



**Assessment of Flex-Seal Coupling Ltd's
Coupling for Weholite pipe - schedule**

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1. Scope

To assess performance of the flexible coupling manufactured by Flex-Seal Couplings Ltd for use with KWH Weholite pipe. [Note: These couplings are made specifically for use on the pipe and the approval does not apply to jointing any other pipes to themselves or to the Weholite pipe].

The flexible coupling is made of an elastomeric sleeve with stainless steel clamping and shear bands. The couplings are produced in the size range 450 mm – 2400 mm.

This assessment schedule replaces PT/35/1197-AS.

2. Assessment schedule

2.1 To assess the product against the performance requirements of WIS 4-41-01 with exceptions for size-related features as list below.

2.2 Witness selected testing of couplings in sizes representative of the product range (i.e. 450, 900, 1200, 1800 mm).

2.3 Audit installation instructions.

3. Review of properties

WIS 4-41-01 is the leading standard for flexible couplings for gravity sewerage and drainage pipes. It covers products up to 600 mm.

Deviations in the assessment from this WIS to take into account any size related factors are identified below. The following properties were deemed important ^(1 & 2).

Dimensions and tolerances to manufacturer's specification.

Material properties:

- Elastomer type⁽³⁾ and hardness;
- Stainless steel (Grade 316);
- Tolerances.

Properties of coupler:

- strength of clamp band (tested to 25 N.m, recommended torque 20 N.m);
- weld test at 6000N (*no longer applies to T-bolt design*);
- watertightness for flexible-flexible pipes [Note: the test regime for connecting flexible-flexible pipes is not specifically listed in the WIS and was carried out as table below].

Test	Clause	Conditions	Size range (mm)
Vacuum/deflection	C.4	-0.3 bar : 2°	Up to 1050
		-0.3 bar: 0.8°	Up to 2400
Pressure/deflection	C.6	1 bar: 2°	Up to 1050
		0.5 bar: 0.8°	Up to 2400
Vacuum/distortion	C.7	-0.3 bar: 5%	Up to 2400
Pressure/distortion	C.8	1 bar: 5%	Up to 1050
Note: All testing was carried out in accordance with the methods in BS EN 1277			

4. Review of procedures



In addition to the performance of pipes, the following items were checked.

Design and installation procedures and available guidance to users.

Coupler installation procedures (written), including:

- pipe preparation;
- fitting instructions;
- testing of fitted coupling.

5. Reference documents

1. WIS 4-41-01: Water Industry Specification for flexible couplings for gravity sewerage and drainage pipes.
2. BS EN 1277: British Standard for plastic piping systems - Thermoplastics piping systems for buried non-pressure applications - Test methods for leaktightness of elastomeric sealing ring type joints.
3. BS EN 681-1: British Standard Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber