



Guidance on the Application Requirements for WRAS Product Approval

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Section 1: Performance Criteria for Mechanical Testing

Requirements for Water Fittings

- 1) Following the UK exit of the European Union (31/12/2020), the EU Exit amendment: Floods and Water (amendments etc) (EU Exit) Regulations 2019 (SI 2019 no. 558) removed EU mechanisms for demonstrating quality & standard in England / Wales Water Regulations.
- 2) Consequently, The Water Supply (Water Fittings) Regulations 1999 requirements for water fittings in England and Wales (Regulation 4) are as follows:

4 (1) Every water fitting shall –

- a) be of an appropriate quality and standard; and*
- b) be suitable for the circumstances in which it is used.*

(2) For the purposes of this Regulation, a water fitting is of an appropriate standard only if-

- (a) sub paragraph (a) omitted due to revisions*
- (b) sub paragraph (b) omitted due to revisions*
- (c) it conforms to an appropriate British Standard or some other national specification of an ~~EEA~~ State which provides an equivalent level of protection and performance; or*
- (d) it conforms to a specification approved by the regulator.*

For Northern Ireland, the 2009 no. 255 WATER AND SEWERAGE SERVICES The Water Supply (Water Fittings) Regulations (Northern Ireland) 2009 and for Scotland the Water supply (water fittings) (Scotland) byelaws 2014 remain unchanged. Thus for Scotland and Northern Ireland Regulation 4 (1) reads as follows:

4 (1) Every water fitting shall –

- c) be of an appropriate quality and standard; and*
- d) be suitable for the circumstances in which it is used.*

(3) For the purposes of this Regulation, a water fitting is of an appropriate standard only if-

- (a) it bears an appropriate CE marking in accordance with Regulation (EU) No 305/2011 of the European Parliament and of the Council laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC⁽²⁾;*
- (b) sub paragraph (b) omitted due to revisions*
- (c) it conforms to an appropriate British Standard or some other national specification of an EEA State which provides an equivalent level of protection and performance; or*
- (d) it conforms to a specification approved by the regulator.*

- 3) For a Water Regulations Approval Scheme (WRAS) approval, the following performance criteria are accepted for Regulation 4 (1) (a).

Regulators' Specification

- 4) The Regulators' Specification provides performance criteria for many products in the form of Test Code Sheets, which are available on the [WRAS Approvals website](#).

British Standards

- 5) Standards that have been assessed by WRAS as being appropriate are listed on the [WRAS website](#).

Harmonized Standards that require a product to bear a CE marking in accordance with Regulation (EU) No 305/2011

- 6) Harmonized Standards that require a product to bear an appropriate CE marking in accordance with Regulation (EU) No 305/2011 of the European Parliament and of the Council laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC⁽²⁾; and accepted by WRAS Approvals will be listed on the WRAS website. This is commonly known as the [Construction Products Regulations](#).
- 7) This is also acceptable as a route to demonstrate compliance for England and Wales if the Standard that the product is CE marked against is identified as designated standard.

⁽²⁾ OJ No L88, 4.4.2011, p5.

Other National Standards

- 8) Where a manufacturer has a product which has been assessed against the national standard of some other country, in order to minimise additional costs which would arise by requiring re-testing to UK criteria, WRAS Approvals will consider a comparison of the other national standard against the appropriate British Standard to assess whether it offers an equivalent level of protection and performance.
- 9) WRAS Approvals will accept test reports from recognised Test Laboratories for the testing undertaken against national standards which are identified as being appropriate and offering equivalent levels of protection and performance.
- 10) The cost of undertaking new comparisons of national standards against the UK Regulations will be met by the applicant. WRAS will maintain a publicly available list of which national standards have been assessed.

Recognition of Test Laboratories

- 11) Only test reports issued by test laboratories recognised by WRAS will be accepted in support of an application for WRAS Approval. Details on how laboratories can become recognised by WRAS can be found on the [website](#). The test laboratories that are currently recognised for mechanical and materials testing are also listed on the website.

Section 2: Application Process

Application File

- 12) The application file will include the elements listed in the Code of Practice (WRAS.Cust-402) and Application form. Including the following:
- a) A completed Application Form (F2) form
 - b) A complete schedule of materials
 - c) General assembly/overview drawings of the product
 - d) Technical drawings of the product and any backflow protection arrangements
 - e) Itemised schematics of the full water pathway.
 - f) Installation manuals where technical specifications are included
 - g) Mechanical Test Report
 - h) A draft description of the product provided by the recognised test laboratory to be used as the directory entry
 - i) A photograph of the product suitable for inclusion in the on-line Directory
 - j) Digital photograph(s) of the product markings suitable for inclusion in the on-line Directory. (Preferred digital format is jpeg)
 - k) Confirmation of age of test sample (s)
 - l) A dated declaration that the information provided is correct and that the applicant is committing to be bound to the WRAS Approvals terms and conditions.

Application Form

- 13) All applications for WRAS Approval must be submitted using the current version of the WRAS Application form ([F2](#)). When the application is presented for approval, the information provided must be current, with the application form having been completed no more than 12 months prior to the date of the scheduled approval meeting.

Schedule of Materials

- 14) All the component parts of a product which come into contact with water (that must be wholesome), in normal use or in fault conditions, must be listed in the schedule of materials in the application file:
- All safety features that may protect the supply from backflow must be detailed
 - All safety features that protect the user from excessive pressure or temperature must be listed in the schedule of materials in the application file.
- 15) Where there is uncertainty as to whether there is direct contact between wholesome water and materials or components, the matter should be brought to the attention of WRAS for clarification.
- 16) At the time the application is presented for approval, all the non-metallic components and materials in contact with water shall have a current WRAS material approval or a valid test report to BS 6920 This includes any flux, thread sealant tape, lubricant and grease that are used, all of which must be listed in the schedule of materials.
- 17) Other features that prevent waste in a primary heating circuit need to be listed on the schedule of materials but will not require BS 6920 testing if not in contact with wholesome water.
- 18) Material test reports must be no more than five years old at the date of the scheduled approval meeting. In addition, if it is more than two years old the test report must be accompanied by a declaration from the manufacturer that the material being currently manufactured has not been altered from that tested.
- 19) Some non-metallic materials have a WRAS approval based upon testing of a prepared sample of the formulated 'raw' material. These are listed in the WRAS [Approvals Directory](#) in sections which are headed as "Material Only" approvals. Non-metallic components which rely upon such approvals can only be accepted where it can be demonstrated that the manufacturing process of the component will not alter the materials properties. (A list of processes accepted by WRAS are listed in [Appendix A](#)). In other cases, a test report or WRAS approval for the manufactured component is required.

Schematics & Drawings

- 20) All applications must be supported by the detailed schematics and technical drawings listed above, which in addition to illustrating the arrangement of the product clearly show the water pathway. F2 form completion Guidance is available on the [website](#) this includes information about drawing requirements.

Use of alternative materials

- 21) Where an applicant identifies the use of alternative materials, mechanical testing of products including these variants shall only be required where they could have an impact on the endurance or pressure testing appropriate to that product. Satisfying this requirement can usually be achieved either by limited retesting or by ensuring that the sample range submitted includes representative examples of products incorporating the alternative material(s).
- 22) Where the number of alternatives results in many permutations WRAS Approvals should be contacted for clarification of what testing permutations would be representative of all materials.

Marking requirements

- 23) It is a condition of every WRAS approval that all products are adequately and consistently marked for easy identification. Applicants are encouraged to ensure that these markings not only enable recognition but also make it possible to distinguish between models and differentiate between different product ranges.
- 24) The mark, label or identification plate shall include reference to the manufacturer, factor, or any other information necessary to enable recognition of the product. This marking shall be located where it will be accessible, as far as is practicable, after installation. For further information refer to Test Code Sheet [6001.1](#) of the Regulators' Specification. Where a company logo or mark is used an example should be submitted as part of the application.
- 25) WRAS Approvals has a number of specific requirements for certain products and has produced guidance for areas of ambiguity in the regulations. Please visit [\(WRAS clarification documents\)](#)

Prototype Products

- 26) WRAS approval will only be granted to production samples. A prototype or preproduction sample may only be submitted for 'approval in principle' and may require retesting when submitted as a production sample. For the definition of production sample see WRAS Approval Scheme Terms & definitions ([WRAS.Gen-601](#)).

Section 3: Mechanical Tests

Validity Period

- 27) Mechanical testing of products must have been completed no more than two years before the date when the report is presented for assessment. The date the mechanical testing is deemed to be completed is the date the test report was issued by the recognised test laboratory.

Regulators' Specification Test Code Sheets

- 28) The matrix is guidance only and suggests test code sheets (TCS) which may be likely to be applicable to a generic/typical fitting or assembly in order to obtain a WRAS Approval. WRAS retains absolute discretion to decide what it considers to be a generic/typical fitting or assembly in this regard. In addition, a product may contain additional components, which may affect test requirements (and which, therefore, are not reflected in the guidance). For the avoidance of doubt, this may mean that additional tests from the Regulator Specification TCS to those listed in the matrix may be required for the purposes of the WRAS Approvals scheme. You should seek advice from your test laboratory about the test code sheets and any tests that apply to your product.
- 29) The WRAS Approvals test code sheet guidance matrix is subject to change. Where changes to the matrix are proposed, WRAS approvals will publish the change at its discretion. If you have a query about the matrix or believe that the matrix should be updated, please contact the WRAS Approvals team.
- 30) WRAS accepts no liability for loss of goodwill, business, revenue or profits, anticipated savings or wasted expenditure (whether reasonably foreseeable or not) or indirect or consequential loss arising from or in connection with the matrix.
- 31) On the basis the matrix is guidance for the purpose of the WRAS Approvals scheme, no reliance should be placed on the matrix for the purposes of evidencing that a product complies with the requirements of the water fittings regulations, or for the purposes of carrying out testing in connection with a WRAS Approvals application. We further refer you to the limitations of our liability in connection with the WRAS approvals scheme.

Selection of Individual Test Criteria

- 32) All test laboratories must adhere to the testing indicated for the specific product type or category in the [TCS matrix](#). In the case of non-standard products, clarification of the testing required should be sought from WRAS in advance.
- 33) Where a product is an assembly of components, the testing must satisfy the TCS requirements for all individual constituent components. This testing must be applied as indicated in the matrix for that type of product.
- 34) In cases where there are several sub-divisions relating to different types of products within a Test Code Sheet the choice of test must be noted.

Testing of Product Ranges

- 35) Refer to the sampling matrix for product sampling available on the WRAS website ([Appendix C](#)).

Test conditions

- 36) The scope of an approval is restricted to those conditions applied during testing, consequently, should an applicant wish to obtain approval for use with a variety of pipe materials at a range of maximum working pressures and temperatures testing must accommodate these variables, provided it is permitted by the test code sheet or standard.
- 37) Where a product is intended to be used with other materials or components which are no longer manufactured or available, (obsolete materials), please contact the WRAS approvals team for further information regarding its testing.

Testing of fittings for use with pipe

- 38) Where approval is sought for fittings to be used with a generic pipe material such as copper or polyethylene the pipe used for testing must conform to the current British Standard or equivalent for that pipe material.

On Site Assessments and Site Visits

- 39) Testing of products outside the recognised test laboratory premises will only be permissible where the laboratory has remote testing in its quality management system and this testing process has been accepted as part of the WRAS Approvals laboratory recognition policy. Test reports from on-site assessments during site visits will only be acceptable when it would be impracticable for testing to be performed in a recognised laboratory.
- 40) Such circumstance include, but are not limited to, where:
- Due to its size or weight a fitting cannot reasonably be transported to an accredited test laboratory,
 - There were no adequate test facilities for the fittings in any suitably recognised laboratory,
 - By reason of its unique character, the fitting could only be tested on site, for example the inlet air gap in a very large sectional cistern,
 - If one item in the range is capable of being tested in a recognised laboratory, it should be so assessed and be available for inspection during the approval process,
- 41) Wherever the testing is performed, the correct number and type of samples within the product range must be assessed in accordance with the requirements for that product.
- 42) If there is any doubt about the necessity for an on-site assessment, it is recommended that the recognised test laboratory check with the WRAS Approvals team in advance of the site visit to confirm that product testing by the proposed site visit will be acceptable to WRAS.
- 43) In all cases where site testing is permitted, the test criteria to be used for assessing a given fitting are the same as those which would be used at a recognised test laboratory premises.

- 44) Where testing is carried out onsite it shall be undertaken to a standard of quality assurance no less than that which would apply had it been performed at the recognised test laboratory.

Experience and Accreditation for Site Visits

- 45) The test engineer who is undertaking or witnessing on-site testing must have been authorised for undertaking this activity. They also must have been trained in, and have experience of the relevant tests, gained in an organisation having accreditation under ISO17025 for those tests. At the time of each test the test engineer must be employed by an organisation which is currently accredited to ISO 17025 for the relevant test.

Photographic Evidence from Site Visits

- 46) All site visit reports must be accompanied by video and/or photographic images of sufficient quality to demonstrate:
- An overview of each test setup, including any ancillary equipment related to the tests being conducted.
 - Any significant features of the product.
 - Images of the fitting(s) being tested.
 - Images of the markings on fittings.
 - Detailed photographs of all the calibration equipment used showing all identification numbers and serial numbers where applicable.
- 47) WRAS Approvals will not accept photographs that are blurred or fail to show sufficient detail of the feature being photographed.

Documentary Evidence from Site Visit

- 48) Regardless of who provides the test equipment for site visits, the calibration of test equipment used must be no less stringent than that employed for testing at the recognised laboratory.
- 49) The testing must have been performed within the current period of calibration for the relevant equipment. The application for approval must be accompanied by evidence of accredited calibration certificates for all the relevant test equipment used.
- 50) Where original documents are written in a language other than English, a copy of the original must be accompanied by a translation into English, signed by the person who has translated it as being an accurate translation.

Products Manufactured or Assembled at More than One Site

- 51) WRAS Approval may be granted to products that are assembled or manufactured at more than one site. This will require evidence and a formal declaration by the manufacturer confirming that the same product specifications, processes and quality assurance systems are in place at all sites.
- 52) Manufacturing sites and inclusion of sites covered within the manufacture's quality management scope should also be considered when selecting samples for testing. Contact WRAS to discuss or confirm requirements if these deviate from Appendix C.
- 53) A single approval number will be issued to include products produced at all identified sites.

Section 4: Testing Failure

Failure during testing

- 54) Should a product undergoing mechanical testing fail to satisfy a requirement of an individual test code sheet, then a record of the failure must be made in the test report or be attached to the final report and a new sample requested.
- 55) Complete retesting is then required unless it can be shown that replacement of the failed component or product would not affect the performance of other tests already carried out on the sample which failed.
- 56) In all cases, an explanation of the cause of failure should be provided. Additional information may be requested.
- 57) Approval is limited to models that fall within a range of acceptable test results. If the middle sample from a selection of smallest, medium and large models, fails a test only the smallest and largest models will be granted an approval. The whole range will not be covered until a pass result is obtained for the mid sample.
- 58) Test laboratories are advised to refer to the WRAS Approvals team at the time of the failure in cases where the correct course of action is at all uncertain.

Second failure during testing

- 59) Should a replacement sample subsequently fail the same test then it is deemed to be an outright failure and must be reported as such to WRAS Approvals. If the replacement fails a different test it is considered to be a first failure and treated as a failure during testing.

Modified replacement samples

- 60) If a product fails to satisfy the requirements of an individual test code sheet and is then modified, the applicant must provide a declaration detailing the nature and full extent of all modifications.
- 61) In such cases the status of any earlier testing should be clarified with the WRAS Approvals team. Where the modification is likely to influence the performance in tests already carried out, these tests will have to be repeated.
- 62) Where a modified product is re-tested it is only deemed to be an outright failure if two failures are recorded for the same test.

Failure of samples representing a product range

- 63) When a number of samples are submitted as a representative of a product range, the failure of one sample to satisfy the requirements of an individual test code sheet would be treated as a first failure of that particular model/size. An outright failure would only occur if the replacement example failed the same test.
- 64) The significance of this outright failure on the approval of the whole range would depend upon where the failed sample fitted in that range e.g. if testing five sizes of fitting and the failure was of the smallest fitting, the remaining items in the range could be approved if they all passed

their tests. Failure of a sample in the middle of a range of samples could result either in approval of a reduced range (or ranges) or approval of individual sizes only, depending upon the circumstances. A note to the effect that the approval covers certain models/sizes only may be included in any subsequent listing.

- 65) Failures in these circumstances must be reported to WRAS Approvals.
- 66) Test laboratories should refer to WRAS Approvals before recommending approval of items or ranges if there is any uncertainty in these circumstances.

Exceptions to these requirements

- 67) Taps with diverters and/or swivel mechanisms:

If the headwork, the diverter or the swivel mechanism fails endurance testing only the item that has failed (headworks, diverter, or swivel) would require retesting. All other results would remain valid.

- 68) Pipes & fittings: thermal cycling endurance testing:

During the first 200 cycles, where there has been a failure at the pipe/fitting interface, any number of fittings can be replaced, and testing restarted from the beginning. This will not be considered as a failure and therefore does not require recording. Any failure of the pipe itself or the body of the fitting is deemed to be an outright failure and must be reported to WRAS Approvals.

After 200 cycles have been successfully completed if there is subsequently a single failure (per size) at the pipe/fitting interface, then that fitting can be replaced and the endurance testing can resume from where it was suspended. This event must however be recorded in the test report. If there is more than one failure (per size or type of fitting) at the pipe/fitting interface then testing is deemed to be an outright failure and must be reported to WRAS Approvals as such. Any failure of the pipe itself or the body of the fitting is deemed to be an outright failure and must be reported to WRAS Approvals.

Failure of early audits

- 69) The failure of a product submitted for early audit will result in the existing approval being reviewed and may result in its approval being suspended or withdrawn and removed from the directory. WRAS retains the right to make public any withdrawals of approvals.

Section 5: Approval

Validity of WRAS Product Approvals

- 70) WRAS approvals are valid for up to five years unless suspended or withdrawn. All current WRAS approved products are listed in the WRAS Approvals Directory.
- 71) To retain a product approval, re-assessment in the form of full re-testing will be required every five years.
- 72) Only those products identified and listed on an approval under the heading 'Model' are covered by the scope of the approval.
- 73) The WRAS Approval certificate is sometimes requested as evidence of compliance. However, as approvals can be modified, a check of the WRAS Approvals directory is the only reliable way to verify the validity of an approval.

Installation Requirement and Note (IRNs)

- 74) Installation requirements and notes detail the installation and other requirements that apply to products as a condition of their WRAS fittings approval and are identified both in the directory listing and the approval documentation of an approval. An approval will only be valid if the requirements of the IRN are followed.
- 75) Such conditions are a requirement of the WRAS Approvals scheme imposed as part of the certification process; installing water fittings in accordance with such requirements does not guarantee compliance with the water fittings regulations. For this reason, WRAS cannot guarantee that enforcement action will not be taken by water companies under the water fittings regulations, or that the courts will hold that your product is compliant in this regard even where an installation and requirement note is adhered to.
- 76) WRAS, accordingly, accepts no liability for loss of goodwill, business, revenue or profits, anticipated savings or wasted expenditure (whether reasonably foreseeable or not) or indirect or consequential loss arising from or in connection with the WRAS installation and requirement notes.
- 77) No reliance should be placed on an IRN as evidence that a product complies with the requirements of the water fittings regulations. We further refer you to the limitations of our liability in connection with the WRAS Approvals scheme.

Deferred Approvals

- 78) If the WRAS Approