

POLIPLEX™ Polyethylene Pressure

Compliance: Manufactured in accordance with AS/NZS 4130 'PE Pipes for Pressure Applications' using pre-compounded materials conforming to AS/NZS 4131 'PE Compounds for Pressure Pipes and Fittings'. Iplex PE pressure pipes are independently certified in accordance with the test requirements of AS/NZ 4130. Standards Mark License number SMK20400.

Product Codes:

POLIPLEX™ 80 PE Pressure Pipes (AS/NZS 4130 Series 1)
2600 Series - PE 80 Medium Density Polyethylene (MDPE) pipes,
HDS* = 6.3 MPa
Colour Options - Blue with Black Stripes (BUTS), Black with Blue Stripes (BTS),
Black with no Stripes (B)

POLIPLEX™ PE 100 100 PE Pressure Pipe (AS/NZS 4130 Series 1)
3500 Series - PE 100 High Performance Polyethylene (HPPE) pipes
HDS* = 8 MPa
Colour Options - Royal Blue, Black (B)

POLIGAS™ PE Gas Pipe (AS/NZS 4130 Series 2) (Nominal OD Series)
230 Series - PE 80 Gas Pipes, SDR 11 (4.2 Bar maximum working pressure for
Natural Gas applications)
Colour Options - Yellow, Black with Yellow Stripes

POLIGAS™ PE Gas Pipe (AS/NZS 4130 Series 3) (Nominal ID Series)
200 Series - PE 80 Gas Pipes (4.2 Bar maximum working pressure for Natural
Gas applications)
Colour Options - Yellow

*HDS: Hydrostatic Design Stress

Joining:

- Butt Fusion. The pipe ends are heated to melting point, then brought together in a Buttfusion machine to form a homogeneous weld. The resulting joint is end load resistant and should perform under pressure similarly to the un-welded pipe.
- Electrofusion fittings. These employ an electrical heating coil, incorporated inside a moulded socket. When energised from an electrofusion control box, the coil melts the adjacent material, causing the pipe and socket to fuse together.
- Butt Fusion / Flange combination.
- Iplex recommends the use of fittings complying with AS/NZS 4129 – Fittings for polyethylene (PE) pipes for pressure applications.

Applications:

- Water distribution for town, rural and irrigation purposes
- Sewer rising mains
- Submarine pipelines for ocean outfalls
- Estuary and river crossings
- Above ground temporary and unrestrained pipelines
- Above ground fixed (restrained) pipe system
- Pipeline renovation liners
- Sleeve pipes for corrosion or mechanical protection
- Chemical process pipe work
- Compressed air
- Sub-soil drainage (when slotted)
- Dredge discharge lines
- Mine tailings disposal
- Trenchless installations, including directional boring
- Natural gas reticulation
- LPG reticulation
- Landfill gas extraction
- Acids, alkalis and aggressive chemicals*

*Refer to 'A Guide to Chemical Resistance of Thermoplastic and Elastomeric Materials' - available from IPLEX Pipelines

Fusion Welding Procedure: Refer to the PIPA Guidelines for butt fusion and electrofusion welding procedures – www.pipa.com.au. Tensile testing of fusion welds to be in accordance with ISO/DIS 13953.

Length: 12 metre lengths are standard.

Design & Installation: POLIPLEX pipe should be designed and installed in accordance with the following Standards.

- **Buried Structural Design:**
AS/NZS 2566 Part 1 and supplement 1. "Buried Flexible Pipelines - Structural Design"
- **Detailed Installation and Site Pressure Testing:**
AS/NZS 2566 Part 2 "Installation"
AS/NZS 2033 Installation of polyethylene pipe systems



POLIplex DN 500 PN PE100 pressure pipe coloured black with blue jacket identifying it as a pressure water mains, Manawatu.

