

1. SCOPE

This schedule specifies the requirements for the Camstopper® range of drain stoppers, manufactured by Norham (France) and Norham Plastics (UK), for the temporary stopping of flows from the end of domestic drains and small adoptable sewers made of clay or plastic in sizes between 90mm and 160mm.

The scope of this 2017 re-assessment is extended to include the Remote Installation Device (RID) and the CAM V product, a lockable version of the Camstopper®.

2. PRODUCT DESCRIPTION

2.1 Introduction

The Camstopper® comprises a base plate, top plate and lever moulded from glass-filled nylon 6, surrounded by an EDPM rubber seal.

The Camstopper® is positioned in the host pipe with the 'heel' of the stopper on the invert of the pipe which prevents the stopper from moving out of vertical alignment. The profile of the rubber seal is expanded by manually engaging the lever mechanism, thereby locking the stopper against the inner wall of the host pipe.

The RID is an extendable pole with a socket to fit the lever of the Camstopper® and a mechanism to facilitate the operation of the Camstopper® lever from outside the chamber.

The CamV lockable stopper has an alternative lever that is only installable and removable using a RID with a clip that engages with the locking lever.

2.2 Relevant Standards

The following relevant standards are identified:

- BS EN 1610: 1998⁽¹⁾
- BS EN 752: 2008⁽²⁾
- BS EN 681:2000⁽³⁾

2.3 Approval History

The Camstopper® Cam range has been WRc Approved™ since 2003. The first approval was registered to Advanced Sewer Products Ltd and renewed in 2012 when the business was acquired by the current manufacturer, Norham.

- PT/266/0903
- PT/326/0312

3. REQUIREMENTS AND TESTING

3.1 Product Design

There are no product standards for drain stoppers. BS EN 1610: 1998⁽¹⁾ and BS EN 752:2008⁽²⁾ are the leading standards for the design and construction of gravity sewerage and drainage pipes. This assessment schedule has taken into account the requirements of these standards, together with those of the relevant pipe standards and the performance claims of the product.

3.2 Type Testing

Dimensions and tolerances

The Camstopper® Cam and CAMV® ranges will be assessed on the diameters specified below, which are considered representative of the product diameter range:

- CAM100 (96mm to 103mm)
- CAM150 (147mm to 153mm).

Materials specifications

Materials shall meet the requirements of:

- BS EN 752:1998
- BS EN 681:2000

General requirements

The Camstopper® and CAMV® shall resist structural damage if dropped a maximum of 5 metres to a concrete surface.

The leak tightness of the Camstopper® and CAMV® shall maintain a pressure of 0.5 bar for a period of 30 minutes without movement or failure when installed in rigid and flexible pipes and when tested in accordance with BS EN 1610:1998.

Tests shall be carried out on the new condition surfaces of each pipe material for which the product is designed.

3.3 Manufacture

To ensure the quality and performance of the Camstopper®, CAMV® and RID range, 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.
- Fabrication and inspection of fabricated component parts.
- Inspection and maintenance of moulds.
- Documentation and records for production quality control.

The production of the Camstopper®, CAMV® and RID poles and related quality control procedures⁽⁴⁾ 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⁽⁵⁾, the installation shall be practicable and suitable for conditions that could reasonably be expected on site.

4. APPROVAL

The Camstopper®, CAMV® and RID pole range has been audited and has successfully met all of the requirements stated within this assessment schedule.

Signed:

5. REFERENCES

1. BS EN 1610 Construction and testing of drains and sewers:1998
2. BS EN 752 Drain and sewer systems outside buildings:2008
3. BS EN 681-2:2000 Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Thermoplastic elastomers
4. Norham – Norham Plastic Quality Control manual
5. Norham – Norham Plastic Installation instructions