



Pipemakers Australia Pty Ltd

PRODUCT APPRAISAL REPORT PA 2308

PVC-U Series 1 Pressure Pipes

AS NZS 1477-2017 PVC pipes and fittings for pressure applications

Published: 17 November 2023

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Peer Reviewers

Name/Title	Organisation	Date
Product Appraisal Technical Advisory Group	WSAA	17 November 2023
WSAA Expert Panel	WSAA	17 November 2023
Peter Pittard, WSAA Consultant	WSAA	2 November 2023
Carl Radford, Product Appraisal Manager	WSAA	17 November 2023

Overview of WSAA

The Water Services Association of Australia (WSAA) is the peak industry body representing the urban water industry. Our members provide water and sewerage services to over 20 million customers in Australia and New Zealand and many of Australia's largest industrial and commercial enterprises.

Based around our vision of 'customer driven, enriching life', WSAA facilitates collaboration, knowledge sharing, networking and cooperation within the urban water industry. We are proud of the collegiate attitude of our members which has led to industry-wide approaches to national water issues.

WSAA can demonstrate success in the standardisation of industry performance monitoring and benchmarking, as well as many research outcomes of national significance. The WSAA Executive retains strong links with policy makers and legislative bodies and their influencers, to monitor emerging issues of importance to the urban water industry.

WSAA was formed in 1995 as a non-profit organisation to foster the exchange of information between industry, government and the community, and to promote sustainable water resource management.

The urban water industry is committed to anchoring its services to customers' values, and to enrich communities where water services have broad economic, environmental and social values. In line with this our main activities focus on four areas:

1. influencing national and state policies on the provision of urban water services and sustainable water resource management
2. promoting debate on environmentally sustainable development and management of water resources and the community health requirements of public water supplies
3. improving industry performance and establishing benchmarks and industry leading practices for water service processes; and
4. fostering the exchange of information on education, training, research, water and wastewater management and treatment and other matters of common interest.

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1 EXECUTIVE SUMMARY

Pipemakers Australia Pty Ltd (Pipemakers) is an Australian company established in Queensland in 1990 to manufacture PVC piping. The company maintains PVC manufacturing facilities in Acacia Ridge in Queensland and Deer Park in Victoria and operates a national distribution network within Australia.

This Appraisal is for a range of PVC-U Series 1 pipes with solvent cement joints suitable for water supply and pressure sewer applications manufactured to AS/NZS 1477:2017 *PVC pipes and fittings for pressure applications*.

The Series 1 PVC-U pipes are available in sizes from DN 15 to DN 375 with pressure classifications from PN6 to PN18. Pipes are supplied in 6m lengths.

See Section 4 for details.

Colours for Series 1 pipe are white for drinking water, purple for non-drinking water and cream for pressure sewer applications.

The outside diameters of the Series 1 PVC-U pipes are “metric” and are not compatible with ductile iron pipe outside diameters.

Pipemakers Australia Pty Ltd holds an ISO 9001:2015 Quality Management System licence.

The pipes have ISO Type 5 ApprovalMark Product Certification to AS/NZS 1477:2017 *PVC pipes and fittings for pressure applications*.

This Appraisal has determined that Pipemakers PVC-U Series 1 pipes, as detailed in this report, meet the requirements of WSA PS-211 *Polyvinylchloride, Unplasticised (PVC-U) Pressure Pipes for Pressure Applications – Drinking Water, Non-Drinking Water Supply and Sewerage* and are considered as ‘fit-for-purpose’.

1.1 Recommendations

It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise Pipemakers PVC-U Series 1 pressure pipes, as detailed in this report, for use in water supply and pressure sewer networks provided pipeline design, installation, acceptance testing and commissioning are in accordance with relevant WSAA Codes and the manufacturer’s requirements.

2 THE APPLICANT

The Applicant is Pipemakers Australia Pty Ltd.

2.1 The Manufacturer/Supplier

Pipemakers Australia Pty Ltd is an Australian company established in Queensland in 1990 to manufacture PVC piping. PVC pipes are manufactured at Acacia Ridge Queensland and Deer Park in Victoria. Pipemakers operates a national distribution network within Australia.

Pipemakers Australia became a Pty Ltd company in January 2008 but is still managed by the Kanji group, which has extensive operations across many industries throughout Australia and Asia.

Pipemakers manufactures its range of thermoplastic pipes using the latest European PVC pipe manufacturing technology and equipment and has further capacity to grow and expand its product range.

The range of PVC-U Series 1 pipes is manufactured at the Acacia Ridge facility.

3 THE PRODUCT

This Appraisal is for a range of PVC-U Series 1 pipes with solvent cement joints suitable for water supply and pressure sewer applications manufactured to AS/NZS 1477:2017 *PVC pipes and fittings for pressure applications*.

The Series 1 PVC-U pipes are available in sizes from DN 15 to DN 375 with pressure classifications from PN6 to PN18. Pipes are supplied in 6m lengths.

See Table 1 for details.

Colours for Series 1 pipe are white for drinking water, purple for non-drinking water and cream for pressure sewer applications.

The outside diameters of the Series 1 PVC-U pipes are “metric” and are not compatible with ductile iron pipe outside diameters.

4 SCOPE OF THE APPRAISAL

The scope of this appraisal includes PVC-U Series 1 pipes with solvent cement joints (SWJ) as detailed in Table 1 and included in the ISO Type 5 ApprovalMark Product Certification schedule included in Appendix B. All pipes are 6 m long.

TABLE 1 PIPEMAKERS PVC-U SERIES 1 SCJ PIPE RANGE

DN	OD mm	Pressure Class PN				
		6	9	12	15	18
15	21				✓	✓
20	27			✓		✓
25	34		✓	✓		✓
32	42		✓	✓		✓
40	48	✓	✓	✓		✓
50	60	✓	✓	✓		✓
65	75	✓	✓	✓		✓
80	89	✓	✓	✓		✓
100	114	✓	✓	✓		
125	140	✓	✓	✓		✓
150	160	✓	✓	✓		✓
175	200		✓	✓		✓
200	225	✓	✓	✓		✓
225	250	✓		✓		
250	280	✓		✓		✓
300	315		✓	✓		
375	400	✓	✓	✓		

5 APPRAISAL CRITERIA

5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts PVC-U pipes manufactured in compliance with AS/NZS 1477:2017 *PVC pipes and fittings for pressure applications* and duly certified by means of an ISO Type 5 Product Certification scheme undertaken by a JAS-ANZ accredited Conformity Assessment Body (CAB) or by an international accreditation system recognised by JAS-ANZ.

The manufacturer is generally expected to have a production management and control system that has been duly accredited in accordance with AS/NZS ISO 9001 as a prerequisite to undergoing a product certification audit.

The ISO Type 5 Product Certification Scheme shall meet the criteria described in WSA TN-08.

5.2 Performance Requirements

Pipemakers PVC-U Series 1 pressure pipes have been appraised for compliance with AS/NZS 1477:2017 *PVC pipes and fittings for pressure applications*.

Appraisal criteria are also determined by the WSAA Product Appraisal Technical Advisory Group and regularly reviewed to ensure that the criteria reflect the requirements of WSAA members.

The following Product Specification is also relevant to this application:

WSA PS-211 *Polyvinylchloride, Unplasticised (PVC-U) Pressure Pipes for Pressure Applications – Drinking Water, Non-Drinking Water Supply and Sewerage*.

A copy of the Product Specification is available at the following link:

<https://www.wsaa.asn.au/shop/product/60961>

5.3 COMPLIANCE WITH APPRAISAL CRITERIA

5.3.1 Compliance with Quality Assurance Requirements

Pipemakers has submitted the following quality certificates:

- ISO 9001:2015 Certificate of Registration No. AMI-QM 78034 issued to Pipemakers Australia Pty Ltd by ApprovalMark International.
- AS/NZS 1477:2017 ApprovalMark ISO Type 5 Product Certification Licence No. AMI 70061 issued to Pipemakers Australia Pty Ltd (Acacia Ridge) by ApprovalMark International.
- AS/NZS 4765:2017 ApprovalMark Best Environmental Practice Certificate No. BEP-PVC 4110 issued to Pipemakers Pty Ltd (Acacia Ridge) by ApprovalMark International.

Copies of the Quality Assurance and Product Certification licences have been included in Appendix B and are also available from WSAA.

5.3.2 Compliance with Performance Requirements

5.3.3 Performance tests for pipes

Performance tests in accordance with AS/NZS 1477:2009 requirements have been completed by Australian Pipes and Fittings Testing Centre in August 2016. The test requirements were not amended in AS/NZS 1477:2017 and therefore remain valid.

The pipe tests include vinyl chloride monomer, long-term hydrostatic pressure, impact, reversion, high temperature, fracture toughness and short-term hydrostatic pressure.

5.3.4 Contact with drinking water

Pipemakers has submitted a copy of a report from StandardMark Laboratory Sdn Bhd, based in Malaysia, (SAMM Accreditation No. 786) dated 14th October 2019 to demonstrate compliance of DN 20 PVC-U Series 1 pressure pipe with AS/NZS 4020:2018.

6 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

PVC-U pressure pipe was a commonly used product in the urban water industry for many years and most experienced pipe layers have a good understanding of the installation requirements. Pipemakers do not provide any specific training for pipe layers.

- a) Drilling and tapping: Conventional drilling and tapping equipment is suitable for PVC-U pipes.
- b) Allowable damage: The depth of external damage should be limited to 10% of the wall thickness up to a maximum of 0.5mm. This advice is consistent with WSA 03 *Water Supply Code for PVC* where it states that pipes scored deeper than 0.5mm are not to be used.
- c) External storage: If the total period of exposed storage outdoors is likely to exceed 12 months, pipes should be covered and stored in a manner that allows ventilation and prevents heat entrapment. Pipes may be stored in this manner indefinitely.

The installation, repair and maintenance procedures for PVC pipes are well documented in AS/NZS 2032 - *Installation of PVC pipe systems* and the WSA Sewerage and Water Supply Codes of Australia (WSA 02 and WSA 03 respectively).

There are also a number of Registered Training Organisations (RTOs) who conduct suitable training courses based on AS/NZS 2032 and AS/NZS 2566.2. The Plastics Industry Pipe Association of Australia Limited (PIPA) have nominated the Flexitec course, which covers PVC pipe handling and installation, and is delivered nationally either directly by LeHunt and Associates or in conjunction with PARTEC (Qld, NT, NSW), Holmesglen TAFE (Vic), Chisholm TAFE (Vic) and Regency TAFE (SA). The Civil Contractors Federation have their own state-based RTOs and some of them conduct suitable PVC pipe training courses as well.

Installation, repair and maintenance procedures for PVC pipes are also specified in WSA 03 *Water Supply Code of Australia* and WSA 02 *Sewerage Code of Australia*.

7 PRODUCT MARKING

Pipemakers PVC-U pipes are marked in accordance with requirements of AS/NZS 1477:2017 including the following:

- Manufacturers Name: Pipemakers
- Pipe Series Number: S1
- Pipe Material: PVC-U
- Nominal Size: e.g., DN150
- Pressure Classification: e.g., PN9
- The date of manufacture: e.g., 231006 (6th October 2023)
- Place of manufacture & machine number: e.g., L3 Q
- The standard number: AS/NZS 1477
- Best Environmental Practice: BEP
- Licence Number: LN70061
- Special Application information – e.g., RECYCLED WATER - DO NOT DRINK

Example: PIPEMAKERS BEP PVC-U S1 DN150 PN9 231006 L3 Q AS/NZS 1477 W LN70061 17:11 150PRESSPN9

8 PACKAGING AND TRANSPORTATION

Pipemakers packages the pipes in accordance with AS/NZS 2032 guidelines.

The PVC-U pipe is crated with timber and has extra nylon gut strapping for safety. The customer should inspect the pipe when it is delivered on site to check for any movement or abrasion damage.

Full packs of pipe use timber frames fastened with nylon straps. A nylon gut strap secures individual pipes.

Socketed pipes are stacked in layers with sockets placed at alternative ends of the rack and protruding, to avoid uneven stacks and distortion and to prevent damage to sockets during transport.



FIGURE 1 EXAMPLE OF PIPE PACKAGING

9 PRODUCT WARRANTY

The products are covered by the normal commercial and legal requirements of the *Competition and Consumer Act 2010 (Cth)*, which covers manufacture to the relevant standard, and details of Pipemakers Australia Pty Ltd warranty is included in their terms and conditions of sale.

10 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD-TESTING REPORT

Pipemakers has been manufacturing PVC pipe for many years.

Series 1 PVC-U pipes are not commonly specified by water agencies, however may be considered for special applications including for example for deep sewers or sewers where minimum cover applies. The pipe ODs are compatible with DWV pipes and fittings.

11 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

No issues were raised.

12 FUTURE WORKS

No future works have been identified.

13 DISCLAIMER

This Product Appraisal Report (Report) is issued by the Water Services Association of Australia Limited on the understanding that:

This Report applies to the product(s) as submitted. Any changes to the product(s) either minor or major shall void this Report.