Limitations: Polyethylene pipes are not suitable for use in the following applications:

- As a conductor for earthing electrical appliances
- All fire rated applications
- Exposure to direct sunlight in service (except black pipe)
- Pressure pipes in continuous services up to 60°C internal or external temperature, where provision for pressure derating has not been made
- Without adequate support to the pipe in above ground and below ground applications
- Where working pressure and surge pressure exceeds the nominated pressure rating of the pipe
- Where incorrect depth of cover is applied.
- Without adequate support to the pipe both in above ground and below ground applications
- Without adequate thrust support
- Where depth of cover is less than:
 - 300mm where pipeline is not subject to vehicular loadings
 - 450mm where pipeline is subject to vehicular loadings not in roadways
 - 600mm where pipeline is subject to vehicular loading in sealed roadways
 - 750mm where pipeline is subject to vehicular loading in unsealed roadways
 - 750mm where pipeline is subject to construction equipment loadings
- Without provision for fatigue design, to accommodate dynamic stresses where appropriate (in accordance with published PIPA guidelines)
- Where working pressure plus surge/cyclic pressure exceeds the nominated pressure performance rating of the pipe

PRODUCER STATEMENT

POLIPLEX™ Polyethylene Pressure

POLIPLEX™ Polythene Pipe Dimensions to AS 4130 Series 1 (mm)																				
		SDR41		SDR33		SDR26		SDR21		SDR17		SDR13.6		SDR11		SDR9		SDR7.4		
PN for PE80		3.2		4				6.3		8		10		12.5		16		20		
PN for PE100		4				6.3		8		10		12.5		16		20		25		
DN	Min O.D. (mm)	Max O.D. (mm)	Mean Wall	Mean I.D.	Mean Wall	Mean I.D.	Mean Wall	Mean I.D.	Mean Wall	Mean I.D.	Mean Wall	Mean I.D.	Mean Wall	Mean I.D.	Mean Wall	Mean I.D.	Mean Wall	Mean I.D.	Mean Wall	Mean I.D.
75	75	75.7	-	-	2.5	70.4	3.1	69.2	3.9	67.6	4.8	65.8	5.9	63.7	7.2	61.0	8.9	57.6	10.9	53.6
90	90	90.9	-	-	3.0	84.5	3.7	83.0	4.6	81.3	5.7	79.0	7.0	76.5	8.7	73.1	10.7	69.1	13.0	64.5
110	110	111	2.9	104.7	3.6	103.2	4.6	101.3	5.6	99.2	7.0	96.5	8.6	93.3	10.5	89.4	13.0	84.5	16.0	78.5
125	125	126.2	3.3	118.9	4.1	117.3	5.1	115.4	6.3	112.9	7.8	109.9	9.7	106.1	12.0	101.5	14.8	96.0	18.1	89.4
140	140	141.3	3.8	133.1	4.6	131.4	5.8	129.1	7.1	126.4	8.8	123.1	10.9	118.8	13.4	113.9	16.6	107.6	20.2	100.3
160	160	161.5	4.2	152.3	5.2	150.4	6.6	147.6	8.1	144.5	10.0	140.7	12.4	135.9	15.4	130.0	18.9	123.1	23.1	114.6
180	180	181.7	4.7	171.5	5.9	169.2	7.3	166.3	9.1	162.7	11.3	158.3	14.0	152.8	17.3	146.3	21.2	138.5	25.9	129.1
200	200	201.8	5.2	190.5	6.6	187.7	8.1	184.6	10.1	180.6	12.5	175.8	15.5	169.9	19.2	162.5	23.6	153.7	28.8	143.3
