

Pressure drop & flow rates

FOR ALTERNATE FIRE SPRINKLER PIPE PRODUCTS





Orrcon is an Australian manufacturer importer and stockist of a wide range of welded and seamless Carbon Steel pipe as well as an ancillary range of pipe fittings. The company actively supports the Australian Fire Protection industry by locally manufacturing an SSL approved Orrfire range of Smartcote® fire red painted pipe for sprinkler pipe fabrication, an Allgal® Electro Galvanised sprinkler pipe and a fully hot dip galvanised hydrant and industrial plumbing pipe. The development of lighter wall, higher steel grade pipe for use with mechanical jointing coupling has offered reduced costs for the industry in both material and labour costs. A further extension of this development is the opportunity to vary pipe design sizes and the type of pipe product used in a project by incorporating the reduced pressure drop offered by light wall steel pipes.

These tables are intended to assist pipe fabrication designers in optimising the use of mechanically jointed light wall steel pipes in either red painted, electrogalv or fully hot dip galvanised pipes.

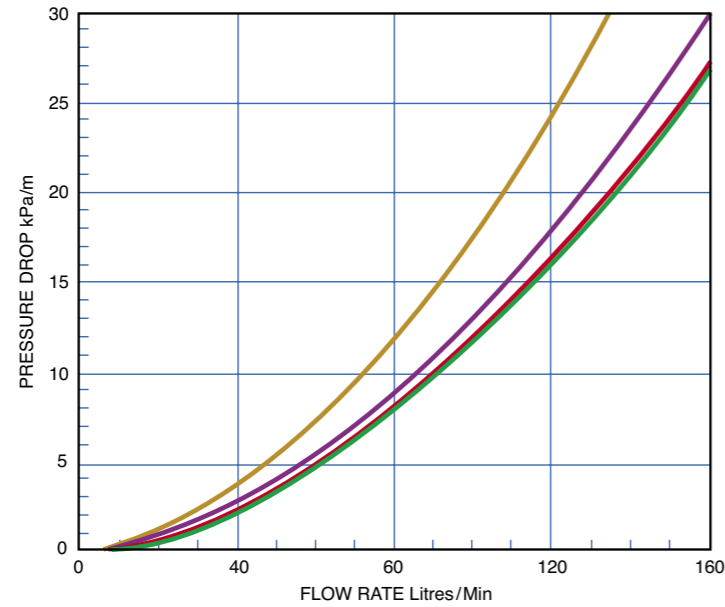
S.S.L. (Scientific Services laboratory) ActiVfire equipment listing scheme

All Orrcon products offered for sale to the fire protection industry have S.S.L. approval under a range of product listing data sheets current approvals are as follows;

SSL APPROVAL LISTING NUMBER	PRODUCT	DESIGNATION
afp 1640	Orrcon Orrfire Allgal Electro Galvanised	Extra Light pipe
afp 1528	Orrcon Orrfire Allgal Electro Galvanised	Extra Light pipe 100NB and above
afp 1508	Orrcon Orrfire Allgal Electro Galvanised	Light Pipe
afp 1509	Orrcon Orrfire Allgal Electro Galvanised	Medium & Heavy pipe
afp 1641	Orrcon Orrfire Smartcote Red Painted	Extra Light pipe
afp 1510	Orrcon Orrfire Smartcote Red Painted	Light pipe
afp 1511	Orrcon Orrfire Smartcote Red Painted	Medium & Heavy pipe
afp 1529	Orrcon Orrfire Hot Dip Galvanised	Sprinkler & Hydrant pipe Extra Light and Light
afp 1530	Orrcon Orrfire Hot Dip Galvanised	Sprinkler and Hydrant Medium pipe

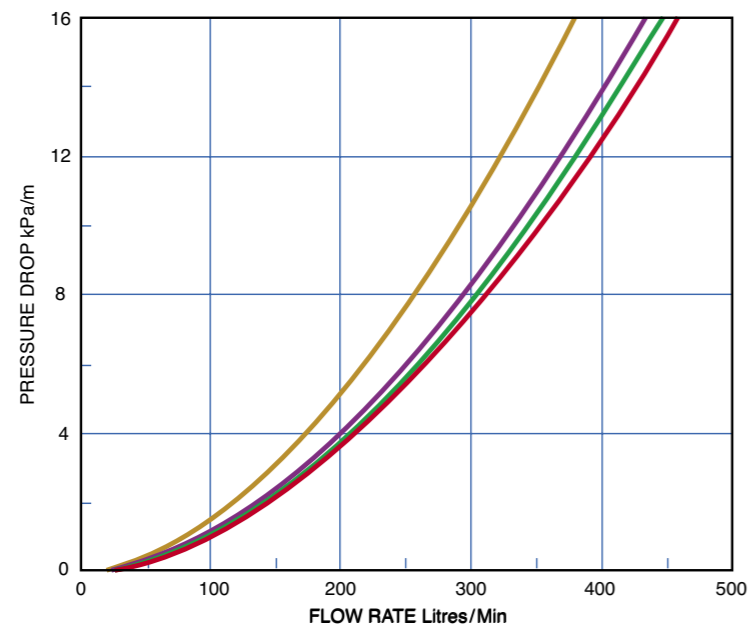


20 NOMINAL SIZE PIPE



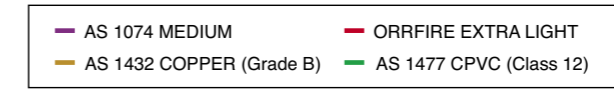
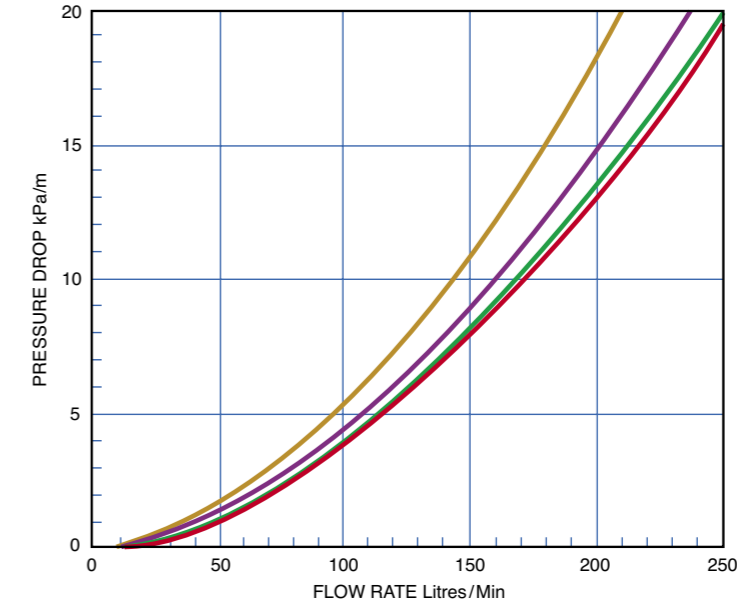
20 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	26.90	26.90	19.01	26.75
Norm Thick (mm) =	2.60	2.00	1.02	1.55
Norm Mean I.D. (mm) =	21.70	22.90	16.97	23.65
Surface roughness K =	4.50	4.50	1.50	1.50

32 NOMINAL SIZE PIPE



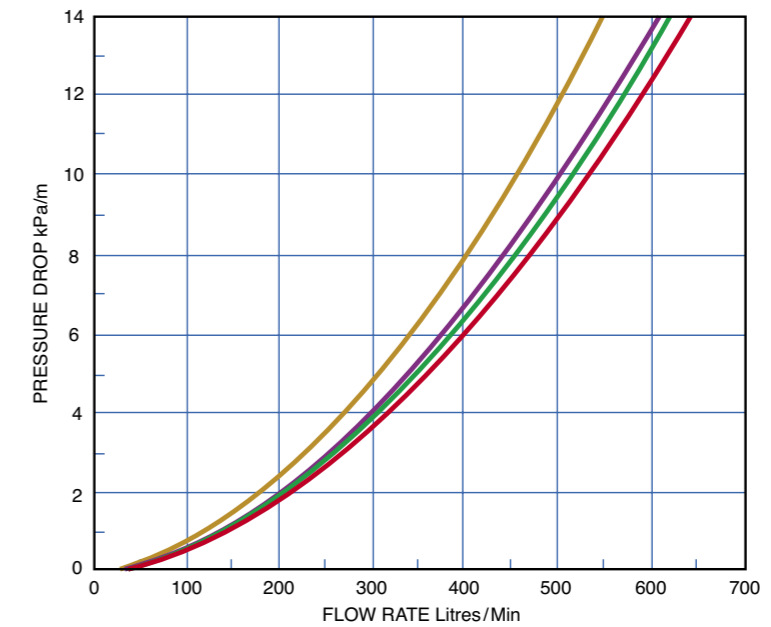
32 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	42.40	42.40	31.70	42.25
Norm Thick (mm) =	3.20	2.00	1.22	2.40
Norm Mean I.D. (mm) =	36.00	38.20	29.26	37.45
Surface roughness K =	4.50	4.50	1.50	1.50

