



# Vinidex Pty Ltd

## PRODUCT APPRAISAL REPORT 1605 Issue 3

**LINX™ and ZAP™ Ductile Iron Pipe**

**AS/NZS 2280:2020 Ductile iron pipes and fittings**

Issue 1 Published: 10 May 2016

Issue 2 Published: 20 December 2018

Issue 3 Published: 3 September 2021

## Document History

The following information indicates the changes made to this document.

| Date             | Version               |
|------------------|-----------------------|
| 19 April 2016    | Peer Review           |
| 10 May 2016      | Issue 1 Publication   |
| 19 December 2018 | Issue 2 Client Review |
| 20 December 2018 | Issue 2 Publication   |
| 2 September 2021 | Issue 3 Client Review |
| 3 September 2021 | Issue 3 Publication   |

## Peer Reviewers

| Name/Title                                 | Organisation | Date             |
|--|--------------|------------------|
| Product Appraisal Technical Advisory Group | WSAA         | 10 May 2016      |
| WSAA Expert Panel                          | WSAA         | 10 May 2016      |
| Peter Pittard, WSAA Consultant             | WSAA         | 19 April 2016    |
| Carl Radford, Product Appraisal Manager    | WSAA         | 10 May 2016      |
| Peter Pittard, WSAA Consultant             | WSAA         | 14 December 2018 |
| Carl Radford, Product Appraisal Manager    | WSAA         | 20 December 2018 |
| Peter Pittard, WSAA Consultant             | WSAA         | 30 August 2021   |
| Carl Radford, Product Appraisal Manager    | WSAA         | 3 September 2021 |

## 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.

## Copyright

This document is copyrighted. Apart from any use as permitted under the Copyright Act 1968, no part of this document may be reproduced or transmitted in any form or by any means, electronically or mechanical, for any purpose, without the express written permission of Water Services Association of Australia Limited.

© Copyright 2021 by WATER SERVICES ASSOCIATION of Australia Limited **All rights reserved.**

**CONTENTS**

|  |    |
|--|----|
| 1 EXECUTIVE SUMMARY .....  | 6  |
| 1.1 Recommendations .....  | 6  |
| 2 THE APPLICANT.....   | 6  |
| 2.1 The Supplier.....  | 6  |
| 2.2 The Manufacturer.....  | 7  |
| 3 THE PRODUCT .....  | 7  |
| 4 SCOPE OF THE APPRAISAL.....  | 9  |
| 5 APPRAISAL CRITERIA.....  | 9  |
| 5.1 Quality Assurance Requirements .....                                 | 9  |
| 5.2 Performance Requirements .....                                       | 9  |
| 6 COMPLIANCE WITH APPRAISAL CRITERIA.....                                | 9  |
| 6.1 Compliance with Quality Assurance Requirements .....                 | 9  |
| 6.2 Compliance with Performance Requirements.....                        | 10 |
| 6.2.1 Ductile iron.....  | 10 |
| 6.2.2 Wall thickness.....  | 10 |
| 6.2.3 Coatings .....   | 10 |
| 6.2.4 Polyethylene sleeving.....   | 10 |
| 6.2.5 Linings .....  | 10 |
| 6.2.6 Seal coating.....  | 11 |
| 6.2.7 Elastomeric seal joints.....                                       | 11 |
| 6.2.8 Joint deflection .....   | 11 |
| 6.2.9 Flanged joints.....  | 11 |
| 6.2.10 Suitability for use with drinking water .....                     | 12 |
| 7 LIFE EXPECTANCY OF DI PIPE.....  | 12 |
| 7.1 Linings.....   | 12 |
| 7.2 Coatings.....  | 12 |
| 8 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION .....                  | 13 |
| 9 PRODUCT MARKING .....  | 14 |
| 10 PACKAGING AND TRANSPORTATION.....                                     | 14 |
| 11 PRODUCT WARRANTY .....  | 15 |
| 12 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD-TESTING REPORT..... | 15 |
| 13 DISCUSSION .....  | 15 |
| 14 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW.....                          | 15 |
| 15 FUTURE WORKS.....   | 15 |
| 16 DISCLAIMER.....   | 15 |
| 16.1 Issue of Report.....  | 15 |
| 16.2 Limits on Reliance on Information and Recommendations.....          | 16 |
| 16.2.1 Disclaimer of liability.....                                      | 16 |
| 16.2.2 Intellectual Property and other rights.....                       | 16 |
| 16.2.3 Need for independent assessment.....                              | 16 |
| 16.3 No Updating .....   | 17 |
| 16.4 No Warranty.....  | 17 |
| APPENDIX A – PRODUCT LITERATURE .....                                    | 18 |
| APPENDIX B - QUALITY CERTIFICATIONS.....                                 | 20 |
| APPENDIX C - ESTIMATED LIFE EXPECTANCY .....                             | 38 |

APPENDIX D - SUPPLIER CONTACTS ..... 39

## 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.

Suns Pipelines Co Ltd, located in Gaoping City, Shanxi, China, is the manufacturer of the ductile iron pipes included in the scope of this appraisal.

This Appraisal covers a range of ductile iron spigot-socket cement lined pipes manufactured to AS/NZS 2280:2020 in sizes DN 100 to DN 750 and pressure classes PN 20, PN 35 and flange class.

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

LINX is the brand name for zinc coated pipe and is offered with either general purpose Portland cement linings (LINX-GP), for transport of drinking or non-drinking water, or high alumina cement linings (LINX-HAC), for transport of sewerage and aggressive water with pH >4<12. LINX-GP is offered with a seal coating option.

ZAP is the brand name for pipe coated with a zinc-aluminium alloy and is offered with the same lining options as LINX. The application of metallic Zinc-Aluminium alloy coatings may enhance the external corrosion protection of the coating in some buried applications. Vinidex recommends the commissioning of a thorough soil survey and corrosion analysis by a competent corrosion specialist before installing pipes without PE sleeving.

The effective length of the pipes is 5.7 m and the socket seal design is T-type.

Both Suns and Vinidex hold an ISO 9001:2015 Quality Management System Licence.

The ductile pipe has ISO Type 5 StandardsMark product certification to AS/NZS 2280:2020.

This Appraisal has determined that LINX and ZAP ductile iron pipes, as detailed in this report, meet the requirements of WSA PS 200 - *Ductile Iron Pipes (CIOD) 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 the range of LINX and ZAP ductile iron pipes as detailed in this report for use in water supply and sewerage pipelines provided pipeline design, installation, acceptance testing and commissioning are in accordance with WSAA Codes and the manufacturer's requirements.

## 2 THE APPLICANT

The Applicant is Vinidex Pty Ltd.

### 2.1 The 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 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](http://www.vinidex.com.au) or [www.aliaxis.com](http://www.aliaxis.com).

## 2.2 The Manufacturer

Suns Pipelines Company Ltd specialises in the manufacture of ductile iron pipes, fittings and other pipeline components with a capacity of 100,000 tonnes per annum. The main equipment includes a hot mould centrifugal casting machine with multiple working positions. Additional casting machines imported from Duker in Germany utilise water cooled metal moulds. Suns manufacture pipes to EN 545, ISO 2531 and AS/NZS 2280.

Suns also apply coating and lining systems within their facilities.

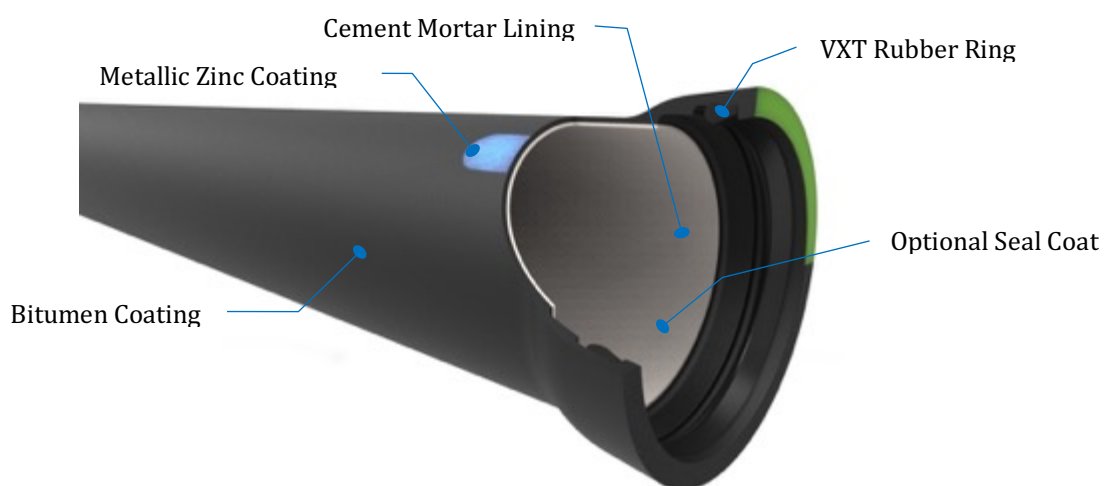
Suns has been manufacturing ductile iron pipes for the Australian market since 2010 when the pipes were supplied to Tyco Flow Control (and subsequently Pentair). Vinidex ductile iron pipes are manufactured to the same technical requirements and standards.

The Suns Pipeline Company Limited manufacturing facility is located at No.8 Pangcun Village Cast Industry District, Gaoping City, Shanxi, China.

## 3 THE PRODUCT

This appraisal applies to the Vinidex Suns range of LINX™ and ZAP™ ductile iron pipes manufactured to AS/NZS 2280:2020 as detailed in Tables 1 and 2.

The ductile iron spigot – socket cement lined pipes are suitable for pressure applications for the conveyance of drinking water, non-drinking water and sewerage applications. The pipes are available with PN 20, PN 35 and flange class pressure classifications. The effective length of the pipes is 5.7 m and the socket seal design is T-type.



**FIGURE 1 LINX PN 20 DI PIPE**

The LINX range of pipes is externally coated with 200g/m<sup>2</sup> of metallic zinc with a finishing layer of bitumen paint to a minimum of 100µm thickness.

The ZAP range of pipes is externally coated with 400g/m<sup>2</sup> of metallic zinc-aluminium alloy and a finishing layer of synthetic resin to a minimum of 100µm thickness. The application of metallic zinc-aluminium alloy coatings may enhance the external corrosion protection of the coating in some buried applications.

Cement mortar linings may be Type GP Portland cement for transport of drinking or non-drinking water or high alumina cement for transport of sewerage and aggressive waters with pH >4<12. The GP cement mortar lining is offered with a seal coating option.

Flange class pipes are also available in uncoated and unlined condition to allow for application of polymeric thermal bonded coatings after flanges are fitted.

**TABLE 1 LINX RANGE OF DI CL PIPES**

| PRESSURE CLASS |                   | LINING  |  |  |  |
|----------------|-------------------|---------|--|--|--|
|                |                   | UNLINED | GP PORTLAND CEMENT   | GP PORTLAND CEMENT + SEAL COAT                             | HIGH ALUMINA CEMENT                                    |
|                |                   | UL      | LINX-GP  | LINX-GPSC  | LINX-HAC   |
| PN 20          | DN                |         | DN 225-750   | DN 225-750   | DN 225-750   |
|                | EXTERNAL COATINGS | -       | 200g/m <sup>2</sup> Zinc + 100µm Black Bitumen Finish Coat | 200g/m <sup>2</sup> Zinc + 100µm Black Bitumen Finish Coat | 200g/m <sup>2</sup> Zinc + 100µm Red Epoxy Finish Coat |
| PN 35          | DN                |         | DN 100-750   | DN 100-750   | DN 100-750   |
|                | EXTERNAL COATINGS | -       | 200g/m <sup>2</sup> Zinc + 100µm Black Bitumen Finish Coat | 200g/m <sup>2</sup> Zinc + 100µm Black Bitumen Finish Coat | 200g/m <sup>2</sup> Zinc + 100µm Red Epoxy Finish Coat |
| FLANGE CLASS   | DN                | 100-750 | DN 100-750   | DN 100-750   | DN 100-750   |
|                | EXTERNAL COATINGS | -       | 200g/m <sup>2</sup> Zinc + 100µm Black Bitumen Finish Coat | 200g/m <sup>2</sup> Zinc + 100µm Black Bitumen Finish Coat | 200g/m <sup>2</sup> Zinc + 100µm Red Epoxy Finish Coat |

**TABLE 2 ZAP RANGE OF DI PIPES**

| PRESSURE CLASS |                   | LINING  |  |  |   |
|----------------|-------------------|---------|--|--|---|
|                |                   | UNLINED | GP PORTLAND CEMENT   | GP PORTLAND CEMENT + SEAL COAT                             | HIGH ALUMINA CEMENT                                       |
|                |                   | UL      | ZAP-GP   | ZAP-GPSC   | ZAP-HAC   |
| PN 20          | DN                |         | DN 225-750   | DN 225-750   | DN 225-750  |
|                | EXTERNAL COATINGS |         | 400g/m <sup>2</sup> Zinc/Al + 100µm Blue Epoxy Finish Coat | 400g/m <sup>2</sup> Zinc/Al + 100µm Blue Epoxy Finish Coat | 400g/m <sup>2</sup> Zinc/Al + 100µm Red Epoxy Finish Coat |
| PN 35          | DN                |         | DN 100-750   | DN 100-750   | DN 100-750  |
|                | EXTERNAL COATINGS |         | 400g/m <sup>2</sup> Zinc/Al + 100µm Blue Epoxy Finish Coat | 400g/m <sup>2</sup> Zinc/Al + 100µm Blue Epoxy Finish Coat | 400g/m <sup>2</sup> Zinc/Al + 100µm Red Epoxy Finish Coat |
| FLANGE CLASS   | DN                |         | DN 100-750   | DN 100-750   | DN 100-750  |
|                | EXTERNAL COATINGS |         | 400g/m <sup>2</sup> Zinc/Al + 100µm Blue Epoxy Finish Coat | 400g/m <sup>2</sup> Zinc/Al + 100µm Blue Epoxy Finish Coat | 400g/m <sup>2</sup> Zinc/Al + 100µm Red Epoxy Finish Coat |



## 4 SCOPE OF THE APPRAISAL

The Scope of this product appraisal application applies to the Vinidex Suns range of LINX and ZAP ductile iron pipes as described in Section 3 and included in the ISO Type 5 Product Certification Schedule included in Appendix B.

## 5 APPRAISAL CRITERIA

### 5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts ductile iron pipes manufactured in compliance with AS/NZS 2280:2020 *Ductile iron pipes and fittings* 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 Suns range of ductile iron pipes has been appraised for compliance with AS/NZS 2280:2020 *Ductile iron pipes and fittings*.

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 200 - *Ductile Iron Pipes (CIOD) 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/35716>

## 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. 05315Q20881R0M issued to Suns Pipelines Company Ltd by Beijing NGV Certification Centre.
- ISO 9001:2015 Certificate of Registration No. QEC0570 issued to Vinidex Pty Ltd by SAI-Global.
- AS/NZS2280:2014 StandardsMark ISO Type 5 product certification Licence No. SMK 40456 issued to Vinidex Pty Ltd by SAI-Global.
- ISO 9001:2015 Certificate of Registration No. 3531 issued to Crown Pack Pty Ltd (polyethylene sleeve manufacturer) by SCI Qual International.

Copies of the primary 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 Ductile iron**

AS/NZS 2280 requires ductile iron to have a minimum tensile strength of 420 MPa, a minimum elongation of 10% and a maximum hardness of 230HB. The microstructure of ductile iron is required to have a minimum nodularity of 75% in forms V and VI.

Vinidex has provided a copy of test reports to indicate that the material properties meet the nominated requirements.

### **6.2.2 Wall thickness**

The LINX and ZAP ductile iron pipes comply with the minimum wall thicknesses of PN 20, PN 35 and flange class ductile iron pipe specified in AS/NZS 2280. Vinidex has supplied copies of typical production test records to demonstrate compliance.

### **6.2.3 Coatings**

The LINX range of pipes is externally coated with metallic zinc. The metallic zinc coating is applied by electric arc melting of zinc wire sprayed with compressed air. The mean mass per unit area is not less than 200g/m<sup>2</sup>, applied in accordance with ISO 8179-1. The finishing layer for GP cement mortar lined pipes is black bitumen paint, applied to a minimum of 100µm thickness. The finishing layer for high alumina cement mortar lined pipes is a red coloured synthetic resin applied to a minimum of 100µm thickness.

The ZAP range of pipes is externally coated with metallic zinc-aluminium alloy. The metallic zinc-aluminium alloy coating is applied by electric arc melting of zinc-aluminium alloy wire sprayed with compressed air. The mean mass per unit area is not less than 400g/m<sup>2</sup>. The finishing layer for GP cement mortar lined pipes is a blue coloured synthetic resin, applied to a minimum of 100µm thickness. The finishing layer for high alumina cement mortar lined pipes is a red coloured synthetic resin, applied to a minimum of 100µm thickness.

The ZAP range of pipes utilises a zinc-aluminium alloy coating, applied at higher than minimum thicknesses, to provide an enhanced external corrosion protection for the pipes. Vinidex recommends the commissioning of a thorough soil survey and corrosion analysis by a competent corrosion specialist before installing pipes without PE sleeving.

Vinidex has supplied a Factory Approval Certificate issued to Suns by Bureau Veritas for application of coatings in accordance with ISO 8179-1.

### **6.2.4 Polyethylene sleeving**

Polyethylene sleeving is manufactured for Vinidex by Crown Pack Pty Ltd.

Sleeving is available in blue, lilac or cream to accommodate drinking water, non-drinking water and sewerage applications.

### **6.2.5 Linings**

The Vinidex LINX and ZAP ductile iron pipes are cement mortar lined by a centrifugal process at the Suns facility in accordance with the requirements of AS/NZS 2280. The raw materials are sourced locally from approved sub-suppliers in China.

Pipes suitable for transport of drinking water and non-drinking water are cement mortar lined using GP Portland cement complying with AS 3952-*Portland and blended cements*.

Pipes suitable for transport of sewerage and aggressive waters with pH values >4<12 are cement mortar lined using high alumina cement.

The thickness of cement mortar lining is specified in AS/NZS 2280 and Vinidex has provided typical test reports to confirm Suns' compliance.

### 6.2.6 Seal coating

Seal coating of cement mortar lined DI pipes may be considered for use in aggressive water situations, nominally less than 30 mg/litre, particularly in small diameter pipelines where flow rates are low and the residence time of water in the pipeline is long.

Where specified, Vinidex LINX and ZAP ductile pipes are seal coated in accordance with ISO 16132 *Ductile iron pipes and fittings – Seal coats for cement mortar linings* at a minimum thickness of 100µm. The seal coating is applied by IPCQ Pty Ltd, a recognised industrial coating applicator with over 20 years' experience applying seal coatings to potable water pipes in Australia.

The seal coat material is a high build bituminous coating, Akzo Nobel Interline 876. A Data Sheet is available from Vinidex or WSAA.

### 6.2.7 Elastomeric seal joints

Vinidex has submitted copies of Type Test reports for DN 300, DN 600 and DN 750 elastomeric seal joints, witnessed by SGS, to verify compliance with the performance requirements of AS/NZS 2280.

The Vinidex range of ductile iron pipes incorporates a T-type elastomeric seal joint design designated as VXT.

The elastomeric seals are manufactured by Thai Duong Joint Stock Company and supplied by Hultec Asia Pacific Pty Ltd using 5557 EPDM in conformance with AS 1646. The seals are covered by ISO Type 5 ApprovalMark Product Certification No AMI 74510. A copy of the licence is held on file by WSAA.

The bactericidal jointing lubricant is supplied by Thomas Grozier & Son Pty Ltd. Thomas Grozier has a WaterMark Licence (No WMKA00103) issued by SAI Global for compliance to WMTS014:2016 *Jointing materials*. A copy of the licence is held on file by WSAA.

### 6.2.8 Joint deflection

AS/NZS 2280 specifies minimum joint deflection requirements as shown in Table 3.

**TABLE 3 ELASTOMERIC SEAL JOINT DEFLECTIONS**

| Nominal Size<br>DN | Min Joint Deflections<br>Degrees |
|--------------------|----------------------------------|
| 100-250            | 3.5                              |
| 300-600            | 2.5                              |
| 750                | 1                                |

Vinidex has advised that whilst in-house testing has confirmed that their joints can accommodate larger deflections than the minimums specified in AS/NZS 2280, they recommend that the AS/NZS 2280 nominated deflections should not be exceeded.

### 6.2.9 Flanged joints

Flanges are screwed and glued on flange class pipe in accordance with AS/NZS 2280. Flanges comply with AS/NZS 4087 Fig 5 (PN 16) or Fig B6 (PN 35).

Vinidex supplies solid EPDM gaskets 3 mm thick complying with WSA PS 312 *Flanged Gasket and O-rings* for flanges rated at PN 16. For flanges rated at PN 35, 1.5 mm thick TEADIT compressed fibre gaskets are recommended.

### 6.2.10 Suitability for contact with drinking water

Copies of AS/NZS 4020 Type Test reports for the following components are held on file by WSAA.

- Cement mortar lining: AWQC (NATA Accreditation No 1115) Report No. 303444, dated 21 February 2021, AS/NZS 4020:2018.
- Interline 876 seal coat: AWQC (NATA Accreditation No 1115) Report No. 308101, dated 29 April 2021, AS/NZS 4020:2018.
- Hultec EPDM 5557: Eurofins ams (NATA Accreditation No 15773) Report No AAL 14560, dated 14<sup>th</sup> August 2020, AS/NZS 4020:2018.

AS/NZS 4020 test reports for the blue epoxy and black bitumen finish coats that are used on the internal surfaces of the socket are not current. The blue epoxy has a current WRAS approval for compliance to BS 6920 and the AS/NZS 4020 test report for the black bitumen coating expired in February 2020. Vinidex is arranging for AS/NZS 4020 testing for both of these coatings and this action has been added as a Future Work Item. See Section 15.

## 7 LIFE EXPECTANCY OF DI PIPE

### 7.1 Linings

Cement mortar lining is considered to be the default internal protection system for potable and recycled water applications.

Seal coating may be applied over cement mortar lining. The intended purpose of a seal coating is to reduce the contact between the cement mortar lining and the contents of the water main, thereby restricting lime leaching and consequent high pH levels when conveying soft (i.e., low carbonate alkalinity) water, especially in small diameter pipelines where flow rates are low and residence times are lengthy.

AS/NZS 2280 suggests that consideration should be given to the use of seal coatings where the total alkalinity of the water being conveyed is less than 30 mg/L.

Many Australian water utilities specify seal coatings as mandatory for pipes up to and including DN 300.

Calcium aluminate cement mortar linings are intended for aggressive water applications and are typically used in gravity and pressure sewerage mediums with pH between 4 and 12. For applications outside of this pH range consideration should be given to polymeric lining systems. Calcium Aluminate Cement is not AS/NZS 4020 compliant and is therefore not suitable for potable water applications.

WSA Technical Note 6 - *Guidelines for the use of cement mortar linings in sewerage applications* provides details of operating limits for different cements used for the cement mortar lining of DI and steel pipes for sewers. It reviews literature with regard to the use of cement mortar lining for sewerage conveyance and in particular focuses on the prime water chemistry constituents that need to be considered viz. sulphate (SO<sub>4</sub>), pH, and hydrogen sulphide (H<sub>2</sub>S) (which can be transformed to sulphuric acid). A copy of WSA Technical Note 6 is available for download from the WSAA website.

Polyurethane linings may also be considered for aggressive medium applications.

### 7.2 Coatings

The majority of Australian Water Agencies have adopted a policy of specifying loose polyethylene sleeving (LPS) for all ductile iron pipes as a corrosion protection measure, unless specialised coatings such as polyurethane or polyethylene, for example, are employed. Properly installed LPS provides a high degree of corrosion protection by creating a passive uniform environment around the pipe and limiting oxygen exposure. LPS should

be installed in accordance with AS 3681 and only accredited pipe layers trained in the application of sleeving should be utilised.

The need for LPS depends on the type of soil and the required service life of the pipeline. Ductile iron pipes may be buried without extra external protection in soils that are not aggressive. In soils that are aggressive, and where either the time or the cost of soil assessment is prohibitive, LPS is the recommended solution.

The application of zinc coatings has not historically been utilised on ductile iron pipes in Australia, although they have been used in Europe for more than 60 years. Zinc coatings are now provided in Australia as a standard offering with 200 g/m<sup>2</sup> thickness complete with a finishing layer and are considered to enhance the external corrosion benefits of pipe in buried applications. In some soil applications it is considered acceptable to install zinc coated pipes without polyethylene sleeving.

Enhancements to zinc coatings are also available where 85/15 Zinc-Aluminium alloy, copper enhanced Zinc-Aluminium alloy and rare earth element enhanced Zinc-Aluminium alloys are offered with 400 g/m<sup>2</sup> thickness complete with a finishing layer. It is reported that these coatings provide improved corrosion protection over standard zinc coating and allows for installation in a wider range of soils, without the need for sleeving.

EN 545 nominates that DI pipes with zinc coating of 200 g/m<sup>2</sup> thickness and min 100µm thick finishing layer or enhanced zinc alloy coating with 400 g/m<sup>2</sup> thickness and min 100µm thick finishing layer can be buried without sleeving except:

For Zinc coatings

- soils with a resistivity less than 1500 Ω cm when laid above the water table, or less than 2500 Ω cm when laid below the water table
- mixed soils i.e. comprising two or more soil natures
- soils with a pH below 6 and a high reserve of acidity
- soils containing refuse, cinders, slags or polluted by wastes or industrial effluents
- areas where there are stray currents

For Zinc-Aluminium or enhanced Zinc-Aluminium alloys

- acidic peaty soils
- soils containing refuse, cinders, slag or polluted by wastes or industrial effluents
- soils below the marine water table with a resistivity lower than 500 Ω cm,
- areas where there are stray currents

EN 545 also advises that evidence of the long-term performance of the above-mentioned solution (e.g. tests and references) should be provided by the manufacturer.

It should be noted however that there has been no proven experience or data to support the extrapolation of European experience to Australian conditions and environments. It is considered imperative that testing be undertaken to ensure that the soil environment meets any necessary pre-conditions.

Manufacturers should be consulted for life expectancy estimates.

Refer to Appendix D for the manufacturers life expectancy estimates for the DI pipe considered in this Appraisal.

## **8 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION**

Pipes should be installed in accordance with well-established laying practices for ductile iron pipes and in accordance with the Pipeline Systems Handling and Installation Manuals provided by Vinidex and appropriate WSAA Codes.

Vinidex offers to provide personalised handling and installation training by their experienced pipeline professionals on a project by project basis, at no cost to the installer.

## 9 PRODUCT MARKING

Vinidex ductile iron pipes are marked in accordance with the requirements of AS/NZS 2280:2020 as per the following:

- Manufacturers Name: VINIDEX SUNS
- Nominal size: DN 100
- Pressure Classification: PN 20, PN 35, FC
- The standard number: AS/NZS 2280
- Standards Mark symbol – I>>>>>I)
- Licence Number: SMK40456
- The words: “Suitable for Cutting” for pipes greater than DN 300, as applicable
- Pipes not complying with AS/NZS 4020: NOT SUITABLE FOR DRINKING WATER
- Colour coding of pipe classes: See Appendix A



**FIGURE 2 EXAMPLES OF MARKING**

## 10 PACKAGING AND TRANSPORTATION

The Vinidex range of ductile iron pipes are transported from China to Australia, either by break bulk shipping or containerised shipping.

Break bulk shipping has a project specialised stowage/ship loading plan that is developed by the shipping company in conjunction with Vinidex. Pipes are discharged at the most appropriate import port as determined by the pipeline project location. Pipes are generally stowed to a plan, protected with timber packing and secured by steel straps.

On arrival, the break bulk shipment or containers are offloaded and inspected by a Vinidex representative prior to despatch to the project site or into one of Vinidex’s distribution sites that are spread strategically around Australia.

Ductile iron pipes are packed for road freight on timber bearers to prevent damage and to comply with Australian road safety regulations. Pipes are loaded and secured to the trucks in accordance with Vinidex transport guidelines.