225	225	227.1	5.8	214.4	7.3	211.5	9.1	207.9	11.4	203.3	14.1	197.8	17.5	191.1	21.6	182.9	26.5	173.1	32.4	161.3
250	250	252.3	6.6	238.0	8.1	234.9	10.1	230.9	12.5	226.1	15.6	220.0	19.4	212.4	23.9	203.4	29.4	192.4	36.0	179.2
280	280	282.6	7.3	266.7	9.1	263.1	11.3	258.7	14.1	253.0	17.5	246.3	21.7	237.9	26.7	227.8	33.0	215.3	40.3	200.7
315	315	317.9	8.1	300.2	10.2	296.0	12.8	290.9	15.8	284.9	19.7	277.1	24.4	267.9	30.1	256.3	37.1	242.3	45.2	226.1
355	355	358.2	9.2	338.2	11.5	333.6	14.3	327.9	17.8	321.0	22.2	311.1	27.5	301.6	33.9	288.8	41.7	273.2	51.0	254.6
400	400	403.6	10.3	380.0	13.0	375.8	16.1	369.5	20.1	361.5	24.9	351.9	30.9	339.9	38.2	325.4	47.0	307.8	57.4	287.0
450	450	454.1	11.6	428.9	14.5	423.0	18.1	415.8	22.6	406.8	28.1	395.9	34.8	382.4	43.0	366.1	52.8	346.5	64.7	322.7
500	500	504.5	13.0	476.3	16.1	470.0	20.1	462.0	25.1	452.0	31.1	440.0	38.7	424.9	47.7	406.8	58.7	384.9	71.7	358.9
560	560	565	14.4	533.7	18.1	526.3	22.5	517.5	28.1	506.4	34.9	492.7	43.3	475.9	53.4	455.8	66.1	430.3	89.4	383.7
630	630	635.7	16.2	600.4	20.3	592.2	25.4	582.1	31.5	569.8	39.2	554.4	48.7	535.5	60.1	512.6	74.4	484.1	101.7	432.7
710	710	716.4	18.3	676.5	22.9	677.3	28.6	655.9	35.6	641.9	44.3	624.6	54.9	603.4	68.5	576.2	82.9	547.4	117.7	489.9
800	800	807.2	20.6	762.3	25.8	752.0	32.2	739.2	40.1	723.4	49.8	703.9	61.8	680.0	76.4	650.8	93.4	616.8	-	-
900	900	908.1	23.2	857.8	29.1	846.0	36.2	831.7	45.1	813.9	56.3	791.7	68.5	764.9	86.0	732.2	105.1	694.0	-	-
1000	1000	1009	25.8	952.9	32.2	940.1	40.2	924.1	50.2	904.1	62.4	879.7	77.3	852.3	95.5	813.5	116.7	771.1	-	-
1200	1200	1210	31.0	1143.1	38.6	1127.8	48.3	1108.4	60.2	1084.6	74.9	1062.3	92.8	1019.6	114.6	975.8	-	-	-	-
1400	1400	1410	36.2	1332.6	45.1	1314.8	56.0	1293.0	70.6	1264.8	87.1	1231.8	108.9	1188.8	134.7	1135.6	-	-	-	-
1600	1600	1610	41.2	1522.3	51.5	1502.0	64.7	1476.1	80.1	1444.8	98.9	1407.2	123.6	1357.8	-	-	-	-	-	-
1800	1800	1816.2	46.1	1712.7	58.3	1688.4	72.8	1662.8	90.1	1628.0	111.3	1585.6	139.1	1527.0	-	-	-	-	-	-
2000	2000	2018	51.3	1906.4	64.7	1879.4	80.8	1847.4	100.1	1808.9	123.6	1761.9	154.5	1696.1	-	-	-	-	-	-

Minimum order quantities may apply.



DN710, PN12.5, PE100 sewer rising main being prepared for installation by horizontal directional drilling. Pipe is black with a cream coloured jacket, identifying it visually as a pressure sewer in accordance with AS/NZS 4130, Christchurch City.

POLIGAS™ Gas Pipe Dimensions for AS 4130 Series 3 (Nominal ID Series)			
		SDR11	SDR9
Nominal Size DN	Mean O.D. (mm)	Mean Wall (mm)	Mean Wall (mm)
10	16.1*	-	1.7*
15	21.6	-	2.6
20	26.8	2.5	-
25	33.5	3.2	-
32	42.2	4.0	-
50	60.5	5.7	-
80	89.0	8.5	-
100	114.4	10.9	-

*IPLEX Pipelines Specifications