



23-18479684

Testing of 100mm Diameter SN20 Perforated Plastic Pipe

On behalf of

Cromford Pipe Holdings Pty Ltd

2nd of May2023



BUREAU
VERITAS

Move Forward with Confidence

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Moss Vale NSW 2577

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ATTENTION:

Mr. Terry Hammerton

CLIENT REFERENCE:

PO: 002430

WORK REQUESTED:

Carry out performance testing on supplied 100mm pipe for certification to AS 2439.1-2007, AS/NZS 1462.22 & RMS QA 3552

See pages 3 and 4 for the test results

TESTING OFFICER(s):

Justin Huynh
Mechanical Testing Officers

REVIEWED/CERTIFIED BY:

Paul Hosking
Mechanical Testing Manager



Accredited for compliance with ISO/IEC 17025.- Testing

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Accreditation No. 1267

AUTHORISED
SIGNATORY

Bureau Veritas

Name	PAUL HOSKING	Date	02-05-2023
Reviewed	MONTY LUKE		

• **TEST RESULTS**

Product Code/Test Specification: AS 2439.1: 2007 AS/NZS 1462.22 & RMS QA 3552 (see specific test clauses in table)
Pipe Type / Classification: Type 1/SN20 (100mm diameter) PVC Pipe
Pipe Colour: White
Test Temperature: 22°C

Test Results AS 2439.1:2007				
Clause	Test	Result		Compliance
2.4.1	Dimensions (Diameter) Average of 3 test pipes	Ave Outside Diameter (mm)	100.54	PASS
		Spec requirement (O.D)	99.0 – 102.0	
		Ave Inside Diameter (mm)	85.10	-
2.4.2	Length	Customer supplied samples in ~20m length Standard lengths for Type 1 pipe (as per standard) are 6, 20, 50, 100, 150 or 200m		N/A
5.2	Bending	No splitting or cracking of the pipe was noted.		PASS
5.3	Straightening	No splitting or cracking of the pipe was noted.		PASS
5.4	High Temperature Impact Resistance	No splitting, cracking or significant indentation was noted.		PASS
5.5	Low Temperature Impact Resistance	No splitting, cracking or significant indentation was noted.		PASS
5.9	Joint Separation	No separation of either pipe from coupling		PASS
5.6	Elongation	Test	Elongation (%)	PASS
		1	0.5	
		2	0.3	
		3	0.3	
		Average	0.4	
		Spec requirement	10% maximum	

Remarks:

The supplied sample complies with the testing requirements for AS 2439.1: 2007 AS/NZS 1462.22 & RMS QA 3552 (see specific test clauses in table). See page 5 for test equipment table.

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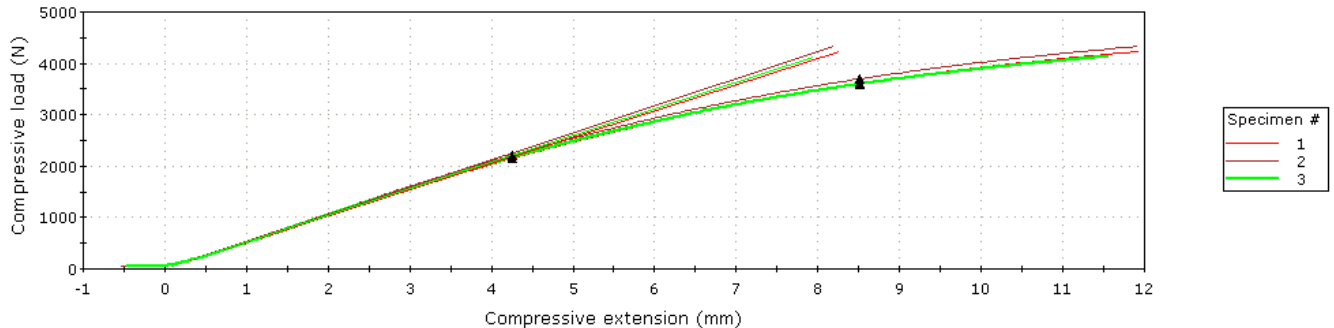
Test Results AS 2439.1:2007 & AS/NZS 1462.22					
Clause	Test	Result			Compliance
5.7 (11mm/ min)	Pipe Stiffness	Test / Specimen No	Pipe Stiffness (N/m/m)		PASS
			At 5% deflection	At 10% deflection	
		1	33 551	29 958	
		2	34 352	30 477	
		3	33 112	29 243	
Average		33 672	29 893		
Specification requirement		20 000 min	17 000 min		

Test Results RMS QA 3552					
Procedure	Test	Result			Compliance
5.2	Physical Properties T1505	Average Length to Width ratio of slots L:W		9.3	PASS
		Specification requirement (AS 2439 Sec 3.1)		3.0 – 10.0	
		Average area of slots per metre length of pipe (mm ² per metre length)		3615	
Specification requirement (AS 2439 Sec 3.1)		1500mm ² min			
Procedure	Test	Result (lowest value of combined tests)			Compliance
5.1 Method B (11mm/min)	Stiffness Properties T1506	Pipe Stiffness (N/m/m)			PASS
		Test #	At 5% deflection	At 10% deflection	
		3	33 672	29 893	
Specification requirement		20 000 min	17 000 min		

Remarks:

The supplied sample complies with the testing requirements for AS 2439.1: 2007 AS/NZS 1462.22 & RMS QA 3552 (see specific test clauses in table). See page 5 for the stiffness test graph and test equipment table.

• **PIPE STIFFNESS TEST GRAPH**



• **TEST EQUIPMENT**

Test Type	Test Equipment Description	Test Equipment Asset No / Serial No	Equipment Calibration No
Diameter Dimensions	Mitutoyo Digital Vernier Callipers	VER-6 / 11155518	A32408DA
Length	Toledo 1000mm steel rule	RULE-24 / S23-2N	S023-2N-2
Bending / Straightening	Radius Jig / Environmental Chamber	A0073 / 41541	A0073
Impact Resistance	Impact Drop test frame and impact dart / Environmental Chamber	A0073 / 41541	S023-6L-7
Joint Separation / Elongation	Test Frame / Komura Pull Push Scale	811110	SAC-23-U-1
Pipe Stiffness	Instron Universal Test Machine 10kN / compression Plates	UTM-13 / A0032	A32799FA
Length / Area of Slots	Nikon Shadowgraph	MCSP-17 / 7047	N/A

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