To maintain the recommendations of this Report any such changes shall be detailed and notified to the Product Appraisal Manager for consideration and review of the Report and appropriate action. Appraisals and their recommendations will be the subject of continuous review dependent upon the satisfactory performance of products.

WSAA reserves the right to undertake random audits of product manufacture and installation. Where products fail to maintain appraised performance requirements the appraisal and its recommendations may be modified and reissued. Appraisal reports will be reviewed and reissued at regular intervals not exceeding five (5) years.

The following information explains a number of very important limits on your ability to rely on the information in this Report. Please read it carefully and take it into account when considering the contents of this Report.

Any enquiries regarding this report should be directed to the Program Manager, Carl Radford, email carl.radford@wsaa.asn.au.

13.1 Issue of Report

This Report has been published and/or prepared by the Water Services Association of Australia Limited and nominated Project Manager and peer group of technical specialists (the Publishers).

The Report has been prepared for use within Australia only by technical specialists that have expertise in the function of products such as those appraised in the Report (the Recipients).

By accepting this Report, the Recipient acknowledges and represents to the Publisher(s) and each person involved in the preparation of the Report that the Recipient has understood and accepted the terms of this Disclaimer.

13.2 Limits on Reliance on Information and Recommendations

13.2.1 Disclaimer of liability

Neither the Publisher(s) nor any person involved in the preparation of the Report accept(s) any liability for any loss or damage suffered by any person however caused (including negligence or the omission by any person to do anything) relating in any way to the Report or the product appraisal criteria underlying it. This includes (without limitation) any liability for any recommendation or information in the Report or any errors or omissions.

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The information and any recommendation contained (expressly or by implication) in this Report are provided in good faith (and subject to the limitations noted in this Report). However, you should treat the information as indicative only. You should not rely on that information or any such recommendation except to the extent that you reach an agreement to the contrary with the Publisher(s).

This Report does not contain all information that a person might require for the purposes of assessing any product discussed or appraised within it (Product). The product appraisal criteria used in preparing this Report may not address all relevant aspects of the Product.

Recipients should seek independent evidence of any matter which is material to their decisions in connection with an assessment of the Product and consult their own advisers for any technical information required. Any decision to use the Product should take into account the reliability of that independent evidence obtained by the Recipient regarding the Product.

Recipients should also independently verify and assess the appropriateness of any recommendation in the Report, especially given that any recommendation will not take into account a Recipient's particular needs or circumstances.

WSAA has not evaluated the extent of the product liability and professional indemnify insurance that the provider of the product maintains. Recipients should ensure that they evaluate the allocation of liability for product defects and any professional advice obtained in relation to the product or its specification including the requirements for product liability and professional indemnity insurance.

13.3 No Updating

Neither the Publisher(s) nor any person involved in the preparation of this Report [has] [have] any obligation to notify you of any change in the information contained in this Report or of any new information concerning the Publisher(s) or the Product or any other matter.

13.4 No Warranty

The Publisher(s) do[es] not, in any way, warrant that steps have been taken to verify or audit the accuracy or completeness of the information in this Report, or the accuracy, completeness or reasonableness of any recommendation in this Report.

APPENDIX A – PRODUCT LITERATURE



PIPEMAKERS



186 Ingram Road, Acacia Ridge
Queensland Australia 4110
PO Box 75, Acacia Ridge
Telephone: (07) 3344 3377
Facsimile: (07) 3452 4529
Website: www.pipemakers.com.au

TABLE 4.1
DIMENSIONS OF PVC PRESSURE PIPES—SERIES 1: METRIC PIPE SERIES

Nominal size DN	Outside diameter			Wall thickness												Tolerance on end squareness	
	Mean outside diameter		Maximum out-of-roundness	PN 4.5		PN 6		PN 9		PN 12		PN 15		PN 18			
	D_m min	D_m max		T_{min}	T_{max}	T_{min}	T_{max}	T_{min}	T_{max}	T_{min}	T_{max}	T_{min}	T_{max}	T_{min}	T_{max}		
10	17.0	17.3	0.5	—	—	—	—	—	—	—	—	—	—	—	1.4	1.7	1
15	21.2	21.5	0.5	—	—	—	—	—	—	—	—	1.4	1.7	1.6	2.0	1	
20	26.6	26.9	0.5	—	—	—	—	—	—	1.4	1.7	1.7	2.1	2.0	2.4	1	
25	33.4	33.7	0.5	—	—	—	—	1.4	1.7	1.7	2.1	2.1	2.5	2.5	3.0	1	
32	42.1	42.4	0.5	—	—	—	—	1.7	2.1	2.2	2.6	2.7	3.2	3.2	3.7	1	
40	48.1	48.4	0.5	—	—	1.4	1.7	1.9	2.3	2.5	3.0	3.1	3.6	3.6	4.2	2	
50	60.2	60.5	0.6	—	—	1.6	2.0	2.4	2.8	3.1	3.6	3.8	4.4	4.6	5.3	2	
65	75.2	75.5	0.7	1.5	1.9	2.0	2.4	3.0	3.5	3.9	4.5	4.8	5.5	5.7	6.5	3	
80	88.7	89.1	0.9	1.8	2.2	2.4	2.8	3.5	4.1	4.6	5.3	5.7	6.5	6.7	7.6	3	
100	114.1	114.5	1.2	2.3	2.7	3.0	3.5	4.5	5.2	5.9	6.7	7.3	8.2	8.6	9.7	4	
125	140.0	140.4	1.4	2.8	3.3	3.7	4.3	5.5	6.3	7.2	8.1	8.9	10.0	10.6	11.9	5	
150	160.0	160.5	1.6	3.2	3.7	4.2	4.8	6.3	7.1	8.3	9.3	10.2	11.4	12.1	13.5	6	
175	200.0	200.5	2.0	3.6	4.2	4.8	5.4	7.1	8.0	9.3	10.4	11.5	12.8	13.6	15.2	7	
200	225.0	225.6	2.2	4.0	4.6	5.4	6.1	7.9	8.9	10.5	11.7	12.9	14.4	15.3	17.1	8	
225	250.0	250.7	2.5	4.5	5.1	6.0	6.7	8.8	9.9	11.6	13.0	14.4	16.0	17.0	19.0	9	
250	280.0	280.8	2.8	5.0	5.7	6.7	7.5	9.9	11.1	13.0	14.5	16.1	17.9	19.1	21.2	10	
300	315.0	315.9	3.1	5.7	6.4	7.5	8.5	11.1	12.4	14.7	16.3	18.1	20.1	21.5	23.8	11	
350	355.0	356.0	3.6	6.4	7.2	8.5	9.5	12.5	14.0	16.5	18.4	20.4	22.6	24.2	26.8	12	
375	400.0	401.0	4.0	7.2	8.1	9.5	10.7	14.1	15.7	18.6	20.7	23.0	25.5	27.3	30.2	14	
400	450.0	451.0	4.5	8.1	9.1	10.7	12.0	15.9	17.7	20.9	23.2	25.9	28.6	30.7	34.0	16	
450	500.0	501.0	5.0	9.0	10.1	11.9	13.3	17.6	19.6	23.3	25.8	28.7	31.8	34.1	37.7	17	
500	560.0	561.0	5.6	10.1	11.3	13.3	14.9	19.8	21.9	26.0	28.9	32.2	35.6	38.2	42.2	19	
575	630.0	631.0	6.3	11.3	12.6	15.0	16.7	22.2	24.7	29.3	32.4	36.2	40.0	43.0	47.5	22	

NOTES:

- Dimensions apply to barrel of pipe exclusive of end treatment (see Clause 2.3).
- Maximum out-of-roundness applies to Classes PN 9, PN 12, PN 15 and PN 18 only (see Clause 2.3).
- Pipes in this series were formerly covered by AS 1477.1—1988, *Unplasticized PVC (UPVC) pipes and fittings for pressure applications* (NZS 7648:1987).

APPENDIX B - QUALITY CERTIFICATIONS

Copies of the following quality certificates are available from WSAA.

TABLE B1 PIPEMAKERS AUSTRALIA PTY LTD – MANAGEMENT SYSTEMS

186 Ingram Road Acacia Ridge QLD 501 Foley Road Deer Park VIC	
Quality Systems Standard	AS/NZS ISO 9001:2008
Certification No.	AMI-QM 78034
Certifying agency	ApprovalMark International
First date of certification	29 September 2021
Current date of certification	29 September 2021
Expiry date of certification	29 September 2024

TABLE B2 PIPEMAKERS AUSTRALIA PTY LTD – PRODUCT CERTIFICATION

186 Ingram Road Acacia Ridge QLD	
Product Standard	AS/NZS 1477:2017
Certificate No.	AMI 70061
Certifying agency	ApprovalMark International
First date of certification	8 August 2023
Current date of certification	8 August 2023
Expiry date of certification	8 August 2028

TABLE B3 PIPEMAKERS AUSTRALIA PTY LTD – BEST ENVIRONMENTAL PRACTICE

186 Ingram Road, Acacia Ridge QLD	
Product Standard	AS/NZS 147: 2017
Certificate No.	BEP-PVC 4110
Certifying agency	ApprovalMark International
First date of certification	20 February 2012
Current date of certification	10 February 2022
Expiry date of certification	20 February 2024

CERTIFICATE OF REGISTRATION



ApprovalMark International hereby grants:

Pipemakers Australia Pty Ltd

186 Ingram Road, Acacia Ridge, QLD 4110, AUSTRALIA
501 Foley Road, Deer Park, VIC 3023, AUSTRALIA

ISO 9001: 2015 - QUALITY MANAGEMENT SYSTEMS

THIS COVERS THE FOLLOWING SCOPE:

"The manufacture and distribution of PE, UPVC and PVC-O pipes and the purchase and distribution of complementary PVC & PE pipe fittings".

Certificate No. AMI-QM 78034

Issued: 29th September 2021
Expires: 29th September 2024

Originally Certified: 29th September 2021
Current Certification: 29th September 2021

John PRASAD
Director



Registered by: ApprovalMark International Pty Ltd (ABN 69 143 259 974) Unit 20, 33 Holbeche Road, Arndell Park NSW 2148 Australia. The assessment was carried with appropriate skill and assessment by ApprovalMark International Pty Ltd; however it will only accept its responsibility for proven negligence. The certificate remains the property of ApprovalMark International Pty Ltd.

ISO 9001

ApprovalMark

ISO TYPE 5

CERTIFICATE OF CONFORMITY



ApprovalMark International hereby grants:

Pipemakers Australia Pty Ltd

186 Ingram Road
Acacia Ridge, QLD 4110
AUSTRALIA

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1477:2017 – PVC pipes and fittings for pressure applications

The ISO Type 5 License shall comply with all the terms and conditions as stipulated by the governance of the operating rules of the ISO Type 5 Scheme and shall comply with the standard requirements at all times including when the standard is amended. The ISO Type 5 License only covers the product which is identified in the attached product schedule.

Certificate No. AMI 70061

Issued: 8th August 2023

Original Issue: 8th August 2023

Expires: 8th August 2028

John PRASAD

Director

ApprovalMark International Pty Ltd
18/33 Holbeche Road, Arndell Park 2148, Australia
www.approvalmark.com



Registered by: ApprovalMark International Pty Ltd (ABN 69 143 259 974) Unit 18, 33 Holbeche Road, Arndell Park NSW 2148 Australia. The assessment was carried with appropriate skill and assessment by ApprovalMark International Pty Ltd, however it will only accept its responsibility for proven negligence. The certificate remains the property of ApprovalMark International Pty Ltd.

ApprovalMark™



Product Schedule

Pipemakers Australia Pty Ltd

186 Ingram Road
Acacia Ridge, QLD 4110
AUSTRALIA

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1477:2017 – PVC pipes and fittings for pressure applications

Model ID	Model Name	Brand Name	Product Description	Endorsement Date
15PRESSPN15	PVC-U Pressure	PipeMakers	15MM PN15 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
15PRESSPN18	PVC-U Pressure	PipeMakers	15MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
20PRESSPN12	PVC-U Pressure	PipeMakers	20MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
20PRESSPN18	PVC-U Pressure	PipeMakers	20MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
25PRESSPN9	PVC-U Pressure	PipeMakers	25MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
25PRESSPN12	PVC-U Pressure	PipeMakers	25MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
25PRESSPN18	PVC-U Pressure	PipeMakers	25MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
32PRESSPN9	PVC-U Pressure	PipeMakers	32MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
32PRESSPN12	PVC-U Pressure	PipeMakers	32MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
32PRESSPN18	PVC-U Pressure	PipeMakers	32MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
40PRESSPN6	PVC-U Pressure	PipeMakers	40MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
40PRESSPN9	PVC-U Pressure	PipeMakers	40MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
40PRESSPN12	PVC-U Pressure	PipeMakers	40MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
40PRESSPN18	PVC-U Pressure	PipeMakers	40MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
50PRESSPN6	PVC-U Pressure	PipeMakers	50MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
50PRESSPN9	PVC-U Pressure	PipeMakers	50MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023



