



Vinidex Pty Ltd

PRODUCT APPRAISAL REPORT 1626 Issue 2

PVC-U DWV Pipes and Fittings for Non-pressure Applications

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	26 June 2017
WSAA Expert Panel	WSAA	26 June 2017
Alan Whittle, WSAA Consultant	WSAA	24 August 2017
Carl Radford, Product Appraisal Manager	WSAA	5 September 2017
Peter Pittard, WSAA Consultant	WSAA	25 November 2022
Carl Radford, Product Appraisal Manager	WSAA	25 November 2022

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

Vinidex Pty Ltd, founded in 1960, is a leading manufacturer and distributor of thermoplastic pipeline systems in Australia. Its systems are used in the transportation of fluids for infrastructure development, agriculture, mining and building.

Vinidex is wholly owned by the Aliaxis Group, a leading global manufacturer and distributor of fluid handling systems used in residential and commercial construction, as well as in industrial and public infrastructure applications.

This Appraisal is for a range of Vinidex PVC-U pipes and fittings manufactured in accordance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent applications*.

This Issue 2 is a replacement for the previous version of the appraisal which had reached its 5-year expiry date.

The pipe range included in this Appraisal consists of:

- Solvent cement joint pipes in sizes DN 100, DN 150, DN 225 and DN 300 with minimum SN10 stiffness rating for DN 100 and SN8 stiffness rating for larger sizes. Pipes are available with a solid wall, solid core sandwich construction or foam core sandwich construction in 3m or 6m lengths.
- Elastomeric seal joint pipes in sizes DN 100, DN 150, DN 225, DN 300 and DN 375 with minimum SN10 stiffness rating for DN 100 and SN8 stiffness rating for larger sizes. Pipes in sizes DN 100 to DN 375 are available with a solid wall construction. Pipes in sizes DN 100 to DN 300 are also available with sandwich construction or foam core sandwich construction. The pipes are available in 3m lengths.

A range of injection moulded and fabricated plain wall fittings are also available in sizes from DN 100 to DN 375. Minimum wall thickness of the fittings is in compliance with AS/NZS 1260 which advises that the fittings are suitable for use in systems using pipes up to SN16.

Details of the product range covered by this Appraisal is detailed in Section 3.

Vinidex Pty Ltd holds an ISO 9001:2015 Quality Management System licence for all manufacturing sites.

Vinidex PVC-U DWV pipes and fittings are covered by ISO Type 5 product certification licences to AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent applications*.

This Appraisal has determined that Vinidex PVC-U DWV pipes and fittings, 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 Recommendations

It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise the Vinidex range of PVC-U DWV pipes and fittings, as detailed in this report, for use in non-pressure wastewater applications provided the design, installation and acceptance testing are in accordance with the relevant WSAA codes, Australian Standards and manufacturer's requirements.

2 THE APPLICANT

The Applicant is Vinidex Pty Ltd.

2.1 The Manufacturer and Supplier

Vinidex Pty Ltd is a leading Australian manufacturer and distributor of thermoplastic pipe and fittings used in the transportation of fluids for infrastructure development, agriculture, mining and building.

Founded in 1960, Vinidex has pipe manufacturing factories and distribution centres located in Sydney, Melbourne, Brisbane, Toowoomba, Townsville, Launceston, Perth, Adelaide, Darwin and Wagga Wagga. The company also has a significant presence in the Asia-Pacific Rim, with operations in New Zealand.

Vinidex PVC-U DWV pipe is manufactured at Smithfield NSW, Coopers Plains Queensland, Sunshine Victoria and O'Connor WA.

Vinidex is wholly owned by the Aliaxis Group which is a leading global manufacturer and distributor, of fluid handling systems used in residential and commercial construction, as well as in industrial and public infrastructure applications.

Aliaxis is present in over 40 countries, has more than 100 manufacturing and commercial entities and employs over 14,000 people. In addition to the well-established markets of Europe and North America, Aliaxis has operations in Latin and South America, Australasia and Asia.

Further information is available on Vinidex and Aliaxis websites at www.vinidex.com.au or www.aliaxis.com.

3 THE PRODUCT

This Appraisal is for a range of Vinidex PVC-U pipes and fittings manufactured in accordance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent applications*.

The pipe range included in this Appraisal consists of:

- Solvent cement joint pipes in sizes DN 100, DN 150, DN 225 and DN 300 with minimum SN10 stiffness rating for DN 100 and SN8 stiffness rating for larger sizes. Pipes are available with a solid wall, solid core sandwich construction or foam core sandwich construction in 3m or 6m lengths.
- Elastomeric seal joint pipes in sizes DN 100, DN 150, DN 225, DN 300 and DN 375 with minimum SN10 stiffness rating for DN 100 and SN8 stiffness rating for larger sizes. Pipes in sizes DN 100 to DN 375 are available with a solid wall construction. Pipes in sizes DN 100 to DN 300 are also available with sandwich construction or foam core sandwich construction. The pipes are available in 3m lengths.

A range of injection moulded and fabricated plain wall fittings are also available in sizes from DN 100 to DN 375. Minimum wall thickness of the fittings is in compliance with AS/NZS 1260 which advises that the fittings are suitable for use in systems using pipes up to SN16.

See Table 1 for details of the range.

TABLE 1 VINIDEX DWV PIPES AND FITTINGS RANGE

DN	Stiffness, SN	OD, mm	Solid Wall	Solid Core Sandwich	Foam Core Sandwich	Effective Length, m
Solvent Cement Joint Pipe						
100	10	110	√	√	√	3
			√	√	√	6
150	8	160	√	√	√	3
			√	√	√	6
225	8	250	√	√	√	3
			√	√	√	6
300	8	315	√	√	√	3
			√	√	√	6

Rubber Ring Joint Pipe						
100	10	110	√	√	√	3
150	8	160	√	√	√	3
225	8	250	√	√	√	3
300	8	315	√	√	√	3
375	8	400	√	X	X	3
SCJ and RRJ Fittings						
100 - 375	Min Wall Thickness	-	√	X	X	-

4 SCOPE OF THE APPRAISAL

The scope of this Appraisal includes Vinidex solvent cement joint and elastomeric seal joint PVC-U DWV plain wall and sandwich construction pipes and compatible plain wall fittings in sizes from DN 100 to DN 375 as detailed in Section 3 and included in the ISO Type 5 StandardsMark Product Schedules included in Appendix B.

5 APPRAISAL CRITERIA

5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts PVC-U DWV pipe manufactured in compliance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent application* 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

The Vinidex range of DWV PVC-U pipes have been appraised for compliance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent application*.

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 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/60961>.

6 COMPLIANCE WITH APPRAISAL CRITERIA

6.1 Compliance with Quality Assurance Requirements

Vinidex has submitted the following quality certificates:

- ISO 9001:2015 Certificate of Registration No. QEC0570 issued to Vinidex Pty Ltd by SAI Global.

- AS/NZS 1260:2017 ISO Type 5 StandardsMark Product Certification Licence No. SMK 1010 issued to Vinidex Pty Ltd by SAI Global. (For pipe)
- AS/NZS 1260:2017 ISO Type 5 StandardsMark Product Certification Licence No. SMK 1246 issued to Vinidex Pty Ltd by SAI Global. (For fittings)
- AS/NZS 1260:2017 Best Environmental Practice Certification No. SDPROD40047 issued to Vinidex Pty Ltd by SAI-Global.

Copies of the 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

Performance type test requirements specified in AS/NZS 1260 were completed for solid wall, solid core and foam core sandwich construction pipes for the previous issue of this appraisal report. The tests included impact at 20°, pipe stiffness, ring flexibility, Vicat softening, pipe wall dimensions, joint performance and interface pressure.

The tests specified in the 2009 version of the standard have not been changed in the 2017 version so the test results remain valid.

6.2.2 Elastomeric seals

The elastomeric seals utilised in the elastomeric joints are manufactured from SBR rubber in accordance with AS 1646 / EN 681.1 by Thai Duong Joint Stock Company and supplied by Hultec Asia Pacific or by Thong Nhat Rubber Company Ruthimex and supplied by Gulf Rubber Australia. ISO Type 5 Product Certification details for both Hultec and Gulf 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*.

Vinidex Installation Guides are available at: <https://www.vinidex.com.au/support-2/pvc-dwv-stormwater-systems-support/>

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

Vinidex DWV pipes and fittings are marked in accordance with the requirements AS/NZS 1260 as per the following:

- Manufacturers Name: Vinidex
- Nominal Size: e.g., 100
- Pipe Identification: PVC-U DWV
- For structural wall pipes of sandwich construction: 'SC'
- Class: e.g., SN8, SN10
- Date of manufacture: e.g., 220401 (i.e., 1st April 2022)
- Identification of place of manufacture. Manufacturer's code is acceptable
- The standard number: AS/NZS 1260

- Product certification symbol: I>>>>I
- Licence Number: LN 1010
- BEP PVC

Vinidex also adds the letters 'FDWV' for foam core sandwich construction pipe and 'SDWV' for solid core sandwich construction pipe.

Example:

VINIDEX BEP PVC DWV 150 PVCU SN8 LIC. No. 1014 AS/NZS 1260 BL03 [0] 220401 16:07

9 PACKAGING AND TRANSPORTATION

The packaging and transport of Vinidex DWV pipe is in accordance with AS/NZS 2032. Full packs of pipes use timber bearers and are held in place by side supports and metal strapping. The strapping is fixed to the timbers to restrict movement during transport.

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 Vinidex's warranty is included in their terms and conditions of sale.

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

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

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 although a predecessor, AS K138, was published in 1967. Originally all PVC-U DWV pipes across the full diameter range were produced to specified minimum wall thicknesses. In 1996 this changed to a performance requirement, namely pipe stiffness.

In accordance with AS/NZS 1260 Vinidex DWV pipes may be produced as solid wall, solid core sandwich construction or foam core sandwich construction. According to AS/NZS 1260, all three DWV pipe constructions are required 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)*.

For more than two decades, Australia's PVC pipe manufacturers utilized post-industrial PVC waste and inhouse production scrap in the manufacture of multilayered non-pressure pipe and electrical conduit, known as sandwich construction or SC PVC pipe. (Note: This pipe is non-pressure pipe, used to convey sewage, stormwater or cabling and is not used for potable water applications.) The reclaimed PVC material is sandwiched between inner and outer layers of virgin resin and produces a drainage pipe or electrical conduit that is of equivalent quality and performance to monolayered (solid) pipe, that is manufactured from 100% virgin material.

It is also possible to optionally "foam" the reclaimed sandwiched layer to further reduce the weight of, and embodied energy in, these products. SC PVC pipes, whether foamed or not, fully conform to Australian product Standards and are equivalent to pipe and conduit manufactured from solid, 100% virgin material.

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

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

1. Solid 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.

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

13 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

There are no outstanding issues.

14 FUTURE WORKS

No future works items 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

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.

15.2.2 Intellectual Property and other rights

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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. 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.

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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

Complete copies of catalogues are available from Vinidex or from the following link:

<https://www.vinidex.com.au/support-2/pvc-dwv-stormwater-systems-support/>



PVC NON-PRESSURE DWV SEWER PIPE & FITTINGS AS/NZS 1260 SOLVENT CEMENT JOINT





PVC NON-PRESSURE
DWV SEWER PIPE & FITTINGS
AS/NZS 1260
RUBBER RING JOINT



APPENDIX B - QUALITY CERTIFICATIONS

Copies of the following Quality Certification Certificates are available from WSAA

TABLE B1 VINIDEX PTY LTD– MANAGEMENT SYSTEMS

See licence below for sites	
Quality Systems Standard	ISO 9001:2015
Certification Licence No.	QEC 0570
Certifying Agency	SAI-Global
First Date of Certification	19 February 1991
Current Date of Certification	17 March 2022
Expiry Date of Certification	21 November 2023

TABLE B2 VINIDEX PTY LTD – PRODUCT CERTIFICATION

See licence below for sites	
Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	SMK1010
Issuing Certification Body	SAI-Global
First Date of Certification	10 August 2011
Current Date of Certification	1 October 2021
Expiry Date of Certification	9 August 2026

TABLE B3 VINIDEX PTY LTD – PRODUCT CERTIFICATION

26 College Street Darlinghurst NSW	
Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	SMK1246
Issuing Certification Body	SAI-Global
First Date of Certification	28 July 1993
Current Date of Certification	29 September 2021
Expiry Date of Certification	11 November 2025

TABLE B4 VINIDEX PTY LTD – BEP CERTIFICATION

Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	SPOD40047
Issuing Certification Body	SAI Global
Current Date of Certification	22 February 2022
Expiry Date of Certification	21 February 2024



CERTIFICATE OF REGISTRATION

This is to certify that:
Vinidex Pty Ltd

ABN 42 000 664 942

Level 4 26 College Street Darlinghurst NSW 2010 AUSTRALIA
(Refer to Attachment to Certificate of Registration dated 24 March 2022 for additional certified sites)

operates a

QUALITY MANAGEMENT SYSTEM

which complies with the requirements of

ISO 9001:2015

for the following scope

The design, manufacture and distribution of polyethylene, polypropylene, modified PVC, oriented PVC and unplasticised PVC pipes, conduits and associated fittings for the water supply, sewerage, drainage, electrical, mining, gas, rural and communications industries.

Certificate No: QEC0570

Issued: 24 March 2022

Originally Certified: 19 February 1991

Expires: 21 November 2023

Current Certification: 17 March 2022

Calin Moldovean
President, Business Assurance
SAI Global Assurance



WWW.JAS-ANZ.ORG/REGISTER

Registered by:
SAI Global Certification Services Pty Ltd (ACN 108 716 669) 680 George Street Sydney NSW 2000 Australia with SAI Global Pty Limited 680 George Street Sydney NSW 2000 Australia ("SAI Global") and subject to the SAI Global Terms and Conditions for Certification. While all due care and skill was exercised in carrying out this assessment, SAI Global accepts responsibility only for proven negligence. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request. To verify that this certificate is current please refer to SAI Global On-Line Certification register at <http://register.saiglobal.com/>





ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under certificate No: QEC0570 issued on 24 March 2022.

Vinidex Pty Ltd

Extrusion 254 Woodpark Road Smithfield NSW 2164 AUSTRALIA

Injection Moulding 254 Woodpark Road Smithfield NSW 2164 AUSTRALIA

3846 Marjorie Street Berrimah NT 0828 AUSTRALIA

49 Enterprise Street Bohle QLD 4818 AUSTRALIA

14 Enterprise Street Bohle QLD 4818 AUSTRALIA

224 Musgrave Road Coopers Plains QLD 4108 AUSTRALIA

Lot 2, Witmack Road Wellcamp QLD 4350 AUSTRALIA

15 Thistle Street South Launceston TAS 7249 AUSTRALIA

42 Calarco Drive Derrimut VIC 3026 AUSTRALIA

Unit 1 10 Duerdin Street Notting Hill VIC 3168 AUSTRALIA

231 - 245 St Albans Road Sunshine VIC 3020 AUSTRALIA

Sainsbury Road O'Connor WA 6163 AUSTRALIA

These registrations are dependent on Vinidex Pty Ltd maintaining their scope of registration to ISO 9001:2015.

Registered by:

SAI Global Certification Services Pty Ltd (ACN 108 716 669) 680 George Street Sydney NSW 2000 Australia with SAI Global Pty Limited 680 George Street Sydney NSW 2000 Australia ("SAI Global") and subject to the SAI Global Terms and Conditions for Certification. While all due care and skill was exercised in carrying out this assessment, SAI Global accepts responsibility only for proven negligence. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request. To verify that this certificate is current please refer to SAI Global On-Line Certification register at <http://register.saiglobal.com>





STANDARDSMARK LICENCE

SAI Global hereby grants:

Vinidex Pty Ltd

ABN 42 000 664 942

Extrusion, 254 Woodpark Road, Smithfield, NSW 2164, Australia
 224 Musgrave Road, Coopers Plains, QLD 4108, Australia
 231 - 245 St Albans Road, Sunshine, VIC 3020, Australia
 Sainsbury Road, O'Connor, WA 6163, Australia

StandardsMark Licence

Manufactured to:

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

"the StandardsMark Licensee" the right to use the STANDARDSMARK as shown below only in respect of the goods described and detailed in the Schedule which are produced by the Licensee or on behalf of the Licensee* and which comply with the appropriate Standard referred to above as from time to time amended. The Licence is granted subject to the rules governing the use of the STANDARDSMARK and the Terms and Conditions for certification and licence. The Licensee covenants to comply with all the Rules and Terms and Conditions.

Licence No: SMKP1010

Issued : 1 October 2021

Expires : 9 August 2026

Originally Certified : 10 August 2011

Current Certification : 1 October 2021

Frank Camasta
 Global Head of Technical Services
 SAI Global Assurance



* For details of manufacture, refer to the licensee

The STANDARDSMARK is a registered certification trademark of SAI Global Pty Limited (A.C.N. 050 644 642) and is issued under licence by SAI Global Certification Services Pty Limited (ACN 108 716 669) ("SAI Global") 680 George Street, Sydney NSW 2000, GPO Box 5420 Sydney NSW 2001. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request. Refer to www.saiglobal.com, for the list of product models.



SCHEDULE TO STANDARDSMARK LICENCE

SAI Global hereby grants:

Vinidex Pty Ltd

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224 Musgrave Road, Coopers Plains, QLD 4108, Australia
231 - 245 St Albans Road, Sunshine, VIC 3020, Australia
Sainsbury Road, O'Connor, WA 6163, Australia

StandardsMark Licence

Manufactured to:

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

Model identification of the goods on which the STANDARDSMARK may be used:

Model Identification	Model Name	Brand Name	Product Description	Product Type	Nominal Size (DN)	Stiffness Classification	Joint Type	Colour	Date Endorsed
UD0_002 ---P--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	32	WT	Plain ends	Grey	9 Jul 2021
UD0_004 ---P--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	40	WT	Plain ends	Grey	9 Jul 2021
UD0_006 ---P--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	50	WT	Plain ends	Grey	9 Jul 2021
UD0_008 ---P--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	65	WT	Plain ends	Grey	9 Jul 2021
UD0_008 ---P--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	80	WT	Plain ends	Grey	9 Jul 2021
UD0_010 06 0R--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	100	6	Rubber ring	Grey	9 Jul 2021
UD0_010 06 0R--- S000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Sandwich Construction	100	6	Rubber ring	Grey	9 Jul 2021
UD0_010 06 0S--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	100	6	Solvent welded	Grey	9 Jul 2021
UD0_010 06 0S--- S000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Sandwich Construction	100	6	Solvent welded	Grey	9 Jul 2021
UD0_010 10 0R--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	100	10	Rubber ring	Grey	9 Jul 2021
UD0_010 10 0R--- S000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Sandwich Construction	100	10	Rubber ring	Grey	9 Jul 2021
UD0_010 10 0S--- P000	Drain, waste and vent (DWV) pipe	Vinidex	PVCU non-pressure	Plain wall	100	10	Solvent welded	Grey	9 Jul 2021

Licence No: SMKP1010

Issued Date: 1 October 2021

This schedule supersedes all previously issued schedules



* For details of manufacture, refer to the licensee

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SCHEDULE TO STANDARDSMARK LICENCE

