PT/558/0725-AS (July 2025)

Assessment Schedule for the SPR®PE / RIBLINE® lining system for gravity pipe renovation as manufactured by SEKISUI Rib Loc Australia Pty Ltd.

independent certification of your products & services

1. SCOPE

This schedule specifies the requirements for the SPR®PE technology, incorporating RIBLINE® spirally wound system by RIB LOC®, as manufactured by SEKISUI Rib Loc Australia Pty Ltd.

It is applicable to the renovation of both fully and partially deteriorated circular gravity pipes with diameters 900 mm to 3000 mm.

This schedule does not cover:

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

2. PRODUCT DESCRIPTION

2.1 Introduction

The SPR®PE / RIBLINE® lining system is a spirally wound pipe lining system, the system comprises:

- a continuous strip of steel-reinforced profiled HDPE plastic (profiles 112-20PE, 112-30PE and 112-40PE) that is supplied in a variety of different profiles depending on the diameter of pipe to be rehabilitated.

The profiled strip is fed into the gravity pipe using a machine sited in the insertion chamber. The machine winds the strip into a tubular configuration and welds the edges of the profile together. The liner is pushed along the host pipe to the target chamber as it is wound.

The annulus between the liner and the host pipe is grouted.

2.2 Applicable standards

Performance: The following standards were identified:

- ASTM F1741-25(1).
- ASTM F1697-24(2).
- AS/NZS 1595(3).
- BS EN ISO 11296-7:2019(4).
- WIS 4-35-01(5).

Materials: Materials used shall comply with:

- ASTM D3350-24(6).

2.3 Approval History

The SPR®PE / RIBLINE® lining system has been awarded the following WRc Approved® certification:

- PT/295/0710.
- PT/373/0715.
- PT/463/0720.

This is the third re-approval of the SPR®PE / RIBLINE® lining system.

3. REQUIREMENTS AND TESTING

3.1 Requirements

Materials requirements: HDPE shall be manufactured to cell classification 335420C/E or higher in accordance with ASTM D3350-24.

Contact: WRc Ltd, Frankland Rd, Blagrove, Swindon SN5 8YF
Tel: 01793 865000 Web: www.wrcapproved.com, E-Mail: wrcapproved@wrcgroup.com

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

Dimensions: Profiled strip shall be manufactured in accordance with BS EN ISO 11296-7:2019.

Mechanical resistance: Mechanical resistance shall be verified by type testing and calculation in accordance with ASTM F1741-25 for fully or partially deteriorated pipes.

Alternatively, the SPR®PE / RIBLINE® lining system can be designed in accordance with the WRc Sewerage Rehabilitation Manual(7) (SRM) Type II structural design.

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

3.2 Type Testing

Testing as stated in BS EN ISO 11296-7:2019 shall meet the following requirements:

- Ring stiffness shall be not less than 0.5 kPa.
- Creep ratio shall be not greater than 2.5.

Serviceability – The SPR®PE / RIBLINE® lining system shall comply with the requirements for jetting resistance in accordance with WIS 4-35-01.

Watertightness – The SPR®PE technology, incorporating RIBLINE® spirally wound system by RIB LOC®, shall comply with the internal pressure and vacuum requirements of ASTM F1697-24.

4. Manufacture

To ensure the quality and performance of the SPR®PE / RIBLINE® lining system, the manufacturing process shall include appropriate systems for the:

- Specification of component materials;
- Verification component materials received are to specification;
- Handling and storage of all component materials and finished units;
- Detailed drawing / schedule for profile manufacture;
- Manufacture / assembly of the SPR®PE / RIBLINE® lining system; and
- Fabrication and quality control of workmanship.

The production of the SPR®PE / RIBLINE® lining system and related quality control procedures shall comply with requirements to ensure the stated performance of the product is reliably achieved.

5. Installation

When installed in accordance with the installation documentation(8), the SPR®PE technology, incorporating RIBLINE® spirally wound system by RIB LOC®, shall be reasonably expected to perform as described.

Contact: WRc Ltd, Frankland Rd, Blagrove, Swindon SN5 8YF
Tel: 01793 865000 Web: www.wrcapproved.com, E-Mail: wrcapproved@wrcgroup.com

6. APPROVAL

The SPR®PE technology, incorporating RIBLINE® spirally wound system by RIB LOC®, has been audited and successfully met all the requirements stated within this assessment schedule.

Signed:

Valid until 30 July 2030

7. REFERENCES

1. ASTM F1741 - 25 Standard Practice for Installation of Machine Spiral Wound Poly (Vinyl Chloride) (PVC) Liner Pipe for Rehabilitation of Existing Sewers and Conduits.

2. ASTM F1697-24 Standard Specification for Poly(Vinyl Chloride) (PVC) Profile Strip for Machine Spiral-Wound Liner Pipe Rehabilitation of Existing Sewers and Conduit.

3. AS/NZS 1595:1998 Cold-rolled, unalloyed, steel sheet and strip.

4. 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.

5. 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.

6. ASTM D3350-24 Standard Specification for Polyethylene Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.

7. WRc Sewerage Rehabilitation Manual, 7th Edition, 2025.

8. SPR®PE / RIBLINE® Installation Method Issue 1, 01/10/2025.

 WRc contract no. 3030257

Contact: WRc Ltd, Frankland Rd, Blagrove, Swindon SN5 8YF
Tel: 01793 865000 Web: www.wrcapproved.com, E-Mail: wrcapproved@wrcgroup.com