25 NOMINAL SIZE PIPE



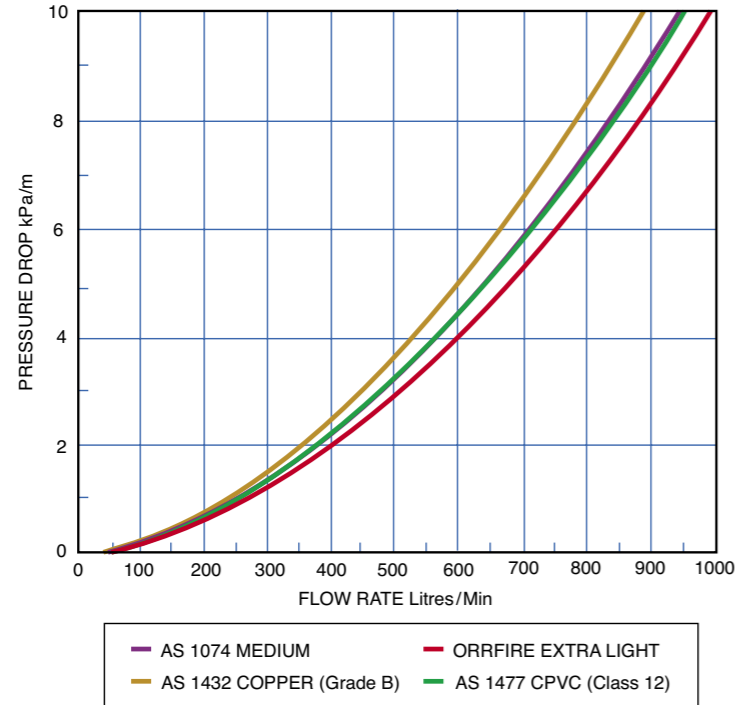
25 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	33.70	33.70	25.35	33.55
Norm Thick (mm) =	3.20	2.00	1.22	1.90
Norm Mean I.D. (mm) =	27.30	29.40	22.91	29.75
Surface roughness K =	4.50	4.50	1.50	1.50

40 NOMINAL SIZE PIPE



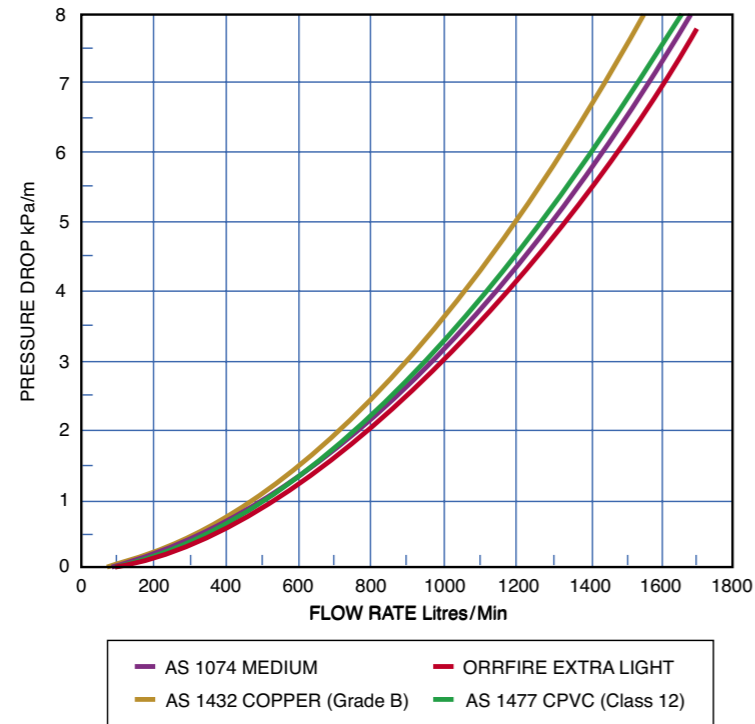
40 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	48.30	48.30	38.50	48.25
Norm Thick (mm) =	3.20	2.30	1.22	2.75
Norm Mean I.D. (mm) =	41.90	43.70	35.61	42.75
Surface roughness K =	4.50	4.50	1.50	1.50

50 NOMINAL SIZE PIPE



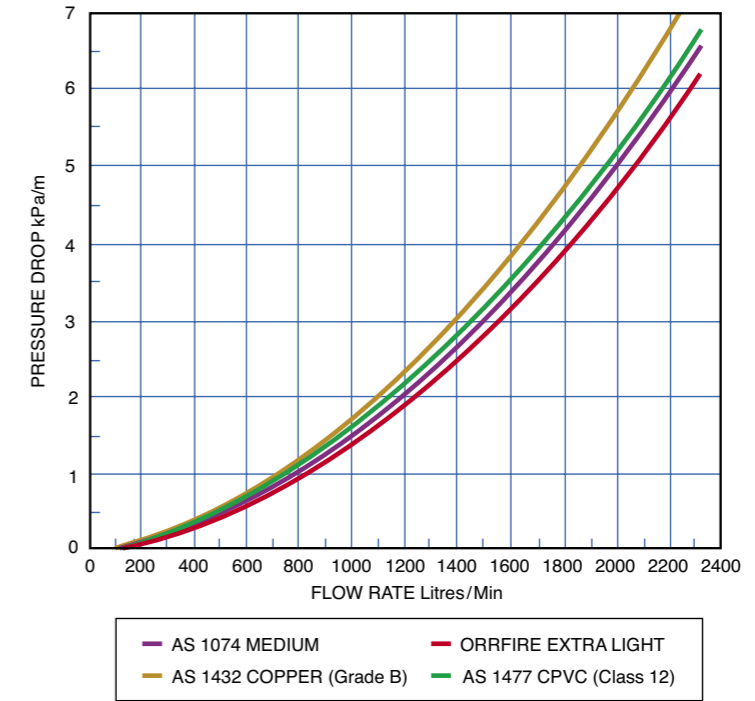
50 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	60.30	60.30	50.74	60.35
Norm Thick (mm) =	3.60	2.30	1.22	3.35
Norm Mean I.D. (mm) =	53.10	55.70	48.30	53.65
Surface roughness K =	4.50	4.50	1.50	1.50

65 NOMINAL SIZE PIPE



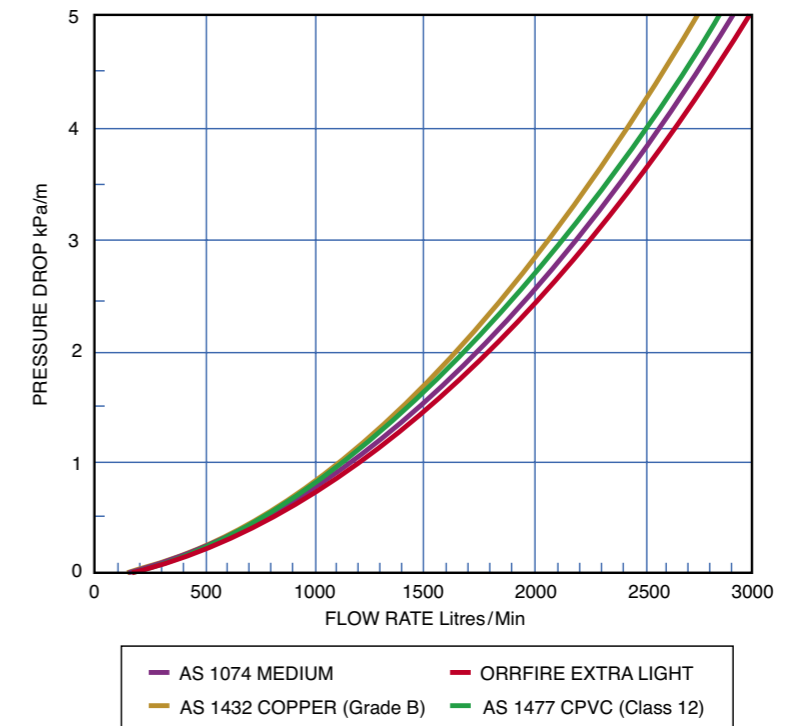
65 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	76.10	76.10	63.43	75.35
Norm Thick (mm) =	3.60	2.30	1.22	4.20
Norm Mean I.D. (mm) =	68.90	71.50	60.99	66.95
Surface roughness K =	4.50	4.50	1.50	1.50

80 NOMINAL SIZE PIPE



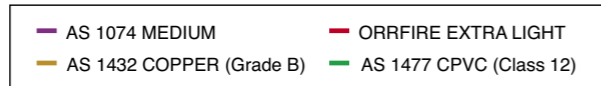
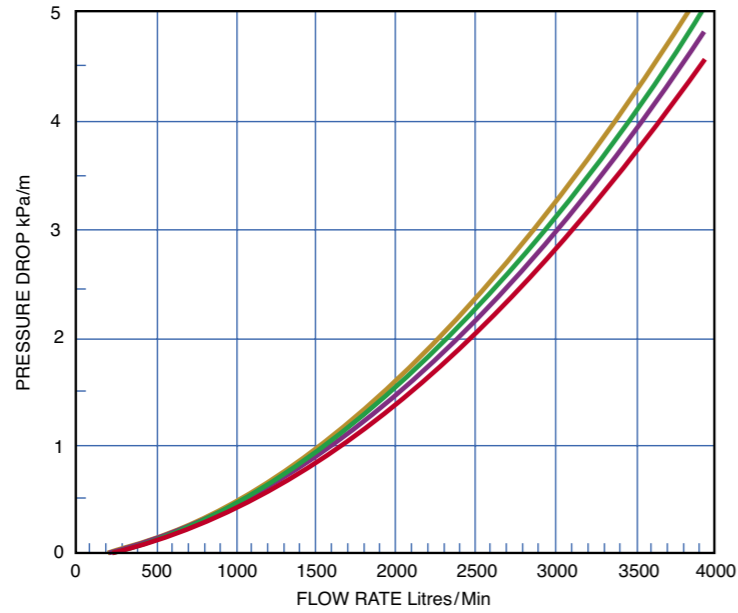
80 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	88.90	88.90	76.11	88.90
Norm Thick (mm) =	4.00	2.60	1.53	4.95
Norm Mean I.D. (mm) =	80.90	83.70	72.85	79.00
Surface roughness K =	4.50	4.50	1.60	1.50

90 NOMINAL SIZE PIPE



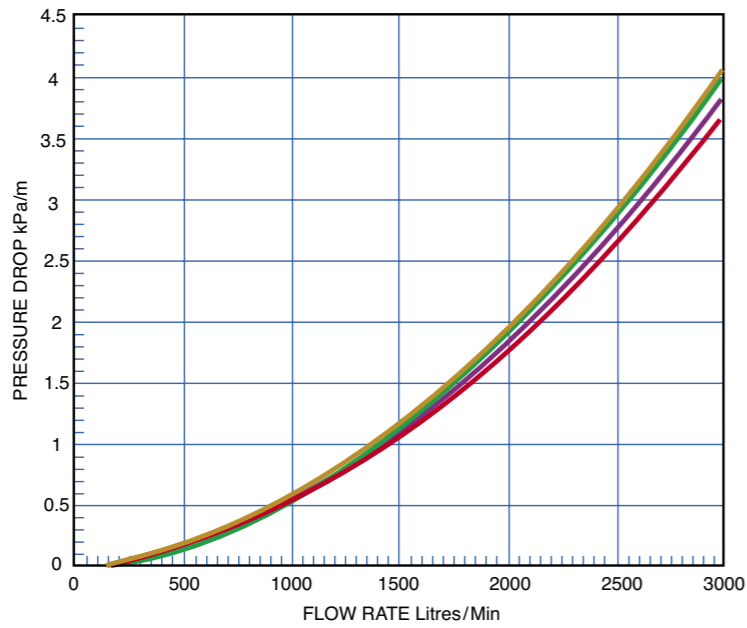
90 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	101.60	101.60	88.80	101.50
Norm Thick (mm) =	4.00	2.60	1.63	5.55
Norm Mean I.D. (mm) =	93.60	96.40	85.54	90.40
Surface roughness K =	4.50	4.50	1.50	1.50

