



AP6 – Wastewater Materials

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AP6 Wastewater

6.1 Approved Materials

Wastewater materials shall be as defined in the attached list.



WASTEWATER MATERIALS & FITTINGS					
Notes: All parts of the wastewater reticulation system shall be designed using components and materials that comply with AS/NZS Standards					
	Category / Material	Standard	Comment	Application	Manufacturer
1	Wastewater Pipe		<ul style="list-style-type: none"> • Trunk Mains:- larger than 150mm. These to be specifically approved & specified by Council. • Reticulation Mains:- 150mm • Lateral/connection:- 100 & 150mm • Rising mains min 76mm 		
1.1	Spiral-welded steel pipe Internal linings include concrete or epoxy	NZS4442:1988 or AS1579:1993	Polyken YG111 external wrapping or "Speed Steel" with polyethylene coatings. Note internal coating must be resistant to hydrogen sulphide.	Specific design Structural mains	Steelpipe NZ Ltd
1.2	Ductile Iron Class K9 /K12	AS/NZS 2280:1995 & amendments.	Light cement lined with Tyton joints. External protection with greensleeve Generally suspended pipes and high structural loadings. Note internal coating must be resistant to hydrogen sulphide	Specific design Structural mains	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). Note: internal coating must be resistant to hydrogen sulphide	Specific design Structural mains	Tyco Tyton Excel (Licence #SMK0883)
1.4	uPVC pipes & fittings for gravity applications	AS/NZS 1260		Trunk and Reticulation Mains .	Iplex (Licence #SMK1174) Marley (Licence # WMKA20224) Keyplas (Licence #)



1.5	Polyethylene Pipe (PE) for gravity PE100 SDR17 or PE80, SDR 17 (minimum SN16)	AS/NZS 5065.	Pipes shall be butt welded in accordance with the manufacturer's recommendations, & the standard coloured black with inner core colour white/grey or brown. Electrofusion couplings are not generally accepted.	Specific design situations.	Iplex (Licence #) Marley (Licence #) RX Plastics (Licence #)
2.	Seal Rings	Comply with AS 1646.1:2000:	Elastomeric seals for wastewater purposes.		Iplex (Licence #SMK1174)
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
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 (Licence #2029) Surecast Tyco Tyton Joint (Licence #PRD/R61/0412/1)
3.3	Stand Alone Flanges	Table D coated to AS/NZS 4158:1996 & amendments	PVC, Ductile or Cast iron		Iplex PVC Marley PVC Unflanged adaptor - Di (as supplied by Steel & Tube NZ Ltd)



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
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		
3.6	Gibaults - Cast iron (coating as per standard) - Gunmetal DR LG2 with ABS belly - M16 316 stainless steel, (with clips fusion coating as per standard)	4158:1996 & amendments Coating to ASTM A276 AS/NZS 4158	Use 316 Grade Stainless steel bolts . Preference for long barrel . Use 316 stainless steel fasteners		Gillies Viking Johnson Ltd – Maxifit (with Sheraplex coated bolts) Crevet Milnes Pty Ltd Tyco Vari-Gib



3.7	PE Fittings				Durafuse (Licence #9603049) Iplex – Plasson Marley – Pushlok (Lic #1494) Plassom (Licence #1494 & 1271) Plastic Systems – Alprene A16 Easygrip (Licence #1157) PPI Corporation – GF – Compression fittings (Licence #1157)
4.0	Valves				
4.1	Valves $\geq 50\text{mm}$ Resilient seated anti-clockwise closing Rated at PN16. External & internal protective coating Flanges to be raised face & drilled as per standard	AS/NZS 2638.2:2003 NZS/BS 5163 Class 1 AS/NZS 4158:1996 & amendments AS 4087	Teflon gland packing or 2 or more “O” ring seals & dust cover. In-line valves shall be the same diameter as the reticulation main	Pump station and rising mains	AVK valves (Licence #SAI2420 & 2573) Gillies SF series Tyco Figure 500 series (Licence #PRD/R61/0412/2) Crevet Ltd Norcast (Licence #1327) Hawle 4060E2 & 4500E2AS serues (Licence #SMK20123)
5.0	Manholes				
5.1	1050mm to 2500mm id with precast base.				Humes Hynds



5.2	Concrete lid(flat top) with 550mm and 600mm openings				Humes Hynds
	Manhole sealant , flexible jointing compound BM100 or SM9020				Hynds Humes
5.3	Steps 316 grade stainless steel safety step				Humes Hynds
5.4	Plastic encapsulated stainless steel safety step	A/NZS1657:1992, AS4198:1994			Nextep licence #jp-JQA-QM6570
5.5	Cast iron manhole covers and frames: 600mm diameter	BS EN 124 vehicle loading or AS3996 - 80kn loading	Heavy duty /non rock		Humes Hynds Gatic
5.6	Ductile Iron Manhole cover and frames	AS 3996 Class D (210kN)	615mm clear opening		Webforge
6.0	Fittings uPVC	As/NZS 1260 :2002			Iplex (Licence #SMK1174) Marley (Licence # WMKA20224) Keyplas (Licence #)
6.1	Rubber Sleeves	AS/NZS4326:1995	All couplings used shall have a central 316 Stainless steel sheer band	Reticulation pipes	Fernco