



AP7 – Water Materials

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AP7 Water

7.1 Approved Materials

Water materials shall be as defined in the attached list.



WATER MATERIALS & FITTINGS					
Notes: All parts of the water supply system in contact with drinking water shall be designed using components and materials that comply with AS/NZS 4020					
	Category / Material	Standard	Comment	Application	Recommended Manufacturer
1	Water Pipe		<ul style="list-style-type: none"> • Bulk water mains:- larger than 200mm. These to be specifically approved & specified by Council. • Principle mains:- 100, 150 & 200mm • Rider mains:- 50mm (ID PVC), 63mm (OD MDPE) • Services :- 20, 25, 40 & 50mm 		
1.1	Spiral-welded steel pipe Internal linings include concrete, epoxy, bitumen & galvanizing	NZS4442:1988 or AS1579:1993	Rubber ring joints & Polyken YG111 external wrapping or "Speed Steel" with polyethylene coatings	Bulk mains unless other wise approved	Steelpipe NZ Ltd
1.2	Ductile iron Class K9	AS/NZS 2280:1995 & amendments.	Light cement lined with Tyton joints. External protection with greensleeve Generally suspended pipes and high structural loadings	Bulk mains unless other wise approved	Tubemakers, Australia (as supplied by Humes) (licence #2029)
1.3	Ductile iron pipe light cement lined Tyton Excel PN20 & PN35	AS/NZS 2280:1995 & amendments	With Tyton Joint elastomeric seals & socket / spigot joints (with blue polyethylene sleeving).	Bulk mains unless other wise approved	Tyco Tyton Excel (Licence #SMK0883)
1.4	PVC pipes & fittings for pressure applications	AS/NZS 1477:1996	Coloured white Joints shall be spigot & socket rubber ring type (Z joint). Solvent cement joint shall not be used.	Bulk, Principle & Rider mains	Iplex (Licence #SMK 02570) Marley Genex Blue (Licence #2624) Keyplas Metro (Licence #2542)



1.5	uPVC Class PN12 Series 2	AS/NZS 1477	Coloured blue Joints shall be spigot & socket rubber ring type (Z joint). Solvent cement joint shall not be used.	Bulk, Principle & Rider mains	
1.6	mPVC RRJ Class PN12	AS/NZS 4765:2000 Series 2	Coloured blue Joints shall be spigot & socket rubber ring type (Z joint). Solvent cement joint shall not be used.	Bulk, Principle & Rider mains	As for 1.4
1.7	Polyethylene pipe (MDPE) PE80B, PN12.5, SDR 11	AS/NZS 4130:1997 & amendments	Pipes shall be butt or fusion welded in accordance with the manufacturer's recommendations, & the standard coloured blue or blue stripe pipe	Principle, Rider & Service Mains	Iplex Blue-Line (Licence #SMK P20400) Marley Pushlok Pipe (Licence #2639) RX Plastics (Licence #002)
1.8	Copper tube 20 – 50mm half-hard	NZS3501	For use with RPZ backflow prevention devices only	BPD on Service Mains	Mico Wakefield Crane Enfield Metals
2.	Seal Rings	Comply with AS 1646.1:2000:	Elastomeric seals for waterworks purposes.		NZ Channel Forms Ltd
3.	Fittings				
3.1	i) Cast iron socket & spigot fittings ii) Cast iron flanges	i)AS/NZS 1830 & AS/NZS 2544:1995 ii)Table D & coated to AS/NZS 4158:1996 & amendments.	Rated at PN16 or higher. Epoxy coated		Gillies Tudor Pipeline



3.2	i) Ductile iron pipe flanged, socket & spigot fittings to with ii) Flanges	i)AS/NZS 2280:1999 ii) to Table D or raised, faced & drilled to AS 4087, & coated to A/NZS 4158:1996 & amendments			Crevet Griptite (Licence #943 & 950) Humes / AVK (Licence #2029) Tyco Tyton joint (Licence #PRD/R61/0412/1)
3.3	Stand alone flanges	Table D coated to AS/NZS 4158:1996 & amendments Cast iron AS/NZS 4331.2 1995	PVC, Ductile or Cast iron		Iplex (PVC) Marley (PVC) Unflanged adaptor - Di (as supplied by Steel & Tube NZ Ltd) Tyco
3.4	Bolts, nuts & washers to be hot-dipped galvanised	AS/NZS 1111 & 1112	ISO metric hexagon commercial bolts & screws & ISO metric hexagon nuts, including thin nuts, slotted nuts & castle nuts".		Ajax Steel & Tube NZ Ltd
3.5	Stainless steel bolts, nuts & washers are acceptable alternatives to hot-dipped galvanised fastenings provided that they are 316 grade stainless steel with factory applied molybond coating	Complying with AS 1252:1983 – High strength steel fastenings	This particularly applies for use in corrosive soil conditions		Mico Metals Steel & Tube NZ Ltd