100 NOMINAL SIZE PIPE



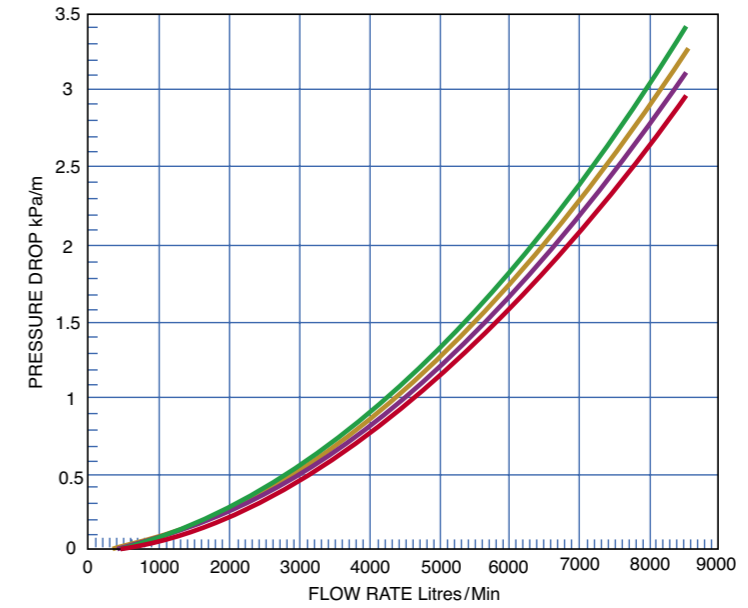
100 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	114.30	114.30	101.48	114.30
Norm Thick (mm) =	4.50	2.50	1.63	6.30
Norm Mean I.D. (mm) =	105.30	109.30	95.22	101.70
Surface roughness K =	4.50	4.50	1.50	1.50

125 NOMINAL SIZE PIPE



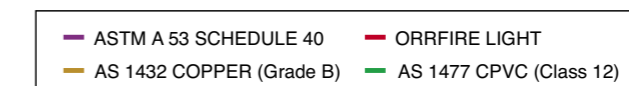
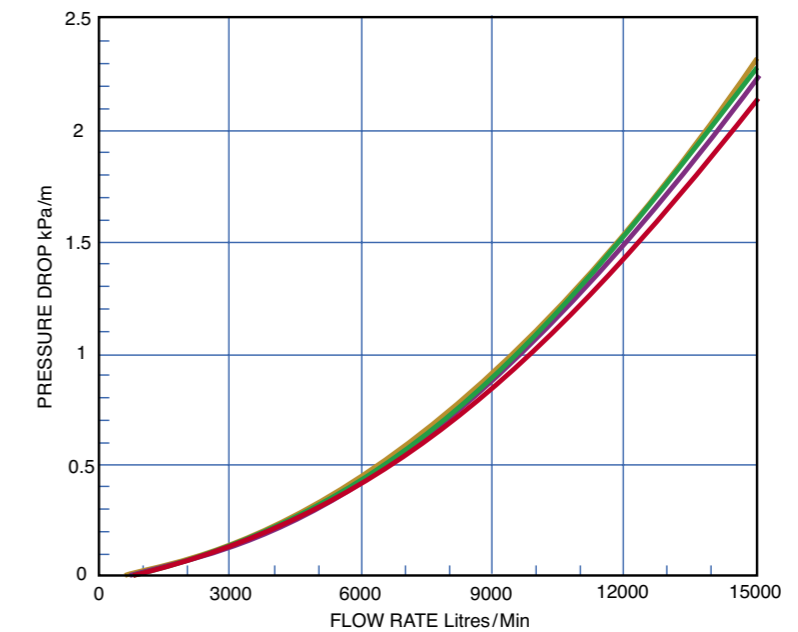
125 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	139.70	139.70	126.88	140.20
Norm Thick (mm) =	5.00	3.00	1.63	7.65
Norm Mean I.D. (mm) =	129.70	133.70	123.62	124.90
Surface roughness K =	4.50	4.50	1.50	1.50