Model Identification	Model Name	Brand Name	Product Description	Product Type	Nominal Size (DN)	Stiffness Classification	Joint Type	Colour	Date Endorsed
UD0_3102_10_05--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	100	10	Solvent welded	Grey	9 Jul 2021
UD0_3150_04_06--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	150	4	Rubber ring	Grey	9 Jul 2021
UD0_3150_04_06--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	150	4	Rubber ring	Grey	9 Jul 2021
UD0_3150_04_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	150	4	Solvent welded	Grey	9 Jul 2021
UD0_3150_04_05--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	150	4	Solvent welded	Grey	9 Jul 2021
UD0_3150_06_06--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	150	6	Rubber ring	Grey	9 Jul 2021
UD0_3150_06_06--R000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Ribbed FRU Pipe	150	6	Rubber ring	Grey	9 Jul 2021
UD0_3150_06_06--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	150	6	Rubber ring	Grey	9 Jul 2021
UD0_3150_06_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	150	6	Solvent welded	Grey	9 Jul 2021
UD0_3150_06_05--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	150	6	Solvent welded	Grey	9 Jul 2021
UD0_3225_04_06--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	225	4	Rubber ring	Grey	9 Jul 2021
UD0_3225_04_06--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	225	4	Rubber ring	Grey	9 Jul 2021
UD0_3225_04_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	225	4	Solvent welded	Grey	9 Jul 2021
UD0_3225_04_05--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	225	4	Solvent welded	Grey	9 Jul 2021
UD0_3225_06_06--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	225	6	Rubber ring	Grey	9 Jul 2021
UD0_3225_06_06--R000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Ribbed FRU Pipe	225	6	Rubber ring	Grey	9 Jul 2021
UD0_3225_06_06--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	225	6	Rubber ring	Grey	9 Jul 2021
UD0_3225_06_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	225	6	Solvent welded	Grey	9 Jul 2021
UD0_3225_06_05--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	225	6	Solvent welded	Grey	9 Jul 2021
UD0_3300_14_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	225	16	Solvent welded	Grey	9 Jul 2021
UD0_3300_04_06--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	300	4	Rubber ring	Grey	9 Jul 2021
UD0_3300_04_06--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	300	4	Rubber ring	Grey	9 Jul 2021

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SCHEDULE TO STANDARDSMARK LICENCE

Model Identification	Model Name	Brand Name	Product Description	Product Type	Nominal Size (DN)	Stiffness Classification	Joint Type	Colour	Date Endorsed
UD0_0300_04_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	300	4	Solvent welded	Grey	9 Jul 2021
UD0_0300_04_05--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	300	4	Solvent welded	Grey	9 Jul 2021
UD0_0300_06_08--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	300	8	Rubber ring	Grey	9 Jul 2021
UD0_0300_06_08--R000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Ribbed RRU Pipe	300	8	Rubber ring	Grey	9 Jul 2021
UD0_0300_06_08--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	300	8	Rubber ring	Grey	9 Jul 2021
UD0_0300_06_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	300	8	Solvent welded	Grey	9 Jul 2021
UD0_0300_06_05--S000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Sandwich Construction	300	8	Solvent welded	Grey	9 Jul 2021
UD0_0300_16_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	300	16	Solvent welded	Grey	9 Jul 2021
UD0_0375_04_08--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	375	4	Rubber Ring	Grey	9 Jul 2021
UD0_0375_04_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	375	4	Solvent welded	Grey	9 Jul 2021
UD0_0375_06_0C--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	375	8	Rubber Rubber ring	Grey	30 Sep 2021
UD0_0375_06_08--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	375	8	Rubber Ring	Grey	9 Jul 2021
UD0_0375_06_08--R000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Ribbed RRU Pipe	375	8	Rubber ring	Grey	9 Jul 2021
UD0_0375_06_05--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	375	8	Solvent welded	Grey	9 Jul 2021
UD0_0475_06_0C--P000	Drain, waste and vent (DWV) pipe	Vindex	PVCU non-pressure	Plan wall	475	8	Rubber Rubber ring	Grey	9 Jul 2021

