

***Thank You For Requesting Your
FREE PVC Information Booklet s Report...***

**You'll Find Your FREE Report Enclosed...
But First, An Important Message!**



From the desk of Victor Little :Owner & Director of Economic Piping Solutions (DEPS).

Dear Sir / Madam),

As you can see I've attached this letter. To Your free Pvc information booklet. Why have I done this? Actually, there are 2 good reasons.

1. I've got something important to tell you so I wanted to get your attention. I thought I would risk looking a bit silly, as long as I got your attention and you read this letter ... hopefully I have done that.
2. And second, I thought I'd use this opportunity to send this message. You see, **this report is about delivering fast and efficient highly specialized pipe joining Fabrication methods and screening systems to the mining, drilling, environment, civil, plumbing and drilling industry ...** and how with my reputation for quality and service you'll no longer have to worry about solving product emergencies that often bring on-site productivity to a standstill... **This report gives you 5 Compelling Reasons to contact me about the incredible benefits you can access when it comes to delivering top quality, economic piping solutions designed and manufactured to suit your requirements.** But more importantly, it gives you a simple, 100% guaranteed way to use my fast, reliable and efficient team of experts to start and complete your project... and get it to your site anywhere on the planet, on time, anytime. And most likely, you're a busy person with dozens of things to do. This valuable information will help you select the correct pipe for your next project, even if it is supplied by someone else, we understand we can't supply to everyone.

So if you're someone who likes to know your dealing with a supplier who has all the answers to meet your demands for any specific requirements... if you would like to know where the best place to turn for a vast range of piping and threads that are well beyond the norm NOW... and have that knowledge available at your fingertips... then please stop what you are doing and read this **Report and Frequently Asked Questions sheet** enclosed.

They reveal what you must know and do to dramatically overcome any difficulties you're likely to face on-site when things go wrong. They give you the keys to get on the front foot and provide FAST TRACK piping supply solutions. It won't take long... but it will give you a good idea on your options.

Warm Regards,

Victor Little

P.S. Don't let this opportunity pass you by. I urge you to take ten minutes off from your very busy schedule and read the enclosed material. If you want to know there's a company that can fully support you and put in the hard yards to get the job done fast and delivered to you wherever you are ...then read the enclosed material now ... it's that important.

P.P.S. SAVE Time & Get Peace Of Mind! When you need specialized piping design Fabrication, screens and casing "**DEPS**" cans save you lot's of worry and pain. With **over 20 years experience in the mining industry** our reputation speaks for itself. Call 1300 133 000 or send us an email to sales@deps.com.au ...NOW!

P.P.P.S. Please use this report so you ensure the PVC product you purchase is fit for purpose. Do not mess with quality; it will hurt you in the end.

PVC Information Booklet



1300 133 000



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UPVC Borecasing and Screens



Deps uses Upvc virgin pipe manufactured in Australia under As1477 and has a watermark certificate.

This material has been used in Irrigation and water supply since the early 1960's

It has now been incorporated into the minimum drilling standards manual.

Pvc pipe is now used due to its high strength and light weight, plus it has high resistance to chemicals.

85% plus water wells are now cased in Upvc.

Some of the applications Upvc is now used in -
Irrigation bores
Stock and Domestic bores.
Environmental bores.
Dewatering bores
Re-Charge bores.
Industrial application
Potable water



Our UPVC Borecasing and Screens Stack up to the following criteria

- ☒ **Australian Made**
- ☒ **5 Year Guarantee**
- ☒ **Meets AS1477**
- ☒ **Non Tainting**
- ☒ **UPVC**
- ☒ **Virgin Material**
- ☒ **Manufacturer certified**
- ☒ **Pass's drop test**
- ☒ **Can be slotted**
- ☒ **Can be threaded**
- ☒ **High Impact strength**
- ☒ **High Collase pressure**
- ☒ **Free Delivery Major Cities**
6m Length



***Stop!!!**

Do not buy any PVC pipe until you read this!

Recently there has been a influx of so called cheap pipe into the market, a couple of months ago a driller came in with some PVC pipe on the back of his truck. It was broken into bits what had happen was that he had picked it up about a meter in the air and accidentally dropped it. It was then that the pipe broke into pieces. The driller was not happy to use it as bore casing or screen, so we replaced it with virgin UPVC pipe made to AS1477 Australian Standard, this he was happy to use and put down the hole.

Other events we have seen with regards to cheap imports are 5.8 m lengths not 6m as Australian pipe is, wrong wall thickness and of course brittleness. Do you really think that an inspector goes overseas and checks to see that the pipe is made to our standard?

So next time you need borecasing or screens that meets your high standard and your happy to use then make sure that it is Australian made pipe. At depts we only keep pipe of the highest quality and it's certified.



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UPVC Screen Slotting



1300 133 000



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PVC Open Area- Slotted Screens

PIPE SIZE	WIDTH OF SLOTS	SPACING	ROWS	OPEN AREA %	Max L/S 1.83 M/MIN. VELOCITY Per 3M SCREEN LENGTH
20mm CL18	0.4mm	6mm	2	3.81	0.25
25mm CL18	0.4mm	6mm	3	4.25	0.35
32mm CL18	0.4mm	6mm	3	4.39	0.44
40mm CL18	0.4mm	6mm	3	3.5	0.43
50mm CL18	0.4mm	10mm	3	2.4	0.3
50mm CL18	0.4mm	5mm	3	4.5	0.6
80mm CL18	0.8mm	10mm	3	5.5	1.2
80mm CL18	0.8mm	5mm	3	10.34	2.2
100mm CL12	0.8mm	10mm	4	4.6	1.7
100mm CL12	0.8mm	5mm	4	10.7	3.1
100mm CL12	1.2mm	10mm	4	8.4	2.4
100mm CL12	1.2mm	5mm	4	15.1	4.5
125mm CL9	0.8mm	10mm	4	5.3	2
125mm CL9	1.2mm	10mm	4	7.7	2.8
125mm CL12	0.8mm	10mm	4	5.5	2
125mm CL12	1.2mm	5mm	4	8	2.8
150mm CL12	0.8mm	10mm	5	4.5	2
150mm CL12	1.2mm	10mm	5	7.2	3
150mm CL12	1.5mm	10mm	5	8.8	3.6
150mm CL12	2.2mm	10mm	5	12.2	5
175mm CL12	1.5mm	10mm	6	9.6	4
175mm CL12	2.2mm	10mm	6	13.3	5.5
200mm CL12	1.5mm	10mm	7	9.3	5.6
200mm CL12	2.2mm	10mm	7	13	8

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UPVC Screen Slotting



Slotted PVC Pipe

20mm to 500mm

0.4mm to 12mm slots

***Special Orders on Request**



Perforated Pipe.

Steel, PVC, ABS and Poly

1mm to 2" Size Perforations Available



Vertical Slotting

100mm to 375Size slotting available

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PVC Pipe Dimensions and Size Guide Book



1300 133 000



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PLACE YOUR ORDER NOW!
CALL 1300 133 000

Dimensions/Size of PVC

Pressure Pipes Size O/D, I/D and Socket Length

Ph: 1300133 000
Fax: 03 5941 4148

Size	PN Rating	O/D	I/D	O/D Bell	Socket Length	Kg/M	QTY	Weight	Pack Size (m) L x W x H
25mm x 6m	PN 12	33.55mm	29.75mm	36mm	35mm	0.3kg	540		
25mm x 6m	PN 18	33.55mm	28.05mm	36mm	35mm	0.4	540		
32mm x 6m	PN 12	42.25mm	37.45mm	48mm	35mm	0.4	300		
32mm x 6m	PN 18	42.25mm	35.4mm	mm	35mm		300		
40mm x 6m	PN 9	48.25mm	44.05mm	55mm	48mm	0.4	280		
40mm x 6m	PN 12	48.25mm	42.75mm	55mm	48mm	0.6	280		
40mm x 6m	PN 18	48.25mm	40.45mm	55mm	48mm	0.8	280		
50mm x 6m	PN 9	60.35mm	55.15mm	69mm	61mm	0.7	210	882	6.2 x 1.2 x .73
50mm x 6m	PN 12	60.35mm	53.65mm	69mm	61mm	0.9	210	1134	6.2 x 1.2 x .73
50mm x 3m	PN 18	60.35mm	50.45mm	69mm	61mm	1.2	140	1008	3.4 x 1.7 x .86
65mm x 6m	PN 12	75.35mm	66.95mm	82mm	61mm	1.3	84	660	6.2 x 1.2 x .73
65mm x 6m	PN 18	75.35mm	62.0mm	89mm	61mm	1.9	84		6.2 x 1.2 x .73
80mm x 6m	PN 9	88.90mm	81.30mm	95mm	73mm	1.4	104	874	6.2 x 1.2 x .77
80mm x 6m	PN 12	88.90mm	79.00mm	95mm	73mm	1.9	104	1186	6.2 x 1.2 x .77
80mm x 6m	PN 18	88.90mm	74.6mm	99mm	73mm	2.5	104	1186	6.2 x 1.2 x .77
100mm x 6m	PN 9	114.30mm	104.60mm	124mm	99mm	2.4	67	965	6.4 x 1.2 x .81
100mm x 6m	PN 12	114.30mm	101.70mm	125mm	99mm	3.1	63	1246	6.4 x 1.2 x .81
100mm x 6m	PN 18	114.30mm	95.1mm	131mm	99mm	6.4			6.4 x 1.2 x .81
125mm x 6m	PN 9	140.20mm	128.40mm	152mm	125mm	3.5	63	945	6.3 x 1.2 x .83
125mm x 6m	PN 12	140.20mm	124.90mm	155mm	125mm	4.6	45	1242	6.3 x 1.2 x .83
125mm x 6m	PN 18	140.20mm	116.5mm	164mm	125mm	7.0			6.3 x 1.2 x .83
150mm x 6m	PN 9	160.25mm	146.85mm	170mm	125mm	4.6	33	911	6.3 x 1.2 x .78
150mm x 6m	PN 12	160.25mm	142.65mm	177mm	125mm	6	33	1188	6.3 x 1.2 x .78
150mm x 6m	PN 18	160.25mm	134.65mm	188mm	125mm	9.6	26	1513	6.3 x 1.2 x .78
175mm x 6m	PN 9	200.25mm	185.15mm	222mm	140mm	7.2	18	778	
177mm x 6m	PN 12	177.00mm	158.30mm	195mm	140mm	7.5	22	990	
177mm x 6m	PN 18	177.00mm	149.00mm	204mm	140mm	10.2	22	1346	
200mm x 6m	PN 6	225.30mm	213.80mm	236mm	150mm		15	630	6.4 x 1.2 x .78
200mm x 6m	PN 9	225.30mm	208.50mm	243mm	150mm	9.1	15	819	6.4 x 1.2 x .78
200mm x 6m	PN 12	225.30mm	203.10mm	248mm	150mm	11.8	15	1062	6.4 x 1.2 x .78
200mm x 6m	PN 18	225.30mm			150mm	15.8			
225mm x 6m	PN 12	250.37mm	225.75mm	275mm	173mm	14.5	12	1044	6.48 x 1.1 x .88
250mm x 6m	PN 12	280.40mm	252.90mm	310mm	200mm	22.2	11	1465	6.54 x 1.1 x .84
250mm x 6m	PN 18	280.40mm			200mm	25			
300mm x 6m	PN 12	315.46mm	284.45mm	345mm	249mm	28	6	1008	6.6 x 1.2 x .7

Pipe (mm)	O/D		PN 6		I/D (mm)	PN 9		I/D (mm)	PN 12		I/D (mm)	PN 18		I/D (mm)	Convert to inches
			Wall Thickness			Wall Thickness			Wall Thickness			Wall Thickness			
			Min (mm)	Max (mm)		Min (mm)	Max (mm)		Min (mm)	Max (mm)		Min (mm)	Max (mm)		
15	21.2	21.5	-	-		-	-	-	-	-	-	1.4	1.7	18.25	5/8"
20	26.6	26.9	-	-		-	-	-	1.4	1.7	23.65	1.7	2.1	22.95	3/4"
25	33.4	33.7	-	-		1.4	1.7	30.45	1.7	2.1	29.75	2.5	3	28.05	1"
32	42.1	42.4	-	-		1.7	2.1	38.45	2.2	2.6	37.45	3.2	3.7	35.35	1 1/4"
40	48.1	48.4	1.4	1.7	45.15	1.9	2.3	44.05	2.5	3	42.75	3.6	4.2	40.45	1 1/2"
50	60.2	60.5	1.6	2	56.75	2.4	2.8	55.15	3.1	3.6	53.65	4.6	5.3	50.45	2"
65	75.2	75.5	-	-	-	-	-	-	3.9	4.5	66.95	6	6	63	2 1/2"
80	88.7	89.1	2.4	2.8	83.7	3.5	4.1	81.3	4.6	5.3	79	7	7	74.5	3"
100	114.1	114.5	3	3.5	107.8	4.5	5.2	104.6	5.9	6.7	101.7	-	9.15	96	4"
125	140	140.4	-	-	-	5.5	6.3	128.4	7.2	8.1	124.9	-	-		5"
150	160	160.5	4.2	4.8	151.3	6.3	7.1	146.9	8.3	9.3	142.7	12	13.6	134.7	6"
150BC	168								10	10	148				
159BC	173					7	7	159							
175	200	200.5	-	-	-	7.1	8	185.2	-	-	-	-	-	-	
177	177.1	177.6	-	-	-	-	-	-	9.2	10.3	157.9	-	-	-	7 1/4"
200	225	225.6	5.4	6.1	213.8	7.9	8.9	208.5	10.5	11.7	203.1	-	16.2	192.9	8"
225	250	250.7	-	-	-	-	-	-	11.6	13	225.8	-	-	-	9"
250	280	288.8	-	-	-	-	-	-	13	14.5	252.9			Avail	10"
300	315	315.9	-	-	-	-	-	-	14.7	16.3	284.5	-	-	-	12"

Pipe Outside Diameter Comparison Chart

Inch	MM	PVC- U & M	Stainless Steel	Galvanized Steel	Stormwater	DWV	ABS	POLY	PVC-O
1/2	15	21.4	21.34	21.30			21.4	16	
3/4	20	26.8	26.67	26.9			26.8	20	
1	25	33.6	33.40	33.70			33.6	25	
1 1/4	32	42.3	42.16	42.40		36.35	42.3	32	
1 1/2	40	48.3	48.26	48.3		42.95	48.3	40	
2	50	60.4	60.33	60.30		55.85	60.4	50	
	63							63	
2 1/2	65	75.4	73.025	76.1		68.9			
	75				75.1			75	
3	80	88.9	88.9	88.9		82.5	88.9		
3 1/2	90		101.6	101.6	90.1			90	
4	100	114.3	114.3	114.3		110.2	114.3		121.7
	110							110	
5	125	140.2	141.3	139.7				125	
	140							140	
6	150	160.3	168.275	165.1	160.3	160.25	168.3		177.1
	160							160	
	170	177.3							
7	175	200.3	193.68			200.3			
8	200	225.3	219.08				219.1	200	231.9
9	225	250.4	244.48		225.3	250.35		225	258.9
10	250	280.3	273.05				250.4	250	285.8
	275		298.45						
	280							280	
12	300	315.3	323.85						344.9
	315						315.4	315	
	350		355.6						
	355						355.4	355	
	375	400.3							
	400		406.4				400.5		



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Schedule 40 Pipe Dimensions

Nom. Pipe Size (in)	O.D.	OD Millimeter s	Average I.D.	ID Millimeter s	Min. Wall	Wall millimeter s	Nom. Kg/m	Max. W.P. PSI**
1/8"	0.405	10.3	0.249	6.3	0.068	1.7	0.08	810
1/4"	0.54	13.7	0.344	8.7	0.088	2.2	0.13	780
3/8"	0.675	17.1	0.473	12.0	0.091	2.3	0.17	620
1/2"	0.84	21.3	0.602	15.3	0.109	2.8	0.25	600
3/4"	1.05	26.7	0.804	20.4	0.113	2.9	0.34	480
1"	1.315	33.4	1.029	26.1	0.133	3.4	0.50	450
1-1/4"	1.66	42.2	1.36	34.5	0.14	3.6	0.67	370
1-1/2"	1.9	48.3	1.59	40.4	0.145	3.7	0.80	330
2"	2.375	60.3	2.047	52.0	0.154	3.9	1.07	280
2-1/2"	2.875	73.0	2.445	62.1	0.203	5.2	1.69	300
3"	3.5	88.9	3.042	77.3	0.216	5.5	2.21	260
3-1/2"	4	101.6	3.521	89.4	0.226	5.7	2.66	240
4"	4.5	114.3	3.998	101.5	0.237	6.0	3.15	220
5"	5.563	141.3	5.016	127.4	0.258	6.6	4.28	190
6"	6.625	168.3	6.031	153.2	0.28	7.1	5.56	180
8"	8.625	219.1	7.942	201.7	0.322	8.2	8.36	160
10"	10.75	273.1	9.976	253.4	0.365	9.3	11.85	140
12"	12.75	323.9	11.889	302.0	0.406	10.3	15.68	130
14"	14	355.6	13.073	332.1	0.437	11.1	18.55	130
16"	16	406.4	14.94	379.5	0.5	12.7	24.24	130
18"	18	457.2	16.809	426.9	0.562	14.3	30.64	130
20"	20	508.0	18.743	476.1	0.593	15.1	35.99	120
24"	24	609.6	22.544	572.6	0.687	17.4	50.08	120



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Schedule 80 Dimensions

Nom. Pipe Size (in)	O.D.	OD millimeters	Average I.D.	ID millimeters	Min. Wall	Wall millimeters	Nom. Kg/m	Max. W.P. PSI**
1/8"	0.405	10.3	0.195	5.0	0.095	2.4	0.09	1230
1/4"	0.54	13.7	0.282	7.2	0.119	3.0	0.16	1130
3/8"	0.675	17.1	0.403	10.2	0.126	3.2	0.22	920
1/2"	0.84	21.3	0.526	13.4	0.147	3.7	0.32	850
3/4"	1.05	26.7	0.722	18.3	0.154	3.9	0.43	690
1"	1.315	33.4	0.936	23.8	0.179	4.5	0.63	630
1-1/4"	1.66	42.2	1.255	31.9	0.191	4.9	0.87	520
1-1/2"	1.9	48.3	1.476	37.5	0.2	5.1	1.06	470
2"	2.375	60.3	1.913	48.6	0.218	5.5	1.46	400
2-1/2"	2.875	73.0	2.29	58.2	0.276	7.0	2.23	420
3"	3.5	88.9	2.864	72.7	0.3	7.6	2.99	370
3-1/2"	4	101.6	3.326	84.5	0.318	8.1	3.65	350
4"	4.5	114.3	3.786	96.2	0.337	8.6	4.37	320
5"	5.563	141.3	4.768	121.1	0.375	9.5	6.07	290
6"	6.625	168.3	5.709	145.0	0.432	11.0	8.35	280
8"	8.625	219.1	7.565	192.2	0.5	12.7	12.68	250
10"	10.75	273.1	9.493	241.1	0.593	15.1	18.80	230
12"	12.75	323.9	11.294	286.9	0.687	17.4	25.87	230
14"	14	355.6	12.41	315.2	0.75	19.1	31.03	220
16"	16	406.4	14.213	361.0	0.843	21.4	39.90	220
18"	18	457.2	16.014	406.8	0.937	23.8	49.92	220
20"	20	508.0	17.814	452.5	1.031	26.2	61.08	220
24"	24	609.6	21.418	544.0	1.218	30.9	86.66	210



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PVC Technical Details



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PVC Pipe Technical Info.

Temperature derating.

When PVC pressure pipes are to be operated at temperatures greater than 20°C, the maximum allowable operating pressure should be reduced by applying a thermal derating factor.

When PVC pressure pipes are to be operated at temperatures greater than 20°C, the maximum allowable operating pressure should be reduced by applying a thermal derating factor.

Table 1
Temperature Degrees Derating factor

Temperature Degrees	Derating factor
20	1
30	0.87
40	0.7
50	0.58

The reduced maximum allowable operating pressure under static pressure is determined by multiplying the PN rating of the pipe by the derating factor given in the Table 1 above

Material Safety Data Sheet

Product Name: Poly (Vinyl Chloride)(PVC) pipe, conduit

Other Names & Variants: Polyvinyl chloride, unplasticised PVC, unmodified PVC (UPVC, MPVC)

Manufacturer's Product Code: Various

Dangerous Goods Class & Subsidiary Risk: Not classified as hazardous according to criteria of Work Safe Australia.

Hazchem Code: No code allocated

Poisons Schedule Number: Not listed

Physical Description / Properties

Appearance: Opaque rigid solid tubes, diameters from 15 to 300mm, lengths

up to 6m, various colours (eg. white, grey, blue, orange), with or without jointing sockets.

Boiling Point / Melting Point: Softening point: >75°C.

Decomposition initiates at approximately 140°C.

Vapour Pressure: Not applicable

Relative Density: 1.3 – 1.6

Flash Point: Not applicable

Flammability Limits: Combustible, Self-extinguishing

Solubility in water: Insoluble

Ingredients:

Chemical Name: CAS Number: Proportion:

Poly (Vinyl Chloride) Polymer 9002-86-2 70 – 80%

Fillers (e.g. Calcium Carbonate) 471-34-1 3 – 16%

Lubricants (e.g. Polyethylene Wax) Not Applicable 0.8 – 1.6%

Modifiers (e.g. Chlorinated Polyethylene, Acrylics) 0 – 5%

Stabilisers (e.g. Stearates & Sulphates of Calcium Not applicable 1.6 – 4%

Zinc and lead)

Pigments (e.g. Titanium Dioxide) 13463-67- 1.2 – 4%

HEALTH HAZARD INFORMATION

Health Effects:

General: There are no significant health hazards associated with PVC pipe products under normal conditions of use or from mechanical working or forming the product.

All additives are encapsulated within the polymer matrix and should present no hazard under conditions of normal use and good occupational work practice.

For pipes intended for use with potable water, extraction of metals and residual monomer is limited to safe levels by requirements of Australian Standards. Peripheral effects may arise from combustion or misuse.

See section PRECAUTIONS FOR USE. No listed carcinogenic, mutagenic or teratogenic effects.

However it is recommended that PVC pipes the purpose of storing potable water (eg. as may be used in campervans or mobile homes), or in systems where water is not continuously or regularly replaced (eg. hydroponic systems where water is continuously recycled). For such applications potable water pipes using calcium-zinc or other non-lead based systems may be used. Has As1477 printed on the pipe and the manufacturer has the certificate of proof.

MSDS & Technical Information



Acute:

Swallowed: There are no known health effects for the ingestion of PVC.

Eye and Skin: Inapplicable to the solid except for mechanical injury. Dust from sawing may affect eyes if not protected.

Hydrogen Chloride and other fumes emitted during combustion cause irritation to the eyes and skin.

Inhaled: Inapplicable to the solid product. Inhalation of combustion products, especially hydrogen chloride, causes irritation of the respiratory tract.

Individuals with bronchial asthma and other chronic obstructive respiratory diseases may develop bronchia-spasm if exposure is prolonged.

Chronic: Inhalation of PVC dust created by mechanical working has been reported to cause fine nodules visible on chest x-rays.

Contact with heavy concentrations of gaseous combustion by-products may result in formation of permanent scar tissue.

First Aid:

If swallowed: No harmful effect.

No LD50 data is available for product

Eye and skin: No specific treatment. Treat mechanical injury and dust contact by normal procedures.

Gaseous combustion by-products: irrigate with fresh water, seek medical assistance if effect persists.

If molten material contacts skin and adhere, cool quickly with running water. DO NOT attempt to remove. Seek medical advice.

Inhaled: Gaseous combustion by-products: remove from source of exposure. Seek medical advice.

First Aid Facilities: No special requirements

Advice to Doctor: Treat symptomatically

MSDS & Technical Information



Exposure Standards: No value assigned by National Health & Medical Research Council.

A limit of 10mg/m³ for nuisance dust is recommended.

Engineering Controls: Stability: Stable Incompatibility: None

Personal Protection: No specific protection required. Gloves are advisable when handling cut ends of pipe.

May shatter if impacted under stress, particularly when cold.

When working with the product, normal safety glasses are recommended, and dust mask if sawing with abrasive wheel or sanding.

Flammability: Combustible, Self-extinguishing

SAFE HANDLING INFORMATION

Storage & Transport: No specific requirements. Road does not consider PVC pipe products hazardous for transportation according to Transport of Goods and Rail Acts.

Handling Injury can be sustained by rolling pipes.

Unpack crates and bundles on a flat surface, and ensure free stacks are adequately chocked.

Do not climb on stacks.

Material Working: Normal safe practices should be employed when working with the material: a well ventilated area and the use of dust masks and eye protection when cutting.

MSDS & Technical Information



When heating for bending, or other forming, use hot water or air with appropriate safeguards. Use of an open flame is inadvisable (see below).

Spills & Disposal: Spillage: not applicable Disposal: Recycle where possible. Refer to appropriate environmental protection agency/authority.

Normally suitable for disposal, as general waste land fill. Can be recycled and reground

Fire / Explosion Hazard: Combustible, Self-extinguishing. No explosion risk. If forced to burn will emit dense acid fumes containing noxious and toxic compounds including carbon monoxide, carbon dioxide and hydrogen chloride.

Carbon dioxide is an asphyxiate.

Carbon monoxide is toxic. Hydrogen chloride is highly acidic and a severe irritant in low concentrations.

All are potentially lethal in high concentrations with sustained exposure. Hydrogen chloride has a highly detectable pungent odour and is intolerable in very low concentrations.

The risk of exposure to hazardous levels for sustained periods is therefore considered low.

Fire-fighting Procedures: Wear fully protective body suit with self-contained breathing apparatus (SCBA) to prevent contact with gases produced during combustion.

Fire-extinguishing Media: Use water, water fog or foam to extinguish fires. Carbon dioxide or dry chemical are suitable, but are not preferred, as lack of cooling capacity may result in re-ignition.

Pipe Material Properties & Strengths

MECHANICAL PROPERTIES	PVC	ABS	POLYETHYLENE MDPE	POLYETHYLENE HPDE
Relative Density	1.42 - 1.48	1.05	0.94	0.95
Ultimate Tensile Strength	52 MPa	30 MPa	19 MPa	24 MPa
Direct Tensile Strength				35 MPa
Break Elongation (%)	50-80%	25%	600%	800%
Yield Elongation (%)			9%	16%
Elastic Flexural Modulus	2.7-3.0 GPa	2000 MPa		32 MPa
Shear Modulus	1.0 GPa			
Torsion Modulus				260 MPa
Short Term Creep Rupture	44 MPa			
Long Term Creep Rupture	28 MPa			
Compressive Strength		42 MPa		
Maximum Operating Temp.		80 Degrees		

Chemical Resistance Chart

	PVC	ABS	POLYETHYLENE	POLYPROPYLENE
Weak acids	GOOD	GOOD	GOOD	EXCELLENT
Strong acids	GOOD	POOR	LIMITED	EXCELLENT
Alkalis	EXCELLENT		GOOD	GOOD
Aggressive soils	GOOD	GOOD	GOOD	GOOD
Sea water	EXCELLENT	GOOD	EXCELLENT	EXCELLENT
Aromatic hydro carbons	DO NOT USE	NO GOOD	LIMITED	GOOD
Organic solvents	POOR	NO GOOD	GOOD	GOOD

PVC Tensile Collapse Strength

Pipe Size	Collapse Pressure (psi)*		Burst Pressure (psi)*		Tensile Strength (lb)*	
	PN 12	PN18	PN12	PN 18	PN 12	PN18
15	1,100	2,700	300	425	264	344
20	630	1,590	240	345	362	487
25	520	1,270	225	315	581	727
32	300	770	185	260	859	878
40	220	590	165	235	954	1,225
50	140	390	140	200	942	1,542
65	180	450	150	210	2,093	2,890
80	120	320	130	185	2,786	3,839
100	70	210	110	160	4,119	5,823
125	50	150	95	145	5,491	6,864
150	40	140	90	140	7,165	11,384
200	30	100	80	125	10,387	17,332
250	20	85	70	115	15,086	25,124
300	16	80	65	115	19,548	34,430

Metric Measurements						
Pipe Size NB	Collapse Pressure (mt)*		Burst Pressure (mt)*		Tensile Strength (kg)*	
	PN 12	PN18	PN12	PN 18	PN 12	PN18
15	773.4	1,898.3	210.9	298.8	119.7	156.0
20	442.9	1,117.9	168.7	242.6	164.2	220.9
25	365.6	892.9	158.2	221.5	263.5	329.8
32	210.9	541.4	130.1	182.8	389.6	398.3
40	154.7	414.8	116.0	165.2	432.7	555.7
50	98.4	274.2	98.4	140.6	427.3	699.4
65	126.6	316.4	105.5	147.6	949.4	1,310.9
80	84.4	225.0	91.4	130.1	1,263.7	1,741.3
100	49.2	147.6	77.3	112.5	1,868.3	2,641.3
125	35.2	105.5	66.8	101.9	2,490.7	3,113.5
150	28.1	98.4	63.3	98.4	3,250.0	5,163.7
200	21.1	70.3	56.2	87.9	4,711.5	7,861.7
250	14.1	59.8	49.2	80.9	6,842.9	11,396.1
300	11.2		45.7		8,866.8	

1300 133 000



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Conversion of PSI to Ft head & Metre head

Pipe (mm)	Convert to inches	O/D	PN 9			PN 12			PN 18		
			Wall Thickness Min (mm)	Collapse Pressure		Wall Thickness Min (mm)	Collapse Pressure		Wall Thickness Min (mm)	Collapse Pressure	
				PSI	Kg/Cm2		PSI	Kg/Cm2		PSI	Kg/Cm2
15	1/2"	21.20							1.40		
20	3/4"	26.60				1.40	144.97	10.14	1.70	268.52	18.79
25	1"	33.40	1.40	71.54	5.00	1.70	131.83	9.22	2.50	433.84	30.36
32	1 1/4"	42.10	1.70	64.45	4.51	2.20	144.74	10.13	3.20	462.38	32.36
40	1 1/2"	48.10	1.90	60.43	4.23	2.50	138.30	9.68	3.60	442.16	30.95
50	2"	60.20	2.40	60.73	4.25	3.10	136.11	9.52	4.60	468.76	32.81
65	2 1/2"	75.20				3.90	140.54	9.83			
80	3"	88.70	3.50	60.06	4.20	4.60	139.06	9.73			
100	4"	114.10	4.50	59.52	4.16	5.90	137.52	9.62			
125	5"	140.00	5.50	59.36	4.15	7.20	135.01	9.45			
150	6"	160.00	6.30	59.37	4.15	8.30	139.73	9.78	12.00	441.39	30.89
175	7"	200.00	7.10	43.40	3.03						
177	7 1/4"	177.10				9.20	139.80	9.78			
200	8"	225.00	7.90	41.73	2.92	10.50	100.11	7.00			
225	9"	250.00				11.60	98.81	6.91			
250	10"	280.00				13.00	98.91	6.92			
300	12"	315.00				14.70	100.51	7.03			



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FAQ- For PVC pipes and Components.

