



Pipemakers Australia Pty Ltd

PRODUCT APPRAISAL REPORT 1103 Issue 3

PVC-U DWV Pipes - Plain Wall and Sandwich Construction

AS/NZS 1260:2017 PVC-U pipes and fittings for drain, waste and vent applications

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Peer Reviewers

Name/Title	Organisation	Date
Product Appraisal Technical Advisory Group	WSAA	20 December 2011
WSAA Expert Panel	WSAA	20 December 2011
Carl Radford, Product Appraisal Manager	WSAA	23 January 2012
Mohamed Yoosuf, Senior Engineer, Standards	WSAA	19 August 2017
Carl Radford, Product Appraisal Manager	WSAA	21 August 2017
Peter Pittard, WSAA Consultant	WSAA	12 January 2023
Carl Radford, Product Appraisal Manager	WSAA	12 January 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 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 plain wall and sandwich wall PVC-U pipes for drainage, waste and vent applications manufactured in conformance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent applications*.

This Issue 3 is a replacement for the previous version of the appraisal which had reached its 5-year expiry date.

The scope of this appraisal includes pipe sizes from DN 100 to DN 375 with minimum stiffness ratings of SN10 for DN 100 and SN8 for sizes equal to and greater than DN 150. The pipes are available with either solvent cement joints (SCJ) or elastomeric seal joints (RRJ). Effective lengths may be 3m or 6m.

See Section 3 for product details by manufacturing site.

Sandwich construction pipes may be provided with a solid core or foam core manufactured using a multilayered die head technology. See Section 12 for further details.

Pipemakers Australia Pty Ltd holds an ISO 9001:2015 Quality Management System Licence covering its Acacia Ridge and Deer Park sites.

The PVC-U DWV pipes have ISO Type 5 ApprovalMark product certification to AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent applications*.

This Appraisal has determined that Pipemakers PVC-U DWV pipes as detailed in this report, meet the requirements of WSA PS 230 *Polyvinylchloride, Unplasticised (PVC-U) Pipes and Fittings for Non-Pressure Applications – Sewerage and Drainage* and are considered as 'fit-for-purpose'.

1.1 Recommendation

It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise Pipemakers plain wall and sandwich wall PVC-U DWV, as detailed in this report, for use in gravity sewer pipelines, provided they are installed in accordance with WSAA Codes and the manufacturer's requirements, where specified.

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. The company maintains PVC manufacturing facilities in Deer Park in Victoria and Acacia Ridge in Queensland and operates a national distribution network within Australia.

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

The PVC-U range of DWV pipes is manufactured at either of Pipemakers manufacturing facilities in Acacia Ridge and Deer Park.

3 THE PRODUCT

This appraisal is for a range of plain wall and sandwich wall PVC-U pipes for drainage, waste and vent applications manufactured in conformance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent applications*.

The scope of this appraisal includes pipe sizes from DN 100 to DN 375 with minimum stiffness ratings of SN10 for DN100 and SN8 for sizes equal to and greater than DN 150. The pipes are available with either solvent cement joints (SCJ) or elastomeric seal joints (RRJ). Effective lengths may be 3m or 6m.

Sandwich construction pipes may be provided with a solid core or foam core manufactured using a multilayered die head technology. See Section 12 for further details.

A water agency should specify where a particular wall type is required.

See Tables 1 and 2 for details of the product range.

TABLE 1: PVC-U DWV SOLVENT CEMENT JOINT SEWER PIPE

DN	Minimum Stiffness Rating	Plain Wall		Solid Core Sandwich		Foam Core Sandwich	
		3m	6m	3m	6m	3m	6m
100	SN10	✓	✓	✓	✓	✓	✓
150	SN8	✓	✓	✓	✓	✓	✓
225	SN8	✓	✓	✓	✓	✓	✓
300	SN8	✓	✓	✓	✓	✓	✓
375	SN8	✓	✓	✓	✓	✓	✓

TABLE 2: PVC-U DWV ELASTOMERIC SEAL JOINT SEWER PIPE

DN	Minimum Stiffness Rating SN	Plain Wall		Solid Core Sandwich		Foam Core Sandwich	
		3m	6m	3m	6m	3m	6m
100	SN10	✓	✓	✓	✓	✓	✓
150	SN8	✓	✓	✓	✓	✓	✓
225	SN8	✓	✓	✓	✓	✓	✓
300	SN8	✓	✓	✓	✓	✓	✓
375	SN8	✓	✓	✓	✓	✓	✓

4 SCOPE OF THE APPRAISAL

This appraisal is for a range of Pipemakers plain wall, solid core or foam core PVC-U DWV pipes with solvent cement joints or elastomeric seal joints in sizes from DN 100, DN 150, DN 225, DN 300 and DN 375.

5 APPRAISAL CRITERIA

5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts plain wall and sandwich construction PVC-U DWV pipes manufactured in compliance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent 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 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 DWV pipe range has been appraised for compliance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent 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 230 *Polyvinylchloride, Unplasticised (PVC-U) Pipes and Fittings for Non-Pressure Applications – Sewerage and Drainage*.

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

<https://www.wsaa.asn.au/shop/product/53481>

6 COMPLIANCE WITH APPRAISAL CRITERIA

6.1 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 1260:2017 ApprovalMark ISO Type 5 Product Certification Licence No. 1540 issued to Pipemakers Australia Pty Ltd by ApprovalMark International.
- AS/NZS 1260:2017 ApprovalMark ISO Type 5 Product Certification Licence No. 71015 issued to Pipemakers Australia Pty Ltd by ApprovalMark International.
- AS/NZS 1260:2017 Best Environmental Practice PVC Certificate No. BEP-PVC 4110 issued to Pipemakers Australia Pty Ltd (Acacia Ridge) by ApprovalMark International.
- AS/NZS 1260:2017 Best Environmental Practice PVC Certificate No. BEP-PVC 542 issued to Pipemakers Australia Pty Ltd (Deer Park) by ApprovalMark International.

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

6.2 Compliance with Performance Requirements

6.2.1 Type Tests

Material and performance type test requirements, including for elastomeric seal joints specified in AS/NZS 1260, were completed for plain wall, solid core sandwich and foam core sandwich pipes for the previous issue of this appraisal report. Pipemakers has confirmed that there have been no changes to the formulation or designs. Tests specified in the 2009 version of the standard have not been changed in the 2017 version so the original test results remain valid.

A copy of a recent test report undertaken by Queensland Testing Laboratory (NATA Accreditation No 14783) has been submitted for tests undertaken on the DN 150 solid core sandwich construction pipe in accordance with AS/NZS 1260:2017. The tests undertaken included dimensional checks, impact at 20°, pipe stiffness, flattening test and elastomeric joint tests for both hydrostatic pressure and infiltration.

6.2.2 Elastomeric seals

The SBR elastomeric seals are supplied by Gulf Rubber and manufactured by Thong Nhat Rubber Company Ruthimex in conformance with AS 1646. The seals are covered by

StandardsMark ISO Type 5 product certification. Certification details are held on file by WSAA.

7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

PVC-U DWV pipes and fittings have been used for many years in Australia. Experience in handling and installing the products is well established. Design and installation instructions are provided in AS/NZS 2032 *Installation of PVC pipe systems*, AS/NZS 2566.1 *Buried flexible pipelines Part 1: Structural design* and AS/NZS 2566.2 *Buried flexible pipelines Part 2: Installation*.

Where permitted by the asset owner, PVC DWV pipes can be installed on a curved alignment in accordance with PIPA document POP202.

8 PRODUCT MARKING

Pipes are marked as follows in compliance with AS/NZS 1260:

- Manufacturer's name: Pipemakers
- Best Environmental Practice: BEP
- Nominal size: e.g., 100
- Pipe Identification: PVC-U DWV
- For structural wall pipes of sandwich construction: SC
- Class: e.g., SN8, SN10
- Identification of the place of manufacture: Line No. and Q (for Qld) or V (for Vic)
- Date of manufacture: yymmdd
- Standard No: AS/NZS 1260
- ApprovalMark Licence Number: e.g., LN 1540

Example:

PIPEMAKERS BEP 100 PVC-U DWV XSC SN10 L1 Q 221203 AS/NZS 1260 W LN 1540 15:44
100DWVSC 9319841040153

9 PACKAGING AND TRANSPORTATION

Timber frames with metal straps are used for full packs of pipes. A nylon 'gut' strap secures individual pipes, separated by wooden spacers.

Pipes are stacked in layers with sockets placed at alternative ends of the rack.



FIGURE 1 EXAMPLE OF PACKAGING

10 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 warranty is included in their terms and conditions of sale.

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

PVC DWV pipes and fittings, manufactured to AS/NZS1260, are widely used by the water industry and field testing is not considered necessary.

PVC-U gravity sewer systems have been in use in Australia since the early 1970s and are the predominant option for collection sewers up to size DN 375. Overseas experience dates back to the 1960s.

Water industry consensus is that PVC-U gravity systems have performed satisfactorily and that correctly installed systems demonstrate satisfactory resistance to tree root penetration, whether elastomeric sealing ring jointed or solvent cement jointed.

Pipemakers PVC-U DWV pipes have received product authorisation from all major water agencies within Australia.

12 DISCUSSION

The period over which PVC-U non-pressure pipes have been used in Australia is indicated by the first edition of AS 1260 being published in 1974. PVC-U DWV pipes were originally produced to specified minimum wall thicknesses. In 1996 the Standard changed to a performance-based requirement where minimum pipe stiffness is specified.

Pipemakers DWV pipes greater than DN100 are produced as plain wall, solid core sandwich construction or foam core sandwich construction. According to AS/NZS 1260, all three DWV pipe constructions have to meet the same performance requirements except that reversion applies only to plain wall pipes. Additionally, all sandwich construction pipes are required to have minimum inside wall thickness according to AS/NZS 1260. The minimum values of the inside wall thicknesses in AS/NZS 1260 are approximately 50% greater than those required in ISO 4435 *Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly (vinyl chloride) (PVC-U)*.

The 3 forms of PVC-U DWV non-pressure pipes used in Australia are:

1. Plain wall (single layer) pipe made entirely from 100% virgin PVC resin with added thermal stabilisers, processing aids, titanium dioxide UV stabiliser and coated calcium carbonate filler. The PVC content of the compound is not less than 80% by mass.
2. Solid wall sandwich construction pipe comprised of an inner and outer layer of virgin PVC and a central (core) layer of “reworked/reclaimed” PVC material. This core layer is typically in-house reworked DWV pipe, PVC communications conduit or PVC-U pressure pipe.
3. Foam core sandwich construction pipe comprised of an inner and outer layer of virgin PVC and a central (core) layer of “reworked/reclaimed” PVC material to which a blowing (foaming) agent has been added. This foamed core layer features a cellular structure that results in lighter weight pipes, improved material efficiency and lower carbon footprint.

Sandwich construction PVC DWV pipes conform to AS/NZS 1260 and are equivalent in performance to pipe manufactured from solid 100% virgin material.

Importantly this type of pipe has been responsible for diverting thousands of tonnes of PVC from the waste stream across Australia.

For further information refer to PIPA Technical Note TN 019 *Sandwich Construction PVC-U Non-Pressure Pipe* (PVC-U).

13 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

They are no outstanding issues.

14 FUTURE WORKS

No future works have been identified.

15 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, Phone: 03 8605 7601 email carl.radford@wsaa.asn.au.

15.1 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.

15.2 Limits on Reliance on Information and Recommendations

15.2.1 Disclaimer of liability

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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 indemnity 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.

15.3 No Updating

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15.4 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

No product literature is available.

APPENDIX B - QUALITY CERTIFICATIONS

Copies of the Quality Certification Certificates are available from WSAA

**TABLE B1
PIPEMAKERS AUSTRALIA PTY LTD – MANAGEMENT SYSTEMS**

501 Foley Road Deer Park VIC 186 Ingram Road, Acacia Ridge QLD	
Quality Systems Standard	AS/NZS ISO 9001:2015
Certification Licence No.	AMI-QM 78034
Certifying Agency	ApprovalMark International
First Date of Certification	27 March 2006
Current Date of Certification	29 September 2021
Expiry Date of Certification	29 September 2024

**TABLE B2
PIPEMAKERS AUSTRALIA PTY LTD (ACACIA RIDGE) – PRODUCT CERTIFICATION**

186 Ingram Road, Acacia Ridge QLD	
Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	AMI 1540
Issuing Certification Body	ApprovalMark International
First Date of Certification	26 April 2011
Current Date of Certification	15 December 2022
Expiry Date of Certification	26 April 2026

**TABLE B3
PIPEMAKERS AUSTRALIA PTY LTD (DEER PARK) – PRODUCT CERTIFICATION**

501 Foley Road Deer Park VIC	
Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	AMI 71015
Issuing Certification Body	ApprovalMark International
First Date of Certification	21 October 2012
Current Date of Certification	15 December 2022
Expiry Date of Certification	21 October 2027

TABLE B4
PIPEMAKERS AUSTRALIA PTY LTD (ACACIA RIDGE)
BEST ENVIRONMENTAL PRACTICE

186 Ingram Road, Acacia Ridge QLD 4110	
Quality Systems Standard	Best Environmental Practice
Certification Licence 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

TABLE B5
PIPEMAKERS AUSTRALIA PTY LTD (DEER PARK)
BEST ENVIRONMENTAL PRACTICE

501 Foleys Road Deer Park Vic	
Quality Systems Standard	Best Environmental Practice
Certification Licence No.	BEP-PVC 542
Certifying Agency	ApprovalMark International
First Date of Certification	29 February 2012
Current Date of Certification	11 February 2022
Expiry Date of Certification	29 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

A handwritten signature in black ink, appearing to read "John Prasad".

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 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 1260:2017 PVC-U pipes and fittings for drain, waste and vent 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 1540

Issued: 15th December 2022

Original Issue: 26th April 2011

Expires: 26th April 2026

John PRASAD

Director

ApprovalMark International Pty Ltd
20/33 Holbeche Road, Arndell Park 2148, Australia
www.approvalmark.com



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Product Schedule

Pipemakers Australia Pty Ltd

186 Ingram Road
Acacia Ridge, QLD 4110
AUSTRALIA

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1260:2017 PVC-U pipes and fittings for drain, waste and vent applications

Model ID	Model Name	Brand Name	Product Description	Endorsement Date
DN40	DN40AR	Pipemakers	DWV Pipe - Plain Wall Grey, DN40, 3m, 6m	15 th December 2022
DN50	DN50AR	Pipemakers	DWV Pipe - Plain Wall Grey, DN50, 3m, 6m	15 th December 2022
DN65	DN65AR	Pipemakers	DWV Pipe - Plain Wall Grey, DN65, 3m, 6m	15 th December 2022
DN80	DN80AR	Pipemakers	DWV Pipe - Plain Wall Grey, DN80, 3m, 6m	15 th December 2022
DN100	DN100AR	Pipemakers	DWV Pipe – Plain Wall-Grey, DN100, SN6 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN150	DN150AR	Pipemakers	DWV Pipe – Plain Wall-Grey, DN150, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN225	DN225AR	Pipemakers	DWV Pipe – Plain Wall-Grey, DN225, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN300	DN300AR	Pipemakers	DWV Pipe – Plain Wall-Grey, DN300, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN375	DN375AR	Pipemakers	DWV Pipe – Plain Wall-Grey, DN375, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN100	DN100AR	Pipemakers	DWV Pipe – Foam Core Wall-Grey, DN100, SN6 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN150	DN150AR	Pipemakers	DWV Pipe – Foam Core-Grey, DN150, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN225	DN225AR	Pipemakers	DWV Pipe – Foam Core-Grey, DN225, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN300	DN300AR	Pipemakers	DWV Pipe – Foam Core-Grey, DN300, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN375	DN375AR	Pipemakers	DWV Pipe – Foam Core-Grey, DN375, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN100	DN100AR	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN100, SN6 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022



Product Schedule

Model ID	Model Name	Brand Name	Product Description	Endorsement Date
DN150	DN150AR	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN150, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN225	DN225AR	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN225, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN300	DN300AR	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN300, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN375	DN375AR	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN375, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022

End of record

Certificate No. AMI 1540

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

**ISO
TYPE 5**

CERTIFICATE OF CONFORMITY



ApprovalMark International hereby grants:

PIPEMAKERS AUSTRALIA PTY LTD

501 Foleys Road
Deer Park, VIC 3023
Australia

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1260:2017 – PVC-U pipes and fittings for drain, waste and vent 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 71015

Issued: 15th December 2022

Original Issue: 21st October 2012

Expires: 21st October 2027



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.



Product Schedule

Pipemakers Australia Pty Ltd

501 Foleys Road
Deer Park, VIC 3023
AUSTRALIA

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1260:2017 PVC-U pipes and fittings for drain, waste and vent applications

Model ID	Model Name	Brand Name	Product Description	Endorsement Date
DN40	DN40DP	Pipemakers	DWV Pipe - Plain Wall Grey, DN40, 3m, 6m	15 th December 2022
DN50	DN50DP	Pipemakers	DWV Pipe - Plain Wall Grey, DN50, 3m, 6m	15 th December 2022
DN65	DN65DP	Pipemakers	DWV Pipe - Plain Wall Grey, DN65, 3m, 6m	15 th December 2022
DN80	DN80DP	Pipemakers	DWV Pipe - Plain Wall Grey, DN80, 3m, 6m	15 th December 2022
DN100	DN100DP	Pipemakers	DWV Pipe – Plain Wall-Grey, DN100, SN6 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN150	DN150DP	Pipemakers	DWV Pipe – Plain Wall-Grey, DN150, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN225	DN225DP	Pipemakers	DWV Pipe – Plain Wall-Grey, DN225, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN300	DN300DP	Pipemakers	DWV Pipe – Plain Wall-Grey, DN300, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN375	DN375DP	Pipemakers	DWV Pipe – Plain Wall-Grey, DN375, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN100	DN100DP	Pipemakers	DWV Pipe – Foam Core Wall-Grey, DN100, SN6 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN150	DN150DP	Pipemakers	DWV Pipe – Foam Core-Grey, DN150, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN225	DN225DP	Pipemakers	DWV Pipe – Foam Core-Grey, DN225, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN300	DN300DP	Pipemakers	DWV Pipe – Foam Core-Grey, DN300, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN375	DN375DP	Pipemakers	DWV Pipe – Foam Core-Grey, DN375, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN100	DN100DP	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN100, SN6 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN150	DN150DP	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN150, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022



Product Schedule

Model ID	Model Name	Brand Name	Product Description	Endorsement Date
DN225	DN225DP	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN225, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN300	DN300DP	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN300, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022
DN375	DN375DP	Pipemakers	DWV Pipe – Solid Core Wall-Grey, DN375, SN4, 6, 8 & 10, SCJ or RRJ - 3m, 6m	15 th December 2022

End of record

Certificate No. AMI 71015

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



BEST ENVIRONMENTAL PRACTICE



ApprovalMark International hereby grants:

PIPEMAKERS AUSTRALIA PTY LTD

501 Foleys Road
Deer Park 3023
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 11th 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 542

Issued: 11th February 2022

Expires: 29th February 2024

Originally Certified: 29th February 2012

Current Certification: 11th February 2022

A handwritten signature in black ink, appearing to read "John PRASAD".

John PRASAD
Director

APPENDIX C - SUPPLIER CONTACTS

Pipemakers Australia Pty Ltd

Email: sales@pipemakers.com.au

Website: www.pipemakers.com.au

Southern Region

Tel: 03 8361 7115

Northern Region

Tel: 07 3344 3377

Western Region

Tel: 08 6250 3100



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