



# Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 2481</b>	15-Mar-2011	Number 9	Issue date 1-May-2018	30-Apr-2019

## Product designation

**Orrfire®, SMARTCOTE®, 250 mm / 300 mm / 350mm fire sprinkler and hydrant pipe**  
(Refer to the Schedule/enclosures for further specified details)

## Agent/distributor

Orrcon Steel  
121 Evans Road, SALISBURY, QLD, AUSTRALIA, 4107

## Registrant

Orrcon Steel  
121 Evans Road, SALISBURY, QLD, AUSTRALIA, 4107

### Producer

Orrcon Steel  
121 Evans Road, SALISBURY, QLD, AUSTRALIA, 4107

## Conformance criteria and evaluation

The Orrfire®, SMARTCOTE®, 250 mm / 300 mm / 350mm fire sprinkler and hydrant pipe has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 4118.2.1-1995, 'Fire sprinkler systems - Piping - General' incl. Amdt 1 (22 June 2005).
2. Australian Standard AS 2419.1-2005, 'Fire hydrant installations - System design, installation and commissioning'.
3. Australian Standard AS 4728-2005, 'Electric resistance welded steel pipe for pressure purposes' incl. Amdt 1 (23 February 2007).
4. Australian/New Zealand Standard AS/NZS 4792:2006, 'Hot-dip galvanized (zinc) coatings on ferrous hollow sections, applied by a continuous or a specialized process'.
5. ASTM Standard A53 / A53M - 10, 'Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless'.

## Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

(Limitations/conditions of conformance continue)

Issued by

David Whittaker  
Executive Officer – ActivFire Scheme



This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

# Schedule to Certificate of Conformity

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Specified limitations/conditions, determined from the evaluation for conformity, include the following.

- i. Fire protection system designers, and authorities having jurisdiction, must confirm that the codes or standards used for the system design adequately address the hydraulic characteristics of this product. Full hydraulic analysis is an approved and recommended method of determining that system performance will meet design requirements.
- ii. Pipes shall not be used below ground, unless externally wrapped or coated for additional corrosion protection in accordance with the relevant standard.

## Producer's description

The production and physical characteristics of Orrfire<sup>®</sup>, SMARTCOTE<sup>®</sup>, 250 mm / 300 mm / 350mm fire sprinkler and hydrant pipe is manufactured with wall thicknesses that meet or exceed those specified in AS 4118.2.1 – 1995 and ASTM A 53/A 53 M- 05.

All sizes are suitable for use with roll-grooved type couplings and fittings of suitable diameter and groove profile. Additionally they are suitable for joining by shouldered-end coupling, or by butt welding

## Technical specification

The following details are a representative extract of the technical specification for the Orrfire<sup>®</sup>, SMARTCOTE<sup>®</sup>, 250 mm / 300 mm / 350mm fire sprinkler and hydrant pipe and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Nominal size DN	Nominal outside diameter	Nominal wall thickness	Mass per metre
250 mm	273.1 mm	4.8 mm	31.76 kg/m
300 mm	323.9 mm	4.8 mm	37.77 kg/m
350 mm	355.6 mm	4.8 mm	41.53 kg/m

Notes:

1. The above mass values have been calculated based on a steel density of 7850 kg / m<sup>3</sup> and assume a pipe of the exact dimensions listed above.
2. Wall thickness; the figures are "nominal" unless otherwise noted as minimum (min).

### General

Orrfire<sup>®</sup>, SMARTCOTE<sup>®</sup>, 250 mm / 300 mm / 350mm fire sprinkler and hydrant pipe is manufactured by using an electric resistance method in accordance with the requirements of AS 4118 Part 2.1

### Galvanising

Hot-dip galvanising coating conforms with AS/NZS 4792, coating class HDG300, and has a minimum average coating mass of 300 g/m<sup>2</sup> of pipe surface.

### Steel properties, as per AS/NZS 1163 Steel Grade C350L0

Yield strength (MPa) min	350
Ultimate tensile strength (MPa) min	430
Minimum elongation (%) where gauge length = 5.65*(S <sub>0</sub> ) <sup>0.5</sup>	20