Product Schedule

Model ID	Model Name	Brand Name	Product Description	Endorsement Date
50PRESSPN12	PVC-U Pressure	PipeMakers	50MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
50PRESSPN18	PVC-U Pressure	PipeMakers	50MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
65PRESSPN6	PVC-U Pressure	PipeMakers	65 MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
65PRESSPN9	PVC-U Pressure	PipeMakers	65 MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
65PRESSPN12	PVC-U Pressure	PipeMakers	65MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
65PRESSPN18	PVC-U Pressure	PipeMakers	65 MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
80PRESSPN6	PVC-U Pressure	PipeMakers	80MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
80PRESSPN6RRJ	PVC-U Pressure	PipeMakers	80MM PN6 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
80PRESSPN9	PVC-U Pressure	PipeMakers	80MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
80PRESSPN9RRJ	PVC-U Pressure	PipeMakers	80 MM PN9 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
80PRESSPN12	PVC-U Pressure	PipeMakers	80MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
80PRESSPN12RRJ	PVC-U Pressure	PipeMakers	80MM PN12 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
80PRESSPN18	PVC-U Pressure	PipeMakers	80 MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
100PRESSPN6	PVC-U Pressure	PipeMakers	100MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
100PRESSPN6RRJ	PVC-U Pressure	PipeMakers	100MM PN6 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
100PRESSPN9	PVC-U Pressure	PipeMakers	100MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
100PRESSPN12	PVC-U Pressure	PipeMakers	100MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
125PRESSPN6	PVC-U Pressure	PipeMakers	125MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
125PRESSPN9	PVC-U Pressure	PipeMakers	125MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
125PRESSPN12	PVC-U Pressure	PipeMakers	125MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
125PRESSPN18	PVC-U Pressure	PipeMakers	125MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
150PRESSPN6	PVC-U Pressure	PipeMakers	150MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
150PRESSPN6RRJ	PVC-U Pressure	PipeMakers	150MM PN6 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
150PRESSPN9	PVC-U Pressure	PipeMakers	150MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023



Product Schedule

Model ID	Model Name	Brand Name	Product Description	Endorsement Date
150PRESSPN12	PVC-U Pressure	PipeMakers	150MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
150PN12RRJ/30	PVC-U Pressure	PipeMakers	150 MM PN12 UPVC PRESSURE PIPE S1 3M RRJ	8 th August 2023
150PRESSPN18	PVC-U Pressure	PipeMakers	150MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
175PRESSPN9	PVC-U Pressure	PipeMakers	175MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
175PRESSPN12	PVC-U Pressure	PipeMakers	175MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	4 th October 2023
175PRESSPN18	PVC-U Pressure	PipeMakers	175MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	4 th October 2023
200PRESSPN6	PVC-U Pressure	PipeMakers	200MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
200PRESSPN6RRJ	PVC-U Pressure	PipeMakers	200MM PN6 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
200PRESSPN9	PVC-U Pressure	PipeMakers	200MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
200PRESSPN12	PVC-U Pressure	PipeMakers	200MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
200PRESSPN18	PVC-U Pressure	PipeMakers	200MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	4 th October 2023
225PRESSPN6	PVC-U Pressure	PipeMakers	225MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
225PRESSPN6RRJ	PVC-U Pressure	PipeMakers	225MM PN6 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
225PN12RRJ/30	PVC-U Pressure	PipeMakers	225MM PN12 UPVC PRESSURE PIPE RRJ S1 3M RRJ	8 th August 2023
225PRESSPN12	PVC-U Pressure	PipeMakers	225MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
250PRESSPN6	PVC-U Pressure	PipeMakers	250MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
250PRESSPN6RRJ	PVC-U Pressure	PipeMakers	250MM PN6 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
250PRESSPN9RRJ	PVC-U Pressure	PipeMakers	250MM PN9 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
250PRESSPN12	PVC-U Pressure	PipeMakers	250MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
250PRESSPN18	PVC-U Pressure	PipeMakers	250MM PN18 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
300PRESSPN6RRJ	PVC-U Pressure	PipeMakers	300MM PN6 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
300PRESSPN9	PVC-U Pressure	PipeMakers	300 MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
300PRESSPN12	PVC-U Pressure	PipeMakers	300MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
375PRESSPN6	PVC-U Pressure	PipeMakers	375MM PN6 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023



Product Schedule

Model ID	Model Name	Brand Name	Product Description	Endorsement Date
375PRESSPN9	PVC-U Pressure	PipeMakers	375MM PN9 UPVC PRESSURE PIPE S1 6M SWJ	8 th August 2023
375PRESSPN12	PVC-U Pressure	PipeMakers	375MM PN12 UPVC PRESSURE PIPE S1 6M SWJ	4 th October 2023
375PRESSPN6RRJ	PVC-U Pressure	PipeMakers	375MM PN6 UPVC PRESSURE PIPE S1 6M RRJ	8 th August 2023
125PN9ET	PVC-U Pressure	PipeMakers	125MM PN9 UPVC PRESSURE PIPE S1 6m SWJ	8 th August 2023
125PN12ET	PVC-U Pressure	PipeMakers	125MM PN12 UPVC PRESSURE PIPE S1 6m SWJ	8 th August 2023
300PN12RRJ/30	PVC-U Pressure	PipeMakers	300MM PN12 UPVC PRESSURE PIPE S1 3M RRJ	8 th August 2023
375PN12RRJ/30	PVC-U Pressure	PipeMakers	375MM PN12 UPVC PRESSURE PIPE S1 3M RRJ	8 th August 2023

End of record

Certificate No. AMI 70061

The models identified above in the schedule are endorsed for ISO Type 5 application only.



BEST ENVIRONMENTAL PRACTICE



ApprovalMark International hereby grants:

PIPEMAKERS AUSTRALIA PTY LTD

186 Ingram Road,
Acacia Ridge 4110
AUSTRALIA

Best Environmental Practice - PVC

Evaluated to

AS/NZS 1254:2010 - PVC-U - Pipes and fittings for stormwater and surface water applications
AS/NZS 1260:2017 - PVC - U - Pipes and fittings for drain, waste and vent applications
AS/NZS 1477:2017 - PVC- U - Pipes and fittings for pressure applications
AS/NZS 4441:2017 - Orientated PVC (PVC-O) pipes for pressure applications
AS/NZS 4765:2017 - Modified PVC (PVC-M) pipes for pressure applications
AS/NZS 2053.2:2001 - Conduits and fittings for electrical installations - Part 2: Rigid plain conduits and fittings of insulating material

The licensee complies with the requirements of Best Environmental Practice – PVC as per Section 7 as specified in the Green Building Council of Australia ("the Requirements") Literature Review and Best Practice Guidelines for the Life Cycle of PVC Building Product's using the compliance pathway Number 2 - Manufacturer's Declaration as measured by the Green Star PVC Credit Auditor Verification Guidance - November 2013 ("the Criteria").

The documentation was reviewed by ApprovalMark International on 10th February 2022 and found to comply with the following requirements:

- **Manufacture of PVC Resin**
- **Manufacture and end of life management of PVC products**
- **Use of PVC Recyclate in PVC products**

Note - Any changes introduced to above requirements shall immediately be reported to ApprovalMark International in order to examine the validity of the certificate.

Certificate No. BEP-PVC 4110

Issued: 10th February 2022
Expires: 20th February 2024

Originally Certified: 20th February 2012
Current Certification: 10th February 2022

John PRASAD
Director

BEP
CERTIFIED

ApprovalMark

APPENDIX C - SUPPLIER CONTACTS**PIPEMAKERS AUSTRALIA PTY LTD****PVC Manufacturing Facilities**

186 Ingram Road Acacia Ridge QLD 4110. Tel. 07 3344 3377 Email. ben.mccreghan@pipemakers.com.au	501 Foley Road Deer Park VIC 3023 Tel. 03 8361 7115 Email. ben.morovic@pipemakers.com.au
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Sales and Distribution

<p>Pipemakers Northern Region</p> <p>Areas Serviced</p> <ul style="list-style-type: none"> • Northern Territory • Queensland • Northern New South Wales • Metropolitan Sydney • ACT <p>Queensland: Phone: (07) 3344 3377 Address: 186 Ingram Rd Acacia Ridge QLD 4110</p> <p>New South Wales: Phone: (02) 9604 3044 Address: 16-24 Lugard Street, Penrith N.S.W.</p>	<p>Pipemakers Southern Region</p> <p>Areas Serviced</p> <ul style="list-style-type: none"> • Southern New South Wales • Victoria • Tasmania • South Australia <p>Victoria Phone: (03) 8361 7115 Address: 501 Foleys Road Deer Park VIC 3023</p> <p>New South Wales Phone: (02) 9604 3044 Address: 16-24 Lugard Street, Penrith N.S.W.</p>
<p>Pipemakers Western Region</p> <p>Areas Serviced</p> <ul style="list-style-type: none"> • Western Australia <p>Phone: (08) 6250 3100 Address: 17 Gauge Circuit Canningvale WA 6155</p>	



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