3.6	Gibaults - Ductile iron (nylon coating as per standard) - M16 316 stainless steel barrel, (with clips fusion coating as per standard)	AS/NZS 4158	Use hot-dipped galvanised bolts as per 3.1.4. or 316 stainless steel bolts Use 316 stainless steel fasteners	Up to 200mm DI barrels & backing rings or SS barrels with DI backing rings. Above 200mm note in item1.	Gillies Viking Johnson Ltd – Maxifit (with Sheraplex coated bolts) Crevet Milnes Pty Ltd AVK Tyco Vari-Gib (Recommended for Gibaults >200 mm (ID))
3.7	MDPE Fittings				Durafuse (Licence #9603049) Iplex – Plasson Marley – Pushlok (Lic #1494) Plasson (Licence #1494 & 1271) Plastic Systems – Alprene A16 Easygrip (Licence #1157) PPI Corporation – GF – Compression Fittings (Licence #1157)
3.8	Brass fittings Alloy 486	AS 1567 – 486 ASTM –B21 485000	Recommend New Zealand manufacture due to variability of imported materials		Spartan Engineering
3.9	Manifold (Brass)				Acuflow
3.10	Ferrules: Gunmetal with polyethylene fittings			Not TCC	



4.0	Valves				
4.1	<p>Valves ≥50mm (Gate / Sluice) Resilient seated anti-clockwise closing Rated at PN16.</p> <p>External & internal protective coating</p> <p>Flanges to be raised face & drilled as per standard</p>	<p>AS/NZS 2638.2:2003 NZS/BS 5163 Class1</p> <p>AS/NZS 4158:1996 & amendments</p> <p>AS 4087</p>	<p>Teflon gland packing or 2 or more “O” ring seals & dust cover. In-line valves shall be the same diameter as the reticulation main</p>	Bulk, principle & rider mains	<p>Gillies SF series Tyco Figure 500 series (Licence #PRD/R61/0412/2) Crevet Ltd Norcast (Licence #1327) Hawle 4060E2 & 4500E2AS series (Licence #SMK20123)</p>
4.2	<p>Peat Valves Gate Valves 25, 40 & 50mm Dezincification resistant materials or LG2 gunmetal. PN16 or higher</p>	<p>BS 5154:1983 or AS 1628</p>			<p>Kitz Fig AS-H (Lic #2054) Pegler Hattersley 1070 (Lic #1850) Maxiflo Gate Valves (SAI Lic #2766)</p>
4.3	Butterfly Valves			Bulk mains only where approved	<p>Keystone (Licences #P-9696, P9700, PSD I-56037)</p>



5.0	Fire Hydrants				
	Tall pattern screw-down standard clockwise closing, rated to PN16 or higher. Coated as per standard	NZS/BS 750:1984 AS/NZS 4158:1996 & amendments.	“O” ring sealing system. Drain holes for frost protection are not permitted The use of ball hydrants is not permitted		Crevet – Hydravalve Gillies Humes AVK series 29 Hydrant Tyco F502 series Tudor Pipelines
6.0	Tapping Bands & Saddles	Standards Australia MP52:2001			
6.1	40mm – 200mm i) LG2 gunmetal DR type – fully enclosed ii) Polyethylene type – fully enclosed with stainless steel bolts.	AS/NZS 4793 / MP52 – Spec025	Tapping bands should be 25mm or greater for live tapplings. Fully enclosed for mPVC blue brute, superblue, cast iron & spiral steel (AC sizing). Swivel bolt type with a flexible band for existing AC watermain.		Milnes Pty Ltd (Licence #W134) Milnes Pty Ltd – Series GM60A Milnes Pty Ltd – Series 61 Maintenance Milnes Pty Ltd insulated type for ductile, cast or steel mains (Licence #W134) Giltech Plasson (Licence #1494)
7.0	Water meters (concentric)	ISO 4064 or BS 5728 Part 7	Class C measuring accuracy Designation N2.5 for “Kent” meters & N1.5 for all other meters		Kent MSM 20mm PSM \geq 25mm Other makes as tested & approved & could include Meinecke, Actaris, Sensus



8.0	Boxes(Valve, Fire Hydrant, Meter), Packers & Valve Marker Plate (WBoP only) Cast iron / Ductile iron		To Council standard drawings		Humes Hygrade Products Ltd Hynds Pipelines
9.0	Concrete Products				
9.1	Concrete Valve / Hydrant Marker Post		To Council standard drawing		Humes Pipelines Hynds Pipelines Newstead Concrete Products
9.2	Fire Hydrant Concrete Surrounds		To Council standard drawing		As for 9.1
9.3	Valve Concrete Surrounds		To Council standard drawing		As for 9.1
10.0	Wooden Products				
10.1	Wooden Valve Post		To Council standard drawing	WBOP Only	Not Applicable
11.0	TOBY BOXES i) Cast iron ii) Polyethylene		To Council standard drawing To Council standard drawing		Humes Hygrade Products Ltd Surecast Chevron Industries Acuflo Industries Draper Industries
12.0	Backflow Prevention Devices	AS/NZ 2845.1	Types of devices to meet Council requirements as assessed .		