PT/483/1220 - AS (December 2020)

Assessment Schedule for the RSM PIPE AID Local Repair System as manufactured by RSM Lining Supplies Global Limited

Independent certification of your products & services

1. SCOPE

This schedule specifies requirements for the RSM Pipe Aid cured-in-place local repair system as supplied by RSM. It is applicable to renovation of straight sections of gravity drains and sewers with nominal diameters of 75mm, 100mm, 150mm or 225mm up to 5m deep.

It is applicable to repairs of lengths of 500mm and 1000mm in kit form and up to 1200mm in bulk.

2. PRODUCT DESCRIPTION

2.1 Introduction

The RSM Pipe Aid local repair system is an ambient-cure cured-in-place localised repair system which comprises a two-part silicate thermosetting resin and a glass fibre mat. The system is supplied with either a summer (s) or winter (w) resin depending on the season. The system is supplied either in kit or bulk form.

The repair kit for a specified pipe diameter comprises a pre-cut mat either 550mm or 1000mm in length, with factory measured volumes of the resin components in a twin compartment bag for the size of mat, and ancillary disposable items for installation.

In bulk form the mat is supplied to the required length and the installer is responsible for calculating the required volumes of each of the resin components for the size of mat.

The resin components are mixed and then combined with the mat on site by the installer in accordance with the installation instructions. The wetted mat is placed around an inflatable packer. The packer is positioned inside the pipe at the defect, the packer is then inflated compressing the mat against the host pipe. The patch repair is then allowed to cure. On completion of curing process, the packer is deflated and removed, the patch is then inspected.

2.2 Relevant Standards

Performance: the following relevant standard were identified for the Pipe Aid local repair system:

- WRc Drain Repair Book 4th edt.(1)

Materials:

- Resin components shall be in accordance with the manufacturer's specification.
- The mat shall be in accordance with the manufacturer's specification.

2.3 Approval History

The RSM Pipe Aid system first received WRc Approved certification in 2015:

- PT/370/1215.

3. TESTING AND REQUIREMENTS

3.1 Type Testing

The Pipe Aid system shall comply with the following test requirements:

When tested in accordance BS EN ISO 11296-4(2) the repair shall achieve the manufactures declared values for the characteristics listed in Table 1.

Table 1 – Material Characteristics

Characteristics	Declared
Short term flexural modulus	5100 MPa
Short -term stress at first break	128 MPa
Strain at first break	2.23%

External long term pressure resistance: When tested in accordance with Appendix D

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of The Drain Repair Book[1] and shall meet the infiltration requirements of CESWI 7th edition clause 7.8.2[3].

Serviceability:

When a section the patch repair is tested in accordance with Appendix B of WIS-4-35 01:2008[4], the repair shall meet the requirements of clause 3.3 of that specification.

The interface between the patch repair and the host pipe at one end of the cured repair is tested in accordance with the methodology of Appendix B of WIS 4-35-01:2008[4] at a pressure of 180 bar, there shall be no visible de-bonding of the patch repair from the host pipe.

The repair and the adjacent unrepaired pipe sections shall be continuous in accordance with BS EN 476:2011 Clause 6.4[5].

3.2 Manufacture

To ensure the quality and performance of the Pipe Aid system, the manufacturing process shall include appropriate systems for:

- Verification of component materials received are to specification.
- Handling and storage of all component materials and finished units.
- Records of the Pipe Aid system.
- Detailed drawings for the Pipe Aid system.
- Inspection and maintenance of the Pipe Aid system.

The production of the Pipe Aid system and related Quality Control procedures shall comply with requirements to ensure the stated performance of the product is reliably achieved.

3.3 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

The RSM Pipe Aid system has been audited and has successfully met all of the requirements stated within this assessment schedule.

Signed:

K A Adams

Date: 05 December 2020

5. REFERENCES

1. Drain Repair Book 4th edition (WRc, 2017).
2. BS EN ISO 11296 - 4:2018: Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks. Lining with cured-in-place pipes.
3. CESWI 7th edition, 2011
4. Wis 4-35-01:2008 Specification for Thermoplastics Structured Wall Pipes – Supplementary Test Requirements.
5. BS EN 476:2011: General requirements for components used in drains and sewers.
6. RSM Pipe Aid installation video example (internal ref. RSM_WRc Patching Video V2)

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