150 NOMINAL SIZE PIPE



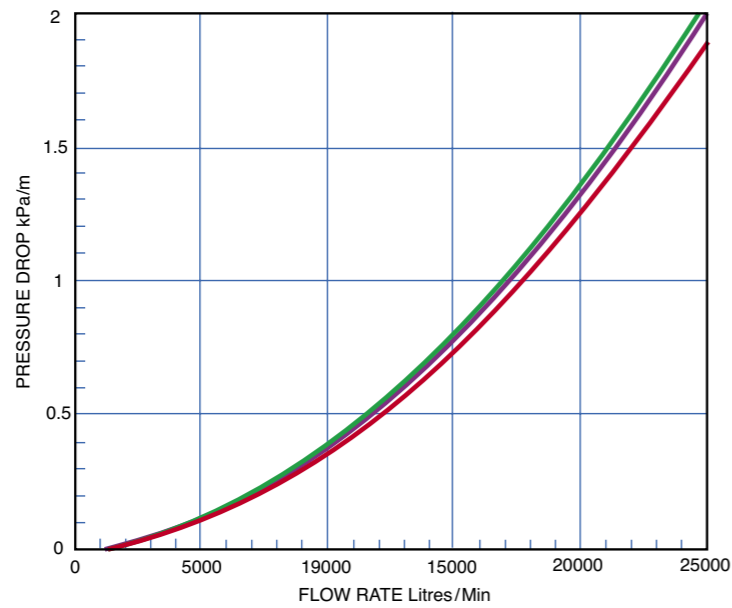
150 NOMINAL PIPE SIZE DIMENSIONS				
	AS 1074 Medium	ORRFIRE Extra Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	165.10	165.10	152.25	160.25
Norm Thick (mm) =	5.00	3.00	2.03	8.80
Norm Mean I.D. (mm) =	155.10	159.10	148.19	142.65
Surface roughness K =	4.50	4.50	1.50	1.50

200 NOMINAL SIZE PIPE



200 NOMINAL PIPE SIZE DIMENSIONS				
	ASTM A 53 Sch 40	ORRFIRE Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	219.10	219.10	203.00	225.30
Norm Thick (mm) =	7.11	4.80	2.03	12.30
Norm Mean I.D. (mm) =	204.88	209.50	198.94	200.70
Surface roughness K =	4.50	4.50	1.50	1.50

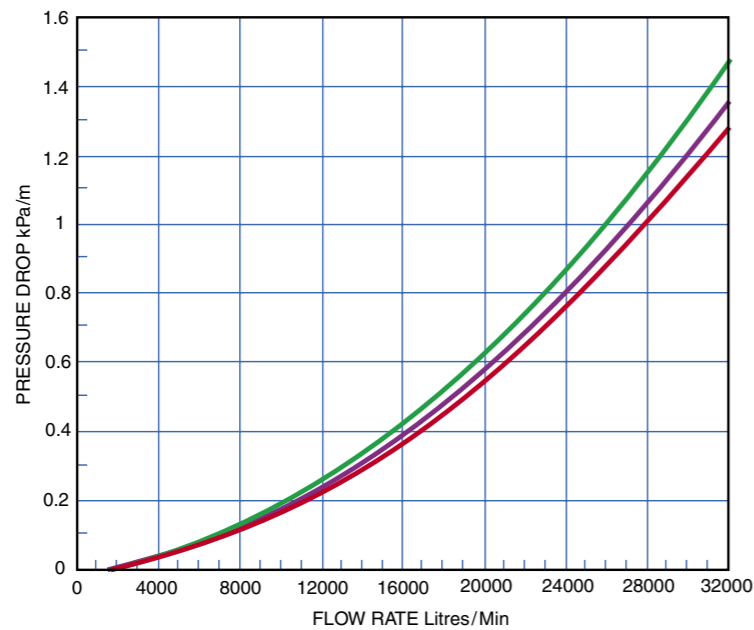
250 NOMINAL SIZE PIPE



— ASTM A 53 SCHEDULE 40 — ORRFIRE LIGHT — AS 1477 CPVC (Class 12)

250 NOMINAL PIPE SIZE DIMENSIONS				
	ASTM A 53 Sch 40	ORRFIRE Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	273.10	273.10	0.00	280.40
Norm Thick (mm) =	9.27	4.80	0.00	15.35
Norm Mean I.D. (mm) =	254.56	263.50	0.00	249.70
Surface roughness K =	4.50	4.50	0.00	1.50

300 NOMINAL SIZE PIPE



— ASTM A 53 SCHEDULE 40 — ORRFIRE LIGHT — AS 1477 CPVC (Class 12)

300 NOMINAL PIPE SIZE DIMENSIONS				
	ASTM A 53 Sch 40	ORRFIRE Light	AS1432 Copper (Grade B)	AS1477 CPVC (Class 12)
Mean O.D. (mm) =	323.90	323.90	0.00	315.45
Norm Thick (mm) =	10.31	6.40	0.00	17.20
Norm Mean I.D. (mm) =	303.28	311.10	0.00	281.05
Surface roughness K =	4.50	4.50	0.00	1.50

Need more information? Get the complete suite of Orrcon ORRFIRE brochures.



ORRFIRE
SMARTCOTE
PAINTED PIPE



ORRFIRE
ALLGAL ELECTRO-
GALVANISED
SPRINKLER PIPE



ORRFIRE
HOT DIP
GALVANISED
PLUMBING &
HYDRANT PIPE

ORRCON "ORRFIRE" RANGE OF FIRE PROTECTION PIPE COMPLIANCE WITH AUSTRALIAN STANDARDS

NOMINAL SIZE DN MM	WALL THICKNESS MM	COMPLIANCE WITH AS 4118 PART 2.1 FIRE SPRINKLERS	COMPLIANCE WITH AS 2419 HYDRANTS	S.S.L. APPROVAL LISTING NO'S
APPROVED FINISH		ALLGAL, SMARTCOTE, H.D.G.	HOT DIP GALV. ONLY	afp
25	2.0	Y	-	1529 1640 1641
	2.6	Y	-	1510 1508
	3.2	Y	-	1530 1509 1511
32	2.0	Y	-	1529 1640 1641
	2.6	Y	-	1510 1508
	3.2	Y	-	1530 1509 1511
40	2.3	Y	-	1529 1640 1641
	2.9	Y	-	1510 1508
	3.2	Y	-	1530 1509 1511
50	2.3	Y	-	1529 1640 1641
	2.9	Y	-	1510 1508
	3.6	Y	-	1530 1509 1511
65	2.3	Y	-	1529 1640 1641
	3.04 min.	Y	Y	1529
	3.2	Y	Y	1510 1508
	3.6	Y	Y	1530 1509 1511
80	2.6	Y	-	1529 1640 1641
	3.04 min.	Y	Y	1529
	3.2	Y	Y	1510 1508
	4.0	Y	Y	1530 1509 1511
100	2.3	Y	-	1529
	2.5	Y	-	1529 1528
	3.04 min.	Y	Y	1529 1528
	3.2	Y	Y	1640 1641
	3.6	Y	Y	1510 1508
	4.5	Y	Y	1530 1509 1511
125	5.4	Y	Y	1530
	3.0	Y	-	1640 1641
	3.5 min.	Y	Y	1510
150	5.0	Y	Y	1530 1509 1511
	2.77	Y	-	1529
	3.00	Y	-	1529 1528
	3.5 min.	Y	Y	1529 1640 1641 1508
	5.0	Y	Y	1530 1509 1511
200	5.4	Y	Y	1530
	4.8	Y	Y	1529 1510
250	4.8	Y	Y	1529 1510



Pressure drop & flow rates

FOR ALTERNATE FIRE SPRINKLER PIPE PRODUCTS

ORRCON OPERATIONS PTY LTD ABN 92 094 103 090
A subsidiary of ORRCON LIMITED ABN 14 010 853 817

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Giving Steel A Real Edge

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