End of Record

Licence No: SMKP1010

Issued Date: 1 October 2021

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This licence covers fittings. The product schedule contains 19 pages and has not been included in this Appendix. Details can be obtained from Vinidex or the following link:

<https://register.saiglobal.com/client/schedule.aspx?setID=SF01&custID=AS014161&appCertNo=SMK1246>



STANDARDSMARK LICENCE

SAI Global hereby grants:

Vinidex Pty Ltd

ABN 42 000 664 942

Level 4, 26 College Street, Darlinghurst, NSW 2010, Australia

StandardsMark Licence

Manufactured to:

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

"the StandardsMark Licensee" the right to use the STANDARDSMARK as shown below only in respect of the goods described and detailed in the Schedule which are produced by the Licensee or on behalf of the Licensee* and which comply with the appropriate Standard referred to above as from time to time amended. The Licence is granted subject to the rules governing the use of the STANDARDSMARK and the Terms and Conditions for certification and licence. The Licensee covenants to comply with all the Rules and Terms and Conditions.

Licence No: SMK1246

Issued : 29 September 2021
Expires : 11 November 2025

Originally Certified : 28 July 1993
Current Certification : 29 September 2021

Frank Camasta
Global Head of Technical Services
SAI Global Assurance



* For details of manufacture, refer to the licensee

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Ref No: SPROD40047

SAI Global hereby grants:

Vinidex Pty Ltd
254 Woodpark Road
Smithfield, NSW.
Australia

Head Office

Level 37, 680 George Street, Sydney
NSW 2000

GPO Box 5420 Sydney NSW 2001

Email product@saiglobal.com

Web www.saiglobal.com

SAI Global Limited

ABN 67 050 611 642

**BEST ENVIRONMENTAL PRACTICE FOR PVC
VERIFICATION CERTIFICATE**

The product types listed below have been assessed and comply with the requirements of Best Practice Guidelines for PVC in the Built Environment, as published by the Green Building Council of Australia.

Pipe and Pipe Fittings manufactured in accordance with:

- AS/NZS 1254
- AS/NZS 1260
- AS/NZS 1477
- AS/NZS 4441
- AS/NZS 4765
- AS/NZS 2053.2

Manufactured at the following sites:

- 254 Woodpark Rd, Smithfield 2164, NSW
- 224 Musgrave Rd Coopers Plains 4108, Qld
- 231 - 245 St Albans Rd, Sunshine 3020, Vic
- 3/5 Wenban Place, Wetherill Park, 6164, NSW
- Sainsbury Road, O'Connor, WA

This certificate is issued based on verification of compliance via manufacturers declaration pathway no 2, for pipe and fittings manufactured by Vinidex Pty Ltd.

This certificate is subject to bi-annual review.

This certificate does not constitute product certification and does not imply the product is certified. For details of product certification please refer to <http://register.saiglobal.com>

Issued: 22 February 2022

Expires: 21 February 2024

This certificate remains valid until the expiry date above or until material change occurs to the PVC and VCM supply and / or process which requires re-validation under the guidelines.

SAI Global is a certification body accredited by JAS-ANZ. For more information on SAI Global's accreditation please refer to www.saiglobal.com.

A handwritten signature in black ink, appearing to read "S Fraser".

Simon Fraser
Operations Manager

This certificate remains the property of SAI Global and must be returned to SAI Global upon its request.

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APPENDIX C - SUPPLIER CONTACTS

Vinidex Pty Ltd

Phone: 131169

Emails:

Queensland: qldsales@vinidex.com.au

Victoria: wasales@vinidex.com.au

Western Australia: wasales@vinidex.com.au

New South Wales: swsales@vinidex.com.au

Web: <https://www.vinidex.com.au/>



Melbourne Office

Level 8, Suite 8.02
401 Docklands Drive
Docklands VIC 3008

Sydney Office

Level 9 420 George Street
Sydney NSW 2000
GPO Box 915
Sydney NSW 2001

P +61 (0) 3 8605 7666
email: info@wsaa.asn.au

www.wsaa.asn.au