

1. SCOPE

This schedule specifies requirements for the SPR™ RO lining system as manufactured by Sekisui Rib Loc Australia PTY Ltd. It is applicable to the renovation of both fully and partially deteriorated circular gravity sewers with diameters 800 mm to 1800 mm.

It is not applicable to:

- Watertightness of end seals; or
- Reconnection of laterals.

2. PRODUCT DESCRIPTION

2.1 Introduction

SPR™ RO is a spirally wound pipe lining system.

The system comprises a continuous profiled strip of PVC-U plastic. The profiled strip is formed into a tubular liner configuration by a winding machine that travels along the host pipe, interlocking the strip into a tubular configuration against the host pipe as it goes.

2.2 Relevant Standards

Performance: the following standards were identified:

- ASTM F1741-18⁽¹⁾
- BS EN ISO 11296-7:2019⁽²⁾
- WIS 4-35-01⁽³⁾

Materials: Materials used shall comply with:

- ASTM D1784-20⁽⁴⁾
- AS/NZS 1595:1998⁽⁵⁾

2.3 Approval History

The SPR™ RO lining system has been awarded the following WRC Approved™ certification:

- PT/311/0710.
- PT/375/0715.

3. REQUIREMENTS AND TESTING

3.1 Requirements

Materials requirements – PVC-U shall be manufactured to cell classification 13354 in accordance with ASTM D1784-20.

Steel shall be CA3SN-G to AS/NZS 1595.

Dimensions – Profiled strip shall be manufactured in accordance with ASTM F1741-18.

Mechanical resistance – Mechanical resistance shall be verified by type testing and calculation in accordance with ASTM F1741-18 for fully or partially deteriorated pipes.

Alternatively, as the long-term leaktightness of the helical interlock has been demonstrated the SPR™ RO lining system can be designed in accordance with the WRC Sewerage Rehabilitation Manual (SRM) Type II structural design.

3.2 Type Testing

Ring stiffness shall be not less than 0.5 MPa in accordance with BS EN ISO 11296-7: 2019.

Creep ratio shall be not greater than 2.5 in accordance with BS EN ISO 11296-7: 2019.

Serviceability – The SPR™ RO liner shall comply with the requirements for jetting resistance in accordance with WIS 4-35-01.

Assessment Schedule for the SPR™ RO lining system for gravity pipe renovation as manufactured by Sekisui Rib Loc Australia PTY Ltd.



Independent certification of your products & services

Watertightness – The SPR™ RO liner shall comply with the internal pressure and vacuum requirements of ASTM F1741-18.

The long-term leaktightness of the helical interlock shall be demonstrated in accordance with WRC requirements.

Appearance – The internal surface of the liner shall be smooth, clean, and free from scoring, cavities and other surface defects.

3.3 Manufacture

To ensure the quality and performance of the SPR™ RO lining system, the manufacturing process shall include appropriate systems for:

- Verification that component materials received are to specification.
- Handling and storage of all component materials and finished units.
- Records of dimensional verification and seam profile configuration.
- Detailed drawings for profiles.
- Inspection and maintenance of extrusion line.
- QC records during extrusion.

The production of the SPR™ RO lining system and related Quality Control procedures shall comply with requirements to ensure the stated performance of the product is reliably achieved.

3.4 Installation

When installed in accordance with the installation documentation, the installation shall be practicable and suitable for conditions that could reasonably be expected on site.

4. APPROVAL

Sekisui Rib Loc Australia PTY Ltd. has been audited and has successfully met all the requirements stated within this assessment schedule for the SPR™ RO lining system.

Signed:

Valid until 31 October 2025

5. REFERENCES

1. ASTM F1741 - 18 Standard Practice for Installation of Machine Spiral Wound Poly (Vinyl Chloride) (PVC) Liner Pipe for Rehabilitation of Existing Sewers and Conduits.
2. BS EN ISO 11296-7:2019 Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks Part 7: Lining with spirally wound pipes.
3. WIS 4-35-01 Specification for thermoplastics structured wall pipes, joints and couplers with a smooth bore for gravity sewers for the size range 150-900 inclusive. Second edition October 2008.
4. ASTM D1784 - 20 Standard Classification System and Basis for Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
5. AS/NZS 1595:1998 (R2016) Cold-rolled, unalloyed, steel sheet and strip.
6. SPR™ RO lining system installation manual.