure and non-pressure (gravity fed) pipeline systems including civil infrastructure, drainage systems and roading systems.

Plumbing: The Iplex plumbing sector covers pipes and fittings used within the property boundary. This includes reticulation of potable and non-potable water, sanitary plumbing, wastewater, drainage and gas reticulation. Iplex have the capabilities of supplying drain, waste and vent pipes and fittings, rainwater systems, traps and accessories.

Rural: Iplex also service the rural market providing pipes and fittings for rural use. Iplex provide systems for irrigation, stock water, land drainage, culverts and farm dairy effluent.



Iplex Pipelines manufacturing plant and distribution hub in Palmerston North, New Zealand.

ENERGY & COMMUNICATIONS SPECIFICATION AND INSTALLATION GUIDE, JUNE 2024

LIMITATIONS

The information contained in this document is current as at June 2024 and is based on data available to Iplex Pipelines NZ Ltd at the time of going to print.

All photographic images are intended to provide a general impression only and should not be relied upon as an accurate example of Iplex Pipelines NZ Ltd products installed in accordance with this document or the referenced compliance documents.

This publication replaces all previous Iplex Pipelines NZ design information and literature relating to Iplex Pipelines NZ Ltd Energy & Communications products. Iplex Pipelines NZ Ltd reserves the right to change the information contained in this document without prior notice. It is your responsibility to ensure that you have the most up to date information available. You can call toll free on 0800 800 262 or visit www.iplex.co.nz to obtain current information.

Iplex Pipelines NZ Ltd has used all reasonable endeavours to ensure the accuracy and reliability of the information contained in this document. However, to the maximum extent permitted by law, Iplex Pipelines NZ Ltd assumes no responsibility or liability for any inaccuracies, omissions or errors in this information nor for any actions taken in reliance on this information. Pipes and fittings have been shown as typical configurations, however, in some cases product dimensions may vary or be changed without notice. In all instances, the reader should contact Iplex Pipelines for clarification that the specific product is appropriate for their circumstance

TRADEMARKS

The name Iplex, Iplex Volta™, Iplex Poligas™ are registered trademarks of Fletcher Building Holdings Limited.

UNSUITABLE APPLICATIONS

Iplex® PVC and PE Electrical Conduits and Ducts and PVC or PE Communication Ducts should not be used:

- i. For any pressure or gravity water applications
- ii. At continuous service temperatures above 60°C
- iii. Without adequate support to the pipe in either, above ground or, below ground applications
- iv. Conduits and Ducts coloured orange and all Communications Ducts when exposed without protection from direct sunlight for service applications, or storage exceeding 12 months from the date of manufacture. This protection in storage can include hessian or canvas covers to allow adequate cooling air circulation. Do not use plastic sheet or film covers which will heat and damage the pipes. Protection in service can include permanent physical shading such as location under bridges or structures, or by painting with pale coloured UV. resistant, water based, paint systems.

Note: *Unprotected coloured PVC ducts including orange, green, red, lilac and salmon will exhibit some colour fading (whitening) of directly exposed surfaces during medium term storage.*

EXPOSED POLE RISER APPLICATIONS

Exposed Pole Riser Applications for Electrical and

Communications ducts *Iplex Novadrain DWV pipe to AS/NZS 1260 or Iplex Novakey PVC-U pressure pipe PN 15 to AS/NZS 1477 can be used for permanently exposed protective ducts for Pole Riser applications without painting or shading.*

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