What does PVC mean?

It stands for Plastic Vinyl Chloride; this is a common thermoplastic resin that is extruded into pipe and many other products.

What is MPVC?

MPVC stands for - modified Plastic Vinyl Chloride

What is UPVC?

UPVC stands for - Unplasticised Poly Vinyl Chloride.

What is the difference between UPVC and MPVC?

MPVC was designed so that the integral working pressure of the pipe would not be effected, but would save on material costs as using this technology the wall thickness could be made smaller thus saving on material, but meeting all specifications

Can I use MPVC or OPVC in my water Bore?

No – the MPVC or OPVC pipe is manufactured with a lot smaller wall thickness than UPVC so its collapse pressure is too low, to withstand the ground or grouting pressure. Many Councils and water authorities have banned this pipe from being used in bores.

What sizes does PVC come in?

12mm to 450PVC. There are many sizes in between but some sizes are not of standard and will only be manufactured to sufficient quantities

What is PVC-O

It is orientated process of manufacturing PVC pipe, it is first extruded and then blown up to size by air, this gives it a larger inside diameter relative to the class, by creating a stronger molecular bond.

What classes does PVC get manufactured in?

PVC pipe is made in many different wall thicknesses and this is stated as "Class". So there is Class 4.5 this is the thinnest, Class 6, Class 9, Class 12 and Class18 the highest pressure pipe

My bore has hot water can I still use PVC bore casing?

Pvc pipe can handle temperatures up to 60 deg C , but at this temperature the pipe pressure it can handle is de-rated. At 20 deg C the rating is standard.

What is the life of PVC?

In the right conditions 100 years can be expected, but if in the direct sunlight then it will deteriorate a lot quicker.

Can PVCU pipes be installed above ground?

Yes, but it would be preferred if they were protected from exposure to UV.

Can PVC pipes be exposed to UV?

After a period of time pvc will break down, first it will change color slightly and then become brittle, if exposed is for a long time, painting of the pipe with a soft color of acrylic paint will slow the aging process significantly.

Are PVC pipes recyclable?

Yes, PVC pipe can be reground and used in making pipes of a lower quality,

Pressure pipes can only be made from virgin material

FAQ for PVC



When Gluing PVC do I need a Primer?

A primer assures a perfect and stronger glue joint as it can take away all impurities that could affect the joint strength.

It also may be required by the standard you are working under, e.g. water board.

Can PVC burn or catch on fire.

PVC is combustible, it will not continue to burn once the fire source has been removed.

Can Pvc pipes be used for compressed air system?

No. HDPE or poly pipe is used for this.

Do Cold temperatures have any effect on PVC?

Cold temperatures have very little effect on PVC pipes; it is used extensively in areas where the temperature is below freezing regularly.

What does NB on the pipe size mean?

NB stands for Nominal Bore; PVC pipe has a standard outside diameter for each size, e.g. 100mm PVC pipe is approximately 114mm od. No matter what pressure rating. This is so that only one pipe fitting has to be made for all pressure ratings.

What does PN12 mean?

This is the rated pressure the pipe can handle internally, 100mm or 4" PVC pipe is manufactured in class 4, 6, 9, 12, 15 and class 18, this means the pipe can handle 180m head of water pressure, class 4 is 40m head, the class relates to pipe thickness.

What does DN12 mean?

It means Diameter Nominal. It relates to the inside diameter depending on the rating of pipe. The 12 is the rating.

FAQ for PVC



What is AS1477?

This is a standard that all pipe in Australia should be made to, when used for potable water. Many pipe and ones that come from overseas have this marked on it, but are not made to it as the manufacturer is not authorized or tested to ensure that they can make the pipe to this standard.

Is lead still used in manufacturing?

Lead has been banned in Australia for manufacturing PVC; there is no guarantee with imported pipe made overseas.

When gluing PVC pipes together how long do I have to wait?

PVC glue takes 24 hrs to reach full strength, most people use the pipe instantaneously, in a bore often there is water minimizing the dead hanging weight. Some drillers use screws on each joint so as to hold the joint in place until glue reaches its full strength.

Do PVC pipes leach chemicals when in the ground?

PVC pipes are used in environmental testing bores as there is no leaching from the PVC pipes to upset the chemical ground water readings.

What is the life expectancy of PVC pipes underground?

When pipes are underground and not exposed to UV, there is a life expectancy of 50 to 100 years. At this point in time pipes in the ground for over 50 years have showed no signs of degrading.

Is PVC brittle?

Compared to other plastic material, PVC is very brittle and will shatter when hit by a strong force like a hammer or when dropped. Imported PVC pipe has been found to be very brittle and easily breaks when mishandled.

FAQ for PVC



Do you know if your PVC pipe meets AS1477?

Pvc pipe is used in the drilling industry for many reasons some of which are Borecasing and screens in irrigation and environment bores, dewatering bores in the civil sector and the mining sector, They can be used for explosive, monitoring, water and uranium collection.

When pipe is manufactured in Australia by reliable manufactures such as Pipemakers, Vinindex, Tyco and Iplex you can be assured that their pipe is of high quality as they are all committed to a high quality control regime.

The majority of pipe used in the above areas are made to the AS1477 standard, this is also called for in the Minimum standards for drillers and many Council regulations, the guideline written for licensed drillers to follow. If inspected by a drill Inspector and the bore is found not to meet the Min. Standard then the driller can be made to fix the problem or be prosecuted.

If the manufacture does not meet the AS1477 standards, they too will feel the ramifications and may lose their licence to manufacture pipe approved to AS1477 standard.

When pipe is manufactured to be used in an environmental monitoring project the consultants demand that there is no printing on the pipe as if any of the printing chemicals used leach's into the fluid being monitored it will cause the readings of the ground water to be wrong.

All pipes used in monitoring situations are to be non leaching to avoid contamination of the bore being monitored.

50mm cl18 has been the standard pipe used in monitoring wells over the last 17 years, but with the advent of new machines such as the Geoprobe, sizes such as 20 or 32mm Pvc pipe have become regularly used as these sizes fit inside the drill rods that are pushed down, so when these rods are extracted the Borecasing and screens are in place. A very quick method of creating monitoring bores.

What is needed to meet all the needs of the environmental consultant, who is usually in charge of the environment project, is the following-

- 1- The manufacturers Specifications are meet
- 2- The pipe needs to be non leaching
- 3- Meets As1477 sizing specifications.
- 4- A secure method of joining the pipes together.
- 5- Pipe sealing method, to ensure integrity of the bore.
- 6- Collapse strength meets the bore depth.

When pipe is manufactured overseas, how can we be ensured that our pipe has the manufacturing construction specifications meet? The answer is - you cannot, as the manufacture would not have a inspector from Australia checking to see the pipe coming off the production line meets AS1477.

Issues that have arisen when drillers have bought this cheap overseas manufactured pipe or even made here by an inferior manufacturer are:- The wall thickness is not consistent to the class of pipe manufactured. The ends look and measure correctly but when shortening the pipe for clients needs the pipe is found to taper and the wall is much thinner, no one would see this unless you cut the pipe, you would find out when installing the pipe in your deep hole just drilled and the pipe breaks in half as it cannot hold the weight of the pipe stem.

Brittleness of the pipe is at a much higher level and any quick or sudden movement or jerk of the pipe will cause it to smash to pieces, this is even more relevant when the pipe is slotted. We have seen a driller who picked up some 100mm cl12 Borecasing and dropped it less than half a meter and the pipe smashed into pieces, he then tested our own pipe by doing the same thing and nothing happened, proving the quality of Australian made pipe.

When slotting pipe from a poor manufacture it blew to pieces every time we tried to slot it yet we had just finished slotting hundreds of pipe from Australia's No 1 pipe manufacturer with no problems at all.

On occasions when the pipe has arrived at the depot or on site, instead of it being 6m long lengths of pipe they are approx 5.8m, this is so they fit into containers. When you calculate the savings, using the shorter length, the 6m Australian pipe is not that much dearer.

Another issue is the quality and consistency of the machined threads.

Being imported consistency of supply can be an issue, one minute the supplier will have pipes by the hundreds and the next you are waiting 6 weeks for the next delivery to arrive from half way around the world.

When the pipe is slotted overseas the options you have are limited, take this size or forget it, but when using businesses here in Australia like ourselves we can slot any size or pattern to meet your specific requirements.

So as you can see when purchasing overseas pipe it is fraught with many dangers and unknowns. Do you want to put your business at risk like this? Not all Australian manufactures supply pipe to the AS1477 standard as required for bore holes either.

Some pipes being manufactured for environmental purposes are made to a sub standard of quality, what happens is the ends of the pipe have the wall thickness of cl18 but the middle

of the pipe is made to be thinner and in the cases we have seen it would lucky to be equivalent to cl9. You think you are purchasing cl18 pipe to ensure that the integrity of your monitoring bore, but what you have is a inferior product that may not stand up to your bore depth. I don't know about you but I like to get what I paid for.

I have not experienced any leeching problems from overseas pipe, but some drillers have stated it has happened.

Brittleness is a major issue for pipes being installed, transported and slotted. Over the years I have been involved with issues of brittle pipes, when slotting pipes; it can easily see the difference in the hardness of pipes. The issues really shines out when transporting 6m lengths of screen, even when using high quality and reliable transport companies we see screens being broken.

Vinidex has the softest pipe of all manufacturers, over the years there pipe has always stood out. Pipemakers and other manufacturers in Australia, all making quality pipe, but for some reason Vinidex stands out in this area. This problem of brittleness is not a common occurrence when the pipe is manufactured in Australia.

When your client is expecting a high quality bore with the integrity to match the specifications required, then you must ensure that the Borecasing, screens or pizzometer you are using has the strength and requirements to meet yours and your clients requirements guaranteed.

Remember as the Famous author Poet John Ruskin stated

"The bitterness of poor quality lingers after the sweetness of low price is forgotten

Victor little

Deps

Thank you for taking time to look at the information we have created for you,

we hope this will be of assistance to solving your piping challenges.

If you have any more questions
Please feel free to contact myself or one of the team

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