The loading of pipes and securing of loads are monitored at Vinidex sites by highly trained logistics supervisors. Vinidex has 60 years’ experience in the transportation of pipes and ensures the pipe loading plan complies with national transport and safety requirements. Unloading at site shall be in accordance with Vinidex transport standard operating procedures.

Pipes damaged during transport should be reported to the local Vinidex representative who will arrange inspection and repair or replacement as deemed necessary.

## **11 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.

## **12 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD-TESTING REPORT**

Ductile iron pipes are well established products and installation, operation and maintenance are well understood by experienced installers. Suns' ductile iron pipes have been supplied previously to Australia and it is considered unnecessary to conduct field trials.

## **13 DISCUSSION**

Vinidex supplies a range of pipeline components to complement the installation of the ductile iron pipeline system. Products include a complete range of ductile iron fittings, mechanical couplings, repair clamps and tapping bands, however are not included within the scope of this Appraisal.

## **14 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW**

No additional requirements have been identified.

## **15 FUTURE WORKS**

Vinidex is required to submit AS/NZS 4020:2018 test reports for the blue epoxy coating and black bitumen coating utilised on the internal surfaces of the sockets within 4 months of publication of this report.

## **16 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](mailto:carl.radford@wsaa.asn.au).

### **16.1 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.

## **16.2 Limits on Reliance on Information and Recommendations**

### **16.2.1 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.

### **16.2.2 Intellectual Property and other rights**

The Water Services Association of Australia Limited does not undertake any assessment of whether the importation, manufacture, sale or use of the Product the subject of this Report infringes the intellectual property rights or proprietary rights of any person. Recipients of the report should undertake their own assessment of whether (as relevant) the importation, manufacture, sale or use of the relevant Products infringe the intellectual property rights or other proprietary rights of any person. If the Product infringes intellectual property rights or other proprietary rights there is potential for the supply of the Products to be interrupted.

From time to time the Water Services Association of Australia Limited and the other Publishers may receive notice of allegations that the importation, manufacture, sale or use of the Product infringes intellectual property rights or other proprietary rights. The Water Services Association of Australia Limited's policy is to not refer to such allegations in its reports or take any other steps to put Recipients on notice of such allegations, unless and until it is aware that the allegations have been admitted or proved in Court. As such, Recipients acknowledge, agree and accept that the Water Services Association of Australia Limited may have information in its possession about intellectual property rights infringement allegations or other infringement allegations in relation to the Product which are not referred to or disclosed in this Report and which are not otherwise communicated to Recipients.

### **16.2.3 Need for independent assessment**

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.

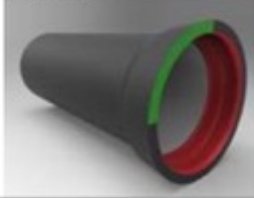
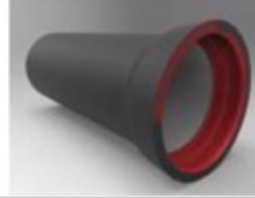
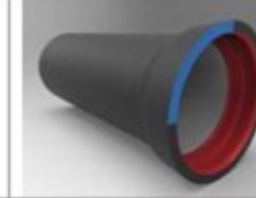
### **16.3 No Updating**

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.



### **16.4 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

| LINX PIPE – POTABLE WATER |   |  |   |
|---------------------------|---|--|---|
| Application               | Potable Water and Irrigation  |  |   |
| Standards                 | AS/NZS 2280, 1646, 4020, 1831 - ISO8179-1, 16132                                  |  |   |
| Nominal Diameter          | 100, 150, 200, 225, 250, 300, 375, 450, 500, 600, 750                             |  |   |
| Effective Length          | 5700mm  |  |   |
| Colour Identification     |  |  |  |
|                           | Green Band  | Red Band   | Blue Band   |
| Pressure Class            | PN20  | PN35   | Flange Class  |
| Joint Type                | Elastomeric Rubber Rings - "T-LINX" (Push - On) EPDM                              |  |   |
| Deflection                | DN100 - DN250   | 3.5°   |   |
|                           | DN300 - DN600   | 2.5°   |   |
|                           | DN750   | 1°   |   |
| External Coating          | First Layer   | Zinc   | 200g/m <sup>2</sup>   |
|                           | Topcoat   | Bitumen - Black  | 100µm   |
| Internal Lining           | Cement Mortar AS3972 type GP  |  |   |
| Internal Socket Coating   | Red Epoxy   |  |   |
| Seal Coating (optional)   | Interline 876   |  |   |

| LINX PIPE – SEWER & AGGRESSIVE FLUIDS |   |  |   |
|---------------------------------------|---|--|---|
| Application                           | Gravity and Pressure Sewers   |  |   |
| Nominal Diameter                      | 100, 150, 200, 225, 250, 300, 375, 450, 500, 600, 750                               |  |   |
| Effective Length                      | 5700mm  |  |   |
| Colour Identification                 |  |  |  |
|                                       | Green Band  | Red Band   | Blue Band   |
| Pressure Class                        | PN20  | PN35   | Flange Class  |
| Joint Type                            | Elastomeric Rubber Rings - "T-LINX" (Push - On) EPDM                                |  |   |
| Deflection                            | DN100 - DN250   | 3.5°   |   |
|                                       | DN300 - DN600   | 2.5°   |   |
|                                       | DN750   | 1°   |   |
| External Coating                      | First Layer   | Zinc   | 200g/m <sup>2</sup>   |
|                                       | Topcoat   | Red Epoxy  | 100µm   |
| Internal Lining                       | Cement Mortar - High Alumina AS3972 type HAC  |  |   |
| Internal Socket Coating               | Red Epoxy   |  |   |
| Seal Coating (optional)               | Interline 876   |  |   |

| ZAP GP PIPE – POTABLE WATER |   |  |   |
|-----------------------------|---|--|---|
| Application                 | Potable Water and Irrigation  |  |   |
| Standards                   | AS/NZS 2280, 1646, 4020, 1831 - ISO8179-1, 16132                                  |  |   |
| Nominal Diameter            | 100, 150, 200, 225, 250, 300, 375, 450, 500, 600, 750                             |  |   |
| Effective Length            | 5700mm  |  |   |
| Colour Identification       |  |  |  |
|                             | Green Band  | Red Band   | Blue Band   |
|                             | PN20  | PN35   | Flange Class  |
| Pressure Class              |   |  |   |
| Joint Type                  | Elastomeric Rubber Rings – "T-LINX" (Push - On) EPDM AS1646                       |  |   |
| Deflection                  | DN100 – DN250   | 3.5°   |   |
|                             | DN300 – DN600   | 2.5°   |   |
|                             | DN750   | 1°   |   |
| External Coating            | First Layer   | Zinc - Aluminium   | 400g/m <sup>2</sup>   |
|                             | Topcoat   | Epoxy - Blue   | 100µm   |
| Internal Lining             | Cement Mortar AS3972 type GP  |  |   |
| Internal Socket Coating     | Epoxy - Blue  |  |   |
| Seal Coating (optional)     | Interline 876   |  |   |

| ZAP® PIPE – SEWER WATER |   |  |   |
|-------------------------|---|--|---|
| Application             | Potable Water and Irrigation  |  |   |
| Standards               | AS/NZS 2280, 1646, 4020, 1831 - ISO8179-1, 16132                                    |  |   |
| Nominal Diameter        | 100, 150, 200, 225, 250, 300, 375, 450, 500, 600, 750                               |  |   |
| Effective Length        | 5700mm  |  |   |
| Colour Identification   |  |  |  |
|                         | Green Band  | Red Band   | Blue Band   |
|                         | PN20  | PN35   | Flange Class  |
| Pressure Class          |   |  |   |
| Joint Type              | Elastomeric Rubber Rings – "T-LINX" (Push - On) EPDM AS1646                         |  |   |
| Deflection              | DN100 – DN250   | 3.5°   |   |
|                         | DN300 – DN600   | 2.5°   |   |
|                         | DN750   | 1°   |   |
| External Coating        | First Layer   | Zinc   | 400g/m <sup>2</sup>   |
|                         | Topcoat   | Epoxy - Red  | 100µm   |
| Internal Lining         | Cement Mortar AS3972 type GP  |  |   |
| Internal Socket Coating | Blue Epoxy  |  |   |
| Seal Coating (optional) | Interline 876   |  |   |

## APPENDIX B - QUALITY CERTIFICATIONS

Copies of the following Quality Certification Certificates are available from WSAA.

### TABLE B1 VINIDEX PTY LTD – MANAGEMENT SYSTEMS

| 224 Musgrave Road Coopers Plains QLD 4108 |                  |
|---|------------------|
| Quality Systems Standard                  | ISO 9001:2015    |
| Certification licence no.                 | QEC0570          |
| Certifying agency                         | SAI-Global       |
| First date of certification               | 19 February 1991 |
| Current date of certification             | 10 November 2020 |
| Expiry date of certification              | 21 November 2023 |

### TABLE B2 SUNS PIPELINES COMPANY LIMITED – MANAGEMENT SYSTEMS

| 8 Pangcun Casting Industrial Park, Gaoping City, Shanxi, China |                   |
|--|-------------------|
| Quality Systems Standard                                       | ISO 9001:2015     |
| Certification licence no.                                      | 00221Q22822R0M    |
| Certifying agency  | CQM Certification |
| First date of certification                                    | 25 June 2009      |
| Current date of certification                                  | 17 May 2021       |
| Expiry date of certification                                   | 16 May 2024       |

### TABLE B3 VINIDEX PTY LTD – PRODUCT CERTIFICATION

| 224 Musgrave Road Coopers Plains QLD 4108 |                  |
|---|------------------|
| Product Standard/Spec.                    | AS/NZS 2280:2020 |
| Certificate No.                           | SMK40456         |
| Issuing certification body                | SAI-Global       |
| First date of certification               | 6 August 2015    |
| Current date of certification             | 12 April 2021    |
| Expiry date of certification              | 5 August 2026    |



# 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 12 November 2020 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 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: 12 November 2020

Originally Certified: 19 February 1991

Expires: 21 November 2023

Current Certification: 10 November 2020

Heather Mahon  
Global Head of Technical Services  
SAI Global Assurance



ISO 9001



[WWW.JAS-ANZ.ORG/REGISTER](http://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 12 November 2020.

### **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

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/>





# CERTIFICATE

## Quality Management System Certificate

Certificate Number:00221Q22822R0M

CQM hereby certifies that

### SUNS PIPELINES COMPANY LIMITED

Unified Social Credit Identifier: 91140581746036405L  
Domicile:Pangcun Village, Nancheng Office, Gaoping City, Jincheng City, Shanxi, P.R.China  
Certification Add.:Pangcun Village, Nancheng Office, Gaoping City, Jincheng City, Shanxi, P.R.China

the management system conform to

**GB/T 19001-2016/ISO 9001:2015**

This certificate is valid to the following scope:

Ductile iron pipe, pipe fittings production

( The information of this certificate can be inquired on [www.cqca.gov.cn](http://www.cqca.gov.cn) or website of CQM. The continual validity of the certificate can be checked by Certificate Confirmation of surveillance. )

Issued on: 2021-05-17  
Expires on: 2024-05-16



中国认可  
国际互认  
管理体系  
MANAGEMENT SYSTEM  
CNAS C002-M



AA 0018454

方圆标志认证集团  
CHINA QUALITY MARK CERTIFICATION GROUP

地址：北京市海淀区增光路33号 (100048) Address: No.33, Zengguang Road, Haidian District, Beijing, P.R. China (100048)

<http://www.cqm.com.cn>



# STANDARDSMARK LICENCE

**SAI Global hereby grants:**

## **Vinidex Pty Ltd**

ABN 42 000 664 942

224 Musgrave Road, Coopers Plains, QLD 4108, Australia

### **StandardsMark Licence**

Manufactured to:

**AS/NZS 2280:2020 - Ductile iron pipes and fittings**

"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: SMK40456**

**Issued : 13 April 2021**  
**Expires : 5 August 2026**

**Originally Certified : 6 August 2015**  
**Current Certification : 12 April 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](http://www.saiglobal.com), for the list of product models.





# SCHEDULE TO STANDARDSMARK LICENCE

SAI Global hereby grants:

## Vinidex Pty Ltd

224 Musgrave Road, Coopers Plains, QLD 4108, Australia

StandardsMark Licence

Manufactured to:

**AS/NZS 2280:2020 - Ductile iron pipes and fittings**

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

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                          | Product Description                                   | Coating / Lining  | Brand Name      | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|---------------------------------------|---|---|-----------------|----------------|---------------|
| 100               | ZAPDP<br>1003S.GPSC  | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALLM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT | VINIDEX<br>ZAP  | H1             | 12 Apr 2021   |
| 100               | LINKDP<br>100FC.GP   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALLM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINIDEX<br>ZAP  | H1             | 12 Apr 2021   |
| 100               | LINKDP<br>100FC.GPSC | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALLM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINIDEX<br>ZAP  | H1             | 12 Apr 2021   |
| 100               | ZAPDP<br>100FC.HAC   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALLM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR | VINIDEX<br>LINK | H1             | 12 Apr 2021   |
| 100               | ZAPDP<br>1003S.HAC   | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALLM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR  | VINIDEX<br>LINK | H1             | 12 Apr 2021   |
| 100               | LINKDP<br>1003S.GP   | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI CL PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup><br>BITUMEN<br>BLACK/RED,<br>PORTLAND<br>CEMENT<br>MORTAR          | VINIDEX<br>LINK | H1             | 12 Apr 2021   |
| 100               | LINKDP<br>1003S.GPSC | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI CL PIPE<br>ZN200 OPC +<br>SEAL COAT<br>5.7m L      | ZN200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT        | VINIDEX<br>LINK | H1             | 12 Apr 2021   |
| 100               | LINKDP<br>100FC.GP   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI CL PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup><br>BITUMEN<br>BLACK/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR         | VINIDEX<br>LINK | H1             | 12 Apr 2021   |
| 100               | LINKDP<br>100FC.GPSC | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI CL PIPE<br>ZN200 OPC +<br>SEAL COAT<br>5.7m L      | ZN200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT        | VINIDEX<br>LINK | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

# SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                 | Product Description                          | Coating / Lining   | Brand Name  | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|------------------------------|--|--|-------------|----------------|---------------|
| 100               | LINKDP 150FC.HAC     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN000 OPC 5.7m L                  | ZN000g/m <sup>2</sup> + EPOXY RED/BLUE, HIGH ALUMINA CEMENT MORTAR       | VINDEK LINK | H1             | 12 Apr 2021   |
| 100               | LINKDP 15035.HAC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN000 OPC 5.7m L                  | ZN000g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 100               | ZAPDP 10025.GP       | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT MORTAR              | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 150               | LINKDP 150FC.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN000 OPC 5.7m L                  | ZN000g/m <sup>2</sup> BITUMEN BLACK/BLUE, PORTLAND CEMENT MORTAR         | VINDEK LINK | H1             | 12 Apr 2021   |
| 150               | LINKDP 15035.GP      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN000 OPC 5.7m L                  | ZN000g/m <sup>2</sup> BITUMEN BLACK/RED, PORTLAND CEMENT MORTAR          | VINDEK LINK | H1             | 12 Apr 2021   |
| 150               | LINKDP 15035.GP5C    | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN000 OPC + SEAL COAT 5.7m L      | ZN000g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 150               | ZAPDP 150FC.HAC      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN-ALUM400 HAC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, HIGH ALUMINA CEMENT MORTAR | VINDEK LINK | H1             | 12 Apr 2021   |
| 150               | LINKDP 150FC.HAC     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN000 OPC 5.7m L                  | ZN000g/m <sup>2</sup> + EPOXY RED/BLUE, HIGH ALUMINA CEMENT MORTAR       | VINDEK LINK | H1             | 12 Apr 2021   |
| 150               | LINKDP 15035.HAC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN000 OPC 5.7m L                  | ZN000g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 150               | ZAPDP 15035.HAC      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN-ALUM400 HAC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, HIGH ALUMINA CEMENT MORTAR  | VINDEK LINK | H1             | 12 Apr 2021   |
| 150               | ZAPDP 15035.GP       | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT MORTAR      | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 150               | ZAPDP 15035.GP5C     | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT + SEAL COAT | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 150               | ZAPDP 150FC.GP5C     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR     | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 150               | LINKDP 150FC.GP5C    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN000 OPC + SEAL COAT 5.7m L      | ZN000g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 150               | ZAPDP 150FC.GP       | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR     | VINDEK ZAP  | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification  | Nominal Pressure (PN) | Joint Designation | Product Type                          | Product Description                                  | Coating / Lining  | Brand Name     | Appendix H Ref | Date Endorsed |
|-------------------|-----------------------|-----------------------|-------------------|---------------------------------------|--|---|----------------|----------------|---------------|
| 200               | ZAPOP<br>2003S.GPSC   | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DICL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 200               | LINKDP<br>200F.C.HAC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DICL PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup> +<br>EPOXY<br>RED/BLUE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR       | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 200               | ZAPOP<br>200F.C.GPSC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DICL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 200               | LINKDP<br>200S.HAC    | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DICL PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup> +<br>EPOXY RED/RED,<br>HIGH ALUMINA<br>CEMENT<br>MORTAR           | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 200               | ZAPOP<br>200S.GP      | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DICL PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED,<br>PORTLAND<br>CEMENT<br>MORTAR      | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 200               | LINKDP<br>200F.C.GP   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DICL PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup><br>BITUMEN<br>BLACK/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR         | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 200               | ZAPOP<br>200F.C.GP    | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DICL PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 200               | LINKDP<br>200S.GP     | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DICL PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup><br>BITUMEN<br>BLACK/RED,<br>PORTLAND<br>CEMENT<br>MORTAR          | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 200               | LINKDP<br>2003S.GPSC  | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DICL PIPE<br>ZN200 OPC +<br>SEAL COAT<br>5.7m L      | ZN200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT        | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 200               | LINKDP<br>200F.C.GPSC | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DICL PIPE<br>ZN200 OPC +<br>SEAL COAT<br>5.7m L      | ZN200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT        | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 200               | ZAPOP<br>200F.C.HAC   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DICL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 200               | ZAPOP<br>200S.HAC     | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DICL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR  | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 225               | ZAPOP<br>225F.C.GP    | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DICL PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 225               | ZAPOP<br>225F.C.GPSC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DICL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                 | Product Description                         | Coating / Lining   | Brand Name  | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|------------------------------|---|--|-------------|----------------|---------------|
| 225               | ZAPDP 22535.GP       | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT MORTAR      | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 225               | ZAPDP 22520.GP       | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 225               | LINXDP 225FC.GP9C    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC + SEAL COAT 5.7m L      | ZN200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | ZAPDP 22535.GP9C     | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT + SEAL COAT | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 225               | LINXDP 22535.GP      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> BITUMEN BLACK/RED, PORTLAND CEMENT MORTAR          | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | LINXDP 225FC.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> BITUMEN BLACK/BLUE, PORTLAND CEMENT MORTAR         | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | LINXDP 22520.GP9C    | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC + SEAL COAT 5.7m L      | ZN200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | ZAPDP 22520.GP9C     | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 225               | LINXDP 22535.GP9C    | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC + SEAL COAT 5.7m L      | ZN200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | LINXDP 225FC.HAC     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DIGL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> + EPOXY RED/BLUE, HIGH ALUMINA CEMENT MORTAR       | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | ZAPDP 22535.HAC      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DIGL PIPE ZN-ALUM400 HAC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, HIGH ALUMINA CEMENT MORTAR  | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | ZAPDP 225FC.HAC      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DIGL PIPE ZN-ALUM400 HAC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, HIGH ALUMINA CEMENT MORTAR | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | LINXDP 22535.HAC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DIGL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 225               | LINXDP 22520.GP      | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> BITUMEN BLACK/GREEN, PORTLAND CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |

Licence No: SMK40456

Issued Date: 13 April 2021

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                 | Product Description                          | Coating / Lining  | Brand Name   | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|------------------------------|--|---|--------------|----------------|---------------|
| 225               | LINKDP 22520.HAC     | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> + EPOXY RED/GREEN, HIGH ALUMINA CEMENT MORTAR       | VNINDEX LINK | H1             | 12 Apr 2021   |
| 225               | ZAPOP 22520.HAC      | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN-ALUM400 HAC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, HIGH ALUMINA CEMENT MORTAR | VNINDEX LINK | H1             | 12 Apr 2021   |
| 250               | ZAPOP 25035.GP       | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT MORTAR       | VNINDEX ZAP  | H1             | 12 Apr 2021   |
| 250               | ZAPOP 25035.GP       | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR     | VNINDEX ZAP  | H1             | 12 Apr 2021   |
| 250               | ZAPOP 250FC.GP       | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR      | VNINDEX ZAP  | H1             | 12 Apr 2021   |
| 250               | LINKDP 250FC.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> BITUMEN BLACK/BLUE, PORTLAND CEMENT MORTAR          | VNINDEX LINK | H1             | 12 Apr 2021   |
| 250               | LINKDP 250FC.HAC     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> + EPOXY RED/BLUE, HIGH ALUMINA CEMENT MORTAR        | VNINDEX LINK | H1             | 12 Apr 2021   |
| 250               | LINKDP 250FC.GPSC    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN200 OPC + SEAL COAT 5.7m L      | ZN200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT         | VNINDEX LINK | H1             | 12 Apr 2021   |
| 250               | LINKDP 25035.GPSC    | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN200 OPC + SEAL COAT 5.7m L      | ZN200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT         | VNINDEX LINK | H1             | 12 Apr 2021   |
| 250               | LINKDP 25020.GPSC    | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN200 OPC + SEAL COAT 5.7m L      | ZN200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT         | VNINDEX LINK | H1             | 12 Apr 2021   |
| 250               | LINKDP 25020.HAC     | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> + EPOXY RED/GREEN, HIGH ALUMINA CEMENT MORTAR       | VNINDEX LINK | H1             | 12 Apr 2021   |
| 250               | LINKDP 25035.HAC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN200 OPC 5.7m L                  | ZN200g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR         | VNINDEX LINK | H1             | 12 Apr 2021   |
| 250               | ZAPOP 25020.GPSC     | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR     | VNINDEX ZAP  | H1             | 12 Apr 2021   |
| 250               | ZAPOP 25035.HAC      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN-ALUM400 HAC 5.7m L             | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, HIGH ALUMINA CEMENT MORTAR   | VNINDEX LINK | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                          | Product Description                                   | Coating / Lining   | Brand Name    | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|---------------------------------------|---|--|---------------|----------------|---------------|
| 250               | LINKP<br>25020.GP    | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI/CL PIPE<br>ZN200 OPC<br>5.7m L                     | Zn200g/m <sup>2</sup><br>BITUMEN<br>BLACK/GREEN,<br>PORTLAND<br>CEMENT<br>MORTAR         | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 250               | ZAPDP<br>25020.HAC   | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI/CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/GREEN                                      | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 250               | ZAPDP<br>250FC.HAC   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI/CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR  | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 250               | LINKP<br>25035.GP    | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI/CL PIPE<br>ZN200 OPC<br>5.7m L                     | Zn200g/m <sup>2</sup><br>BITUMEN<br>BLACK/RED,<br>PORTLAND<br>CEMENT<br>MORTAR           | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 250               | ZAPDP<br>250FC.GPSC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DI/CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR      | VINDE<br>ZAP  | H1             | 12 Apr 2021   |
| 250               | ZAPDP<br>25035.GPSC  | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DI/CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED,<br>PORTLAND<br>CEMENT+ SEAL<br>COAT   | VINDE<br>ZAP  | H1             | 12 Apr 2021   |
| 300               | LINKP<br>300FC.GP    | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI/CL PIPE<br>ZN200 OPC<br>5.7m L                     | Zn200g/m <sup>2</sup><br>BITUMEN<br>BLACK/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR          | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 300               | ZAPDP<br>30035.GPSC  | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DI/CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED,<br>PORTLAND<br>CEMENT+ SEAL<br>COAT   | VINDE<br>ZAP  | H1             | 12 Apr 2021   |
| 300               | ZAPDP<br>300FC.GPSC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DI/CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR      | VINDE<br>ZAP  | H1             | 12 Apr 2021   |
| 300               | LINKP<br>30025.GP    | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI/CL PIPE<br>ZN200 OPC<br>5.7m L                     | Zn200g/m <sup>2</sup><br>BITUMEN<br>BLACK/RED,<br>PORTLAND<br>CEMENT<br>MORTAR           | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 300               | LINKP<br>300FC.HAC   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI/CL PIPE<br>ZN200 OPC<br>5.7m L                     | Zn200g/m <sup>2</sup> +<br>EPOXY<br>RED/BLUE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR        | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 300               | ZAPDP<br>30020.HAC   | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI/CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/GREEN,<br>HIGH ALUMINA<br>CEMENT<br>MORTAR | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 300               | LINKP<br>30020.GPSC  | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI/CL PIPE<br>ZN200 OPC +<br>SEAL COAT<br>5.7m L      | Zn200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT         | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 300               | ZAPDP<br>300FC.HAC   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI/CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR  | VINDE<br>LINK | H1             | 12 Apr 2021   |
| 300               | ZAPDP<br>30025.HAC   | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI/CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR   | VINDE<br>LINK | H1             | 12 Apr 2021   |

**Licence No:** SMK40456

**Issued Date:** 13 April 2021

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

\$120 for 5 courses with  
this email isn't displaying

# SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                 | Product Description                         | Coating / Lining   | Brand Name  | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|------------------------------|---|--|-------------|----------------|---------------|
| 300               | LINKDP 30020.HAC     | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> + EPOXY RED/GREEN, HIGH ALUMINA CEMENT MORTAR      | VINDEK LINK | H1             | 12 Apr 2021   |
| 300               | LINKDP 30035.HAC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 300               | LINKDP 30035.GPSC    | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 300               | LINKDP 300FC.GPSC    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 300               | ZAPDP 300FC.GP       | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DICL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BUE, PORTLAND CEMENT MORTAR      | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 300               | ZAPDP 30020.GP       | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DICL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 300               | LINKDP 30020.GP      | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> BITUMEN BLACK/GREEN, PORTLAND CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 300               | ZAPDP 30025.GP       | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DICL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT MORTAR      | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 300               | ZAPDP 30005.GPSC     | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DICL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 375               | LINKDP 37535.HAC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 375               | LINKDP 37535.GPSC    | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 375               | LINKDP 375FC.GPSC    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 375               | LINKDP 375FC.HAC     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> + EPOXY RED/BUE, HIGH ALUMINA CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 375               | ZAPDP 37535.GPSC     | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DICL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT + SEAL COAT | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 375               | ZAPDP 37520.GP       | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DICL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEK ZAP  | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                          | Product Description                                     | Coating / Lining   | Stand Name     | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|---------------------------------------|---|--|----------------|----------------|---------------|
| 375               | ZAPOP<br>375FC.GPSC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DUCTILE PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR      | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 375               | LINKOP<br>37520.HAC  | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DUCTILE PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup> +<br>EPOXY<br>RED/GREEN,<br>HIGH ALUMINA<br>CEMENT<br>MORTAR       | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 375               | ZAPOP<br>37536.GP    | 36                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DUCTILE PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED,<br>PORTLAND<br>CEMENT<br>MORTAR       | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 375               | LINKOP<br>37520.GPSC | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DUCTILE PIPE<br>ZN200 OPC +<br>SEAL COAT<br>5.7m L      | ZN200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT         | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 375               | ZAPOP<br>37520.HAC   | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DUCTILE PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/GREEN,<br>HIGH ALUMINA<br>CEMENT<br>MORTAR | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 375               | LINKOP<br>37520.GP   | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DUCTILE PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup><br>BITUMEN<br>BLACK/GREEN,<br>PORTLAND<br>CEMENT<br>MORTAR         | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 375               | ZAPOP<br>37536.HAC   | 36                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DUCTILE PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR   | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 375               | ZAPOP<br>375FC.HAC   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DUCTILE PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR  | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 375               | ZAPOP<br>37520.GPSC  | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DUCTILE PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/GREEN,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 375               | LINKOP<br>37536.GP   | 36                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DUCTILE PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup><br>BITUMEN<br>BLACK/RED,<br>PORTLAND<br>CEMENT<br>MORTAR           | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 375               | ZAPOP<br>375FC.GP    | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DUCTILE PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR      | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 375               | LINKOP<br>375FC.GP   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DUCTILE PIPE<br>ZN200 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup><br>BITUMEN<br>BLACK/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR          | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 450               | LINKOP<br>450FC.GPSC | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DUCTILE PIPE<br>ZN200 OPC +<br>SEAL COAT<br>5.7m L      | ZN200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT         | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 450               | ZAPOP<br>45036.HAC   | 36                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DUCTILE PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR   | VINDEK<br>LINK | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.



# SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                 | Product Description                         | Coating / Lining   | Brand Name  | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|------------------------------|---|--|-------------|----------------|---------------|
| 400               | LINKDP 450FC.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> BITUMEN BLACK/BLUE, PORTLAND CEMENT MORTAR         | VINDEX LINK | H1             | 12 Apr 2021   |
| 400               | LINKDP 45035.GPSC    | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEX LINK | H1             | 12 Apr 2021   |
| 400               | ZAPDP 45035.GP       | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT MORTAR      | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 400               | ZAPDP 450FC.GP       | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR     | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 400               | LINKDP 45020.GPSC    | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEX LINK | H1             | 12 Apr 2021   |
| 400               | ZAPDP 45020.GP       | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 400               | ZAPDP 450FC.HAC      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DIGL PIPE ZN-ALUM400 HAC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, HIGH ALUMINA CEMENT MORTAR | VINDEX LINK | H1             | 12 Apr 2021   |
| 400               | ZAPDP 45020.GPSC     | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 400               | LINKDP 45020.HAC     | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DIGL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> + EPOXY RED/GREEN, HIGH ALUMINA CEMENT MORTAR      | VINDEX LINK | H1             | 12 Apr 2021   |
| 400               | ZAPDP 450FC.GPSC     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR     | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 400               | ZAPDP 45035.GPSC     | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DIGL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT + SEAL COAT | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 400               | LINKDP 45020.GP      | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> BITUMEN BLACK/RED, PORTLAND CEMENT MORTAR          | VINDEX LINK | H1             | 12 Apr 2021   |
| 400               | LINKDP 45020.GP      | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIGL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> BITUMEN BLACK/GREEN, PORTLAND CEMENT MORTAR        | VINDEX LINK | H1             | 12 Apr 2021   |
| 400               | LINKDP 45035.HAC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DIGL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR        | VINDEX LINK | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                          | Product Description                                   | Coating / Lining   | Brand Name     | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|---------------------------------------|---|--|----------------|----------------|---------------|
| 450               | LINADP<br>450FC.HAC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN205 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup> +<br>EPOXY<br>RED/BLE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR         | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 450               | ZAPDP<br>45020.HAC   | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/GREEN                                      | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>50020.GP    | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/GREEN,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>50035.GP    | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED,<br>PORTLAND<br>CEMENT<br>MORTAR       | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 500               | LINADP<br>50035.HAC  | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN205 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup> +<br>EPOXY RED/RED,<br>HIGH ALUMINA<br>CEMENT<br>MORTAR            | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 500               | LINADP<br>500FC.HAC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN205 OPC<br>5.7m L                     | ZN200g/m <sup>2</sup> +<br>EPOXY<br>RED/BLE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR         | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>50035.GPSC  | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT  | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>50020.HAC   | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/GREEN,<br>HIGH ALUMINA<br>CEMENT<br>MORTAR | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>500FC.GPSC  | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR      | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>500FC.HAC   | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR  | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>500FC.GP    | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/BLUE,<br>PORTLAND<br>CEMENT<br>MORTAR      | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>50035.HAC   | 35                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>SEWAGE | DI CL PIPE<br>ZN-ALUM400<br>HAC 5.7m L                | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/RED, HIGH<br>ALUMINA<br>CEMENT<br>MORTAR   | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 500               | LINADP<br>50020.GPSC | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI CL PIPE<br>ZN205 OPC +<br>SEAL COAT<br>5.7m L      | ZN200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT         | VINDEK<br>LINK | H1             | 12 Apr 2021   |
| 500               | ZAPDP<br>50020.GPSC  | 20                    | SOC-SP            | DUCTILE<br>IRON PIPE                  | DI CL PIPE<br>ZN-ALUM400<br>OPC + SEAL<br>COAT 5.7m L | ZN-ALUM<br>400g/m <sup>2</sup> +EPOXY<br>BLUE/GREEN,<br>PORTLAND<br>CEMENT<br>MORTAR     | VINDEK<br>ZAP  | H1             | 12 Apr 2021   |
| 500               | LINADP<br>500FC.GPSC | FLANGE<br>CLASS       | SOC-PL            | DUCTILE<br>IRON PIPE<br>FOR<br>WATER  | DI CL PIPE<br>ZN205 OPC +<br>SEAL COAT<br>5.7m L      | ZN200g/m <sup>2</sup><br>BITUMEN<br>COATED,<br>PORTLAND<br>CEMENT + SEAL<br>COAT         | VINDEK<br>LINK | H1             | 12 Apr 2021   |

Licence No: SMK40456

Issued Date: 13 April 2021

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                 | Product Description                    | Coating / Lining  | Brand Name  | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|------------------------------|--|---|-------------|----------------|---------------|
| 500               | LINXDP 50035.GPSC    | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN035 OPC + SEAL COAT 5.7m L | ZN200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT         | VINDEX LINK | H1             | 12 Apr 2021   |
| 500               | LINXDP 50030.GP      | 30                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> BITUMEN BLACK/GREEN, PORTLAND CEMENT MORTAR         | VINDEX LINK | H1             | 12 Apr 2021   |
| 500               | LINXDP 50030.HAC     | 30                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> + EPOXY RED/GREEN, HIGH ALUMINA CEMENT MORTAR       | VINDEX LINK | H1             | 12 Apr 2021   |
| 500               | LINXDP 50035.GP      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> BITUMEN BLACK/RED, PORTLAND CEMENT MORTAR           | VINDEX LINK | H1             | 12 Apr 2021   |
| 500               | LINXDP 500FC.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> BITUMEN BLACK/BLUE, PORTLAND CEMENT MORTAR          | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | LINXDP 60035.GP      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> BITUMEN BLACK/RED, PORTLAND CEMENT MORTAR           | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | LINXDP 600FC.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> BITUMEN BLACK/BLUE, PORTLAND CEMENT MORTAR          | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | LINXDP 60030.GP      | 30                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> BITUMEN BLACK/GREEN, PORTLAND CEMENT MORTAR         | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | ZAPDP 60035.HAC      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN-ALUM400 HAC 5.7m L        | 400g/m <sup>2</sup> +EPOXY BLUE/RED, HIGH ALUMINA CEMENT MORTAR           | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | LINXDP 60030.HAC     | 30                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> + EPOXY RED/GREEN, HIGH ALUMINA CEMENT MORTAR       | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | ZAPDP 60035.GP       | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DICL PIPE ZN-ALUM400 OPC 5.7m L        | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT MORTAR       | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 600               | ZAPDP 600FC.HAC      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN-ALUM400 HAC 5.7m L        | 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, HIGH ALUMINA CEMENT MORTAR          | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | LINXDP 60035.HAC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN200 OPC 5.7m L             | ZN200g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR         | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | ZAPDP 60030.HAC      | 30                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DICL PIPE ZN-ALUM400 HAC 5.7m L        | ZN-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, HIGH ALUMINA CEMENT MORTAR | VINDEX LINK | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

# SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                 | Product Description                          | Coating / Lining   | Brand Name  | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|------------------------------|--|--|-------------|----------------|---------------|
| 600               | ZAPDP 60035.GP       | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 600               | LINKDP 600F.C.HAC    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN200 OPC 5.7m L                  | Zn200g/m <sup>2</sup> + EPOXY RED/BLUE, HIGH ALUMINA CEMENT MORTAR       | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | ZAPDP 600F.C.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR     | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 600               | ZAPDP 60025.GPSC     | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 600               | ZAPDP 600F.C.GPSC    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR     | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 600               | LINKDP 60025.GPSC    | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | LINKDP 60035.GPSC    | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEX LINK | H1             | 12 Apr 2021   |
| 600               | ZAPDP 60035.GPSC     | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT + SEAL COAT | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 600               | LINKDP 600F.C.GPSC   | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DI CL PIPE ZN200 OPC + SEAL COAT 5.7m L      | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEX LINK | H1             | 12 Apr 2021   |
| 750               | ZAPDP 600F.C.GPSC    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR     | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 750               | ZAPDP 600F.C.HAC     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DI CL PIPE ZN-ALUM400 HAC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, HIGH ALUMINA CEMENT MORTAR | VINDEX LINK | H1             | 12 Apr 2021   |
| 750               | ZAPDP 600F.C.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC 5.7m L             | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/BLUE, PORTLAND CEMENT MORTAR     | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 750               | ZAPDP 60035.GPSC     | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/RED, PORTLAND CEMENT + SEAL COAT | VINDEX ZAP  | H1             | 12 Apr 2021   |
| 750               | ZAPDP 60025.GPSC     | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DI CL PIPE ZN-ALUM400 OPC + SEAL COAT 5.7m L | Zn-ALUM 400g/m <sup>2</sup> +EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR    | VINDEX ZAP  | H1             | 12 Apr 2021   |

**Licence No: SMK40456**

**Issued Date: 13 April 2021**

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## SCHEDULE TO STANDARDSMARK LICENCE

| Nominal Size (DN) | Model Identification | Nominal Pressure (PN) | Joint Designation | Product Type                 | Product Description                    | Coating / Lining   | Brand Name  | Appendix H Ref | Date Endorsed |
|-------------------|----------------------|-----------------------|-------------------|------------------------------|--|--|-------------|----------------|---------------|
| 750               | ZAPDP 6050.GP        | 20                    | SOC-SP            | DUCTILE IRON PIPE            | DIOL PIPE ZN-ALUM400 OPC 5.7m L        | ZN-ALUM 400g/m <sup>2</sup> EPOXY BLUE/GREEN, PORTLAND CEMENT MORTAR     | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 750               | ZAPDP 6035.GP        | 35                    | SOC-SP            | DUCTILE IRON PIPE            | DIOL PIPE ZN-ALUM400 OPC 5.7m L        | ZN-ALUM 400g/m <sup>2</sup> EPOXY BLUE/RED, PORTLAND CEMENT MORTAR       | VINDEK ZAP  | H1             | 12 Apr 2021   |
| 750               | LINKDP 6035.GP       | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIOL PIPE ZN600 OPC 5.7m L             | Zn200g/m <sup>2</sup> BITUMEN BLACK/RED, PORTLAND CEMENT MORTAR          | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | LINKDP 6050.GP       | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIOL PIPE ZN600 OPC 5.7m L             | Zn200g/m <sup>2</sup> BITUMEN BLACK/GREEN, PORTLAND CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | LINKDP 600FC.GP      | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DIOL PIPE ZN600 OPC 5.7m L             | Zn200g/m <sup>2</sup> BITUMEN BLACK/BLUE, PORTLAND CEMENT MORTAR         | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | ZAPDP 6050.HAC       | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DIOL PIPE ZN-ALUM400 HAC 5.7m L        | ZN-ALUM 400g/m <sup>2</sup> EPOXY BLUE/GREEN, HIGH ALUMINA CEMENT MORTAR | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | ZAPDP 6035.HAC       | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DIOL PIPE ZN-ALUM400 HAC 5.7m L        | ZN-ALUM 400g/m <sup>2</sup> EPOXY BLUE/RED, HIGH ALUMINA CEMENT MORTAR   | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | LINKDP 6030.GPSC     | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIOL PIPE ZN200 OPC + SEAL COAT 5.7m L | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | LINKDP 6035.HAC      | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DIOL PIPE ZN600 OPC 5.7m L             | Zn200g/m <sup>2</sup> + EPOXY RED/RED, HIGH ALUMINA CEMENT MORTAR        | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | LINKDP 600FC.HAC     | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR SEWAGE | DIOL PIPE ZN600 OPC 5.7m L             | Zn200g/m <sup>2</sup> + EPOXY RED/BLUE, HIGH ALUMINA CEMENT MORTAR       | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | LINKDP 6050.HAC      | 20                    | SOC-SP            | DUCTILE IRON PIPE FOR SEWAGE | DIOL PIPE ZN600 OPC 5.7m L             | Zn200g/m <sup>2</sup> + EPOXY RED/GREEN, HIGH ALUMINA CEMENT MORTAR      | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | LINKDP 6030.GPSC     | 35                    | SOC-SP            | DUCTILE IRON PIPE FOR WATER  | DIOL PIPE ZN200 OPC + SEAL COAT 5.7m L | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |
| 750               | LINKDP 600FC.GPSC    | FLANGE CLASS          | SOC-PL            | DUCTILE IRON PIPE FOR WATER  | DIOL PIPE ZN200 OPC + SEAL COAT 5.7m L | Zn200g/m <sup>2</sup> BITUMEN COATED, PORTLAND CEMENT + SEAL COAT        | VINDEK LINK | H1             | 12 Apr 2021   |

End of Record

Licence No: SMK40456

Issued Date: 13 April 2021

This schedule supersedes all previously issued schedules



\* 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 the Schedule for the list of product models.

## APPENDIX C - ESTIMATED LIFE EXPECTANCY

The following estimated life expectancies have been provided by Vinidex.

Life expectancy estimates are indicative only and may increase or decrease as a result of the system operating conditions, preventative maintenance programs, operating environment and other geographical and site-specific factors.

It should be noted that service life for a pipeline is not necessarily defined as the time to first failure but as the typical service life achievable before major rehabilitation is required.

**TABLE D1**  
**ESTIMATED LIFE EXPECTANCY OF DI PIPE – VINIDEX**

| COATING AND LINING OPTIONS                                 | ENVIRONMENT |                       |            |
|--|-------------|-----------------------|------------|
|  | BENIGN      | MODERATELY AGGRESSIVE | AGGRESSIVE |
| <b>INTERNAL LINING</b>                                     |             |                       |            |
| Portland Cement  | >100 years  | >100 years            | >50years   |
| Portland Cement + Seal Coat                                | >100 years  | >100 years            | >75 years  |
| Calcium Aluminate Cement                                   | >100 years  | >75 years             | >50 years  |
| <b>EXTERNAL COATING</b>                                    |             |                       |            |
| 200 g/m <sup>2</sup> zinc + finishing layer                | >100 years  | >50 years             | >20 years  |
| 200 g/m <sup>2</sup> zinc + finishing layer + PE sleeving  | >100 years  | >100 years            | >75 years  |
| 400 g/m <sup>2</sup> Zn-Al + finishing layer               | >100 years  | >50 years             | >20 years  |
| 400 g/m <sup>2</sup> Zn-Al + finishing layer + PE Sleeving | >100 years  | >100 years            | >75 years  |

## APPENDIX D - SUPPLIER CONTACTS

### Vinindex National Contact Details

**PHONE:** 13 11 69

**FAX:** 13 24 43

**EMAIL:** sales@vinindex.com.au

Queensland: qldsales@vinindex.com.au

Victoria: vicsales@vinindex.com.au

Western Australia: wasales@vinindex.com.au

New South Wales: nswsales@vinindex.com.au



### NEW SOUTH WALES

| CORPORATE OFFICE   | SYDNEY   | WAGGA WAGGA  |
|--|--|--|
| Level 4, 26 College St<br>Darlinghurst, NSW 2010         | 254 Woodpark Road<br>Smithfield, NSW 2164                | 101 Byrnes Road<br>Wagga Wagga, NSW 2650                 |
| PO Box 747<br>Darlinghurst, NSW 1300                     | PO Box 6646<br>Wetherill Park, NSW 2164                  | PO Box 6116<br>Wagga Wagga, NSW 2650                     |
| Telephone: ☎ (02) 8278 0500<br>Facsimile: (02) 8278 0552 | Telephone: ☎ (02) 9604 2422<br>Facsimile: (02) 9725 3363 | Telephone: ☎ (02) 6971 9312<br>Facsimile: (02) 6971 9286 |

### QUEENSLAND

| BRISBANE   | RODNEY INDUSTRIES  | TOOWOOMBA                                       | TOWNSVILLE   | YATALA PLASTICS  |
|--|--|---|--|--|
| 224 Musgrave Road<br>Coopers Plains, QLD 4108            | 19 Valente Close<br>Chermside Qld. 4032                  | Lot 2 Witmack Road<br>Charlton, QLD 4350        | 49 Enterprise Avenue<br>Bohle, QLD 4818                  | 7 Enterprise Drive<br>Beenleigh, QLD 4207                |
| PO Box 379<br>Sunnybank, QLD 4109                        | PO Box 5657<br>Stafford Heights, QLD 4053                |   | PO Box 7366<br>Garbutt, QLD 4814                         |  |
| Telephone: ☎ (07) 3277 2822<br>Facsimile: (07) 3277 9500 | Telephone: ☎ (07) 3624 0300<br>Facsimile: (07) 3624 0399 | Telephone: ☎ (07) 4630 4095<br>☎ (07) 4630 4098 | Telephone: ☎ (07) 4759 0999<br>Facsimile: (07) 4774 5728 | Telephone: ☎ (07) 3807 3302<br>Facsimile: (07) 3807 3657 |

### NORTHERN TERRITORY

### SOUTH AUSTRALIA

### TASMANIA

### WESTERN AUSTRALIA

### VICTORIA

| DARWIN  | ADELAIDE                                     | LAUNCESTON   | PERTH  | MELBOURNE  | MELBOURNE                                       |
|---|--|--|--|--|---|
| 3846 Marjorie Street<br>Pinelands,<br>NT 0829 | 9-11 Kaurna Avenue<br>Edinburgh,<br>SA 5111  | 15 Thistle Street<br>South Launceston,<br>TAS 7249 | Sainsbury Road<br>O'Connor,<br>WA 6163       | Unit 1, 10 Duerdin Street<br>Notting Hill,<br>VIC 3168 | 231-245 St Albans Road<br>Sunshine,<br>VIC 3020 |
|   |  |  | PO Box 36<br>Palmyra, WA 6957                | Private Mail Bag 448<br>Rosebank MDC VIC 3169          | PO Box 194<br>Sunshine, VIC 3020                |
| Tel: ☎ (08) 8932 8200<br>Fax: (08) 8932 8211  | Tel: ☎ (08) 8250 8940<br>Fax: (08) 8250 1625 | Tel: ☎ (03) 6344 2521<br>Fax: (03) 6343 1100       | Tel: ☎ (08) 9337 4344<br>Fax: (08) 9331 3383 | Tel: ☎ (03) 9543 2311<br>Fax: (03) 9543 7420           | Tel: ☎ (03) 9334 7124<br>Fax: (03) 9311 6230    |



**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](mailto:info@wsaa.asn.au)

[www.wsaa.asn.au](http://www.wsaa.asn.au)