

WSAA PRODUCT APPRAISAL CERTIFICATE

Clover Pipelines Pty Ltd Ductile Iron Pipeline Fittings

This appraisal applies to a range of light weight PN 16 ductile iron pipeline fittings from DN 80 to DN 150 manufactured in accordance with AS/NZS 2280:2020 *Ductile iron pipes and fittings*.

The Clover fittings are fully coated and lined with a thermal-bonded polymeric coating.

A listing of Quality and Product Certification Certificates and details of products are included in the attached Schedules A and B.

Product Category	Ductile iron fittings
PA Number:	PA 1727 Issue 2
Supplier	Clover Pipelines Pty Ltd
Brand	Clover
Standards	AS/NZS 2280:2020 <i>Ductile iron pipes and fittings</i> .
WSAA Product Specification	WSA PS 201 - <i>Ductile Iron Fitting (CIOD) for Pressure and Non-Pressure Applications – Drinking Water, Non-Drinking Water Supply and Sewerage</i> .
Other Specifications	
Issue date	3 April 2023
Expiry date	3 April 2028
Recommendations	It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise the range of Clover DI fittings, as detailed in this report, for use in water supply and sewerage pressure pipelines, provided they are installed in accordance with applicable WSAA Codes and the manufacturer's requirements, where specified.
Disclaimer	The disclaimer on Page 2 explains a number of very important limits on your ability to rely on the information in this Product Appraisal Certificate and the assessment criteria used to underlie it. Please read it carefully and take into account when considering the content in this Certificate.

1. Disclaimer

This Product Appraisal Certificate (Certificate) is issued by WSAA on the understanding that:

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

To maintain the recommendations of this Certificate any such changes shall be detailed and notified to the Product Appraisal Manager for consideration and review of the Certificate including the product appraisal criteria underlying it 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. Certificates will be reviewed and reissued at regular intervals not exceeding five (5) years.

WSAA reserves the right to withdraw this Certificate at any time in its sole and absolute discretion for any reason.

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

Any enquiries regarding this Certificate should be directed to the Product Appraisal Manager Phone: 03 8605 7601 email carl.radford@wsaa.asn.au.

1.1. Issue of Certificate

This Certificate has been published and/or prepared by WSAA and nominated Project Manager and peer group of technical specialists (the Publishers).

The Certificate and the underlying product appraisal criteria have been prepared for use within Australia only by technical specialists that have expertise in the function of products such as those appraised in the Certificate (the Recipients).

By accepting this Certificate, the Recipient acknowledges and represents to the Publisher(s) and each person involved in the preparation of the Certificate and product appraisal criteria underlying it that the Recipient has understood and accepted the terms of this Disclaimer.

1.2. Limits on Reliance on Information and Recommendations

1.2.1. Disclaimer of liability

Neither the Publisher(s) nor any person involved in the preparation of the Certificate and product appraisal criteria underlying it 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 Certificate or the product appraisal criteria underlying it. This includes (without limitation) any liability for any recommendation or information in the Certificate or any errors or omissions.

1.2.2. Intellectual Property and other rights

WSAA does not undertake any assessment of whether the importation, manufacture, sale or use of the Product the subject of this Certificate infringes the intellectual property rights or proprietary rights of any person. Recipients of the Certificate 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 WSAA 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. WSAA's policy is to not refer to such allegations in its Certificate or take any other steps to put Recipients on notice of such allegations. If, however, WSAA becomes aware that the allegations have been admitted or proved in Court, then WSAA may, at its discretion, take such steps as it considers appropriate. As such, Recipients acknowledge, agree and accept that WSAA 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 Certificate and which are not otherwise communicated to Recipients.

1.2.3. Need for independent assessment

The information and any recommendation contained (expressly or by implication) in this Certificate are provided in good faith (and subject to the limitations noted in this Certificate). 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 Certificate does not contain all information that a person might require for the purposes of assessing any product discussed or appraised within it. The product appraisal criteria used in preparing this Certificate 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 Certificate, 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.

1.3. No Updating

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

1.4. 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 Certificate, or the accuracy, completeness or reasonableness of any recommendation in this Certificate.

SCHEDULE A

QUALITY AND PRODUCT CERTIFICATIONS

Copies of the following Quality and Product Certificates are available from WSAA.

SCHEDULE A1 CLOVER PIPELINES PTY LTD - MANAGEMENT SYSTEMS

237 Rex Road Campbellfield Victoria	
Quality Systems Standard	ISO 9001:2015
Certification Licence No.	AMI-QM-78026
Certifying Agency	ApprovalMark
First Date of Certification	26 August 2019
Current Date of Certification	4 October 2022
Expiry Date of Certification	26 August 2025

SCHEDULE A2 WUHU JINMAO LIQUID SCIENCE & TECHNOLOGY CO LTD – MANAGEMENT SYSTEM

Suncun Industrial Park, Fanchang, Wuhu, Anhui, China	
Quality Systems Standard	ISO 9001:2015
Certification Licence No.	04321O31683R1M
Certifying Agency	Beijing United Intelligence Certification Co Ltd
First Date of Certification	31 July 2018
Current Date of Certification	28 July 2021
Expiry Date of Certification	30 July 2024

SCHEDULE A3 CONNECT PRECISION PTY LTD – PRODUCT CERTIFICATION

66 Rundle Street Kent Town SA	
Product Standard/Spec.	AS/NZS 2280:2020
Certificate No.	OMK22732
Issuing Certification Body	IAPMO R & T Oceana
First Date of Certification	10 August 2017
Current Date of Certification	10 August 2022
Expiry Date of Certification	9 August 2027

PRODUCT LITERATURE



DUCTILE IRON FITTINGS

Ductile Iron Fittings for water & Waste Water Applications

Clover DUCTILE IRON FITTINGS for use in water and waste water applications

Features

Clovers range of PN16 ductile iron fittings are manufactured from ductile iron and polymeric coated.

Product Specification

Product standard	AS/NZS2280
Fitting material	Ductile Iron
	Tensile 400 MPa min
	Elongation 12% Elongation min
Fitting hardness	250 HB maximum
Nodularity	75% minimum
Coatings/linings	AS/NZS4158
Flanges	AS/NZS4087 PN16 Figure B5

Pressure Classes

PN	Allowable operating pressure (MPa)	Maximum allowable operating pressure (MPa)	Allowable site test pressure (MPa)
16	1.60	1.92	2.00

Product Range



Nominal Size (DN)	Size	Nominal Pressure	Description	Product Code
DN80	80 X 100	PN16	HYDRANT RISER	DHR080100
DN80	80 X 150	PN16	HYDRANT RISER	DHR080150
DN80	80 X 225	PN16	HYDRANT RISER	DHR080225
DN80	80 X 300	PN16	HYDRANT RISER	DHR080300
DN100	100 X 100	PN16	HYDRANT RISER	DHR100100
DN100	100 X 150	PN16	HYDRANT RISER	DHR100150
DN100	100 X 225	PN16	HYDRANT RISER	DHR100225
DN100	100 X 300	PN16	HYDRANT RISER	DHR100300
DN100	100 X 375	PN16	HYDRANT RISER	DHR100375
DN100	100 X 600	PN16	HYDRANT RISER	DHR100600



Nominal Size (DN)	Size	Nominal Pressure	Description	Product Code
DN100	100 X 20	PN16	PRETAP CONNECTOR	DCSST1020
DN100	100 X 25	PN16	PRETAP CONNECTOR	DCSST1020L
DN150	150 X 20	PN16	PRETAP CONNECTOR	DCSST1520
DN150	150 X 20	PN16	PRETAP CONNECTOR	DCSST1520L

Clover Pipelines Pty Ltd
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Revision 1



DUCTILE IRON FITTINGS

Ductile Iron Fittings for water & Waste Water Applications

Clover DUCTILE IRON FITTINGS for use in water and waste water applications

Product Range



Nominal Size (DN)	Size	Nominal Pressure	Description	Product Code
DN100	100 X 100 X 80	PN16	SOCKET - FLANGE TEE	DTSF1008
DN100	100 X 100 X 100	PN16	SOCKET - FLANGE TEE	DTSF1010
DN150	150 X 150 X 100	PN16	SOCKET - FLANGE TEE	DTSF1510
DN150	150 X 150 X 80	PN16	SOCKET - FLANGE TEE	DTSF1508



Nominal Size (DN)	Size	Nominal Pressure	Description	Product Code
DN100	100 X 11.25	PN16	SOCKET BEND	DBSS1011
DN100	100 X 22.5	PN16	SOCKET BEND	DBSS1022
DN100	100 X 45	PN16	SOCKET BEND	DBSS1045
DN100	100 X 90	PN16	SOCKET BEND	DBSS1090
DN150	150 X 11.25	PN16	SOCKET BEND	DBSS1511
DN150	150 X 22.5	PN16	SOCKET BEND	DBSS1522
DN150	150 X 45	PN16	SOCKET BEND	DBSS1545
DN150	150 X 90	PN16	SOCKET BEND	DBSS1590



Nominal Size (DN)	Size	Nominal Pressure	Description	Product Code
DN100	100	PN16	SOCKET CONNECTOR	DCSS100
DN100	100	PN16	SOCKET CONNECTOR	DCSS100L
DN150	150	PN16	SOCKET CONNECTOR	DCSS150
DN150	150	PN16	SOCKET CONNECTOR	DCSS150L



Nominal Size (DN)	Size	Nominal Pressure	Description	Product Code
DN100	100	PN16	SOCKET FLANGE CONNECTOR	DCSF100
DN150	150	PN16	SOCKET FLANGE CONNECTOR	DCSF150



Nominal Size (DN)	Size	Nominal Pressure	Description	Product Code
DN100	100 X 90	PN16	WASHOUT BEND	DBSF1090

SUPPLIER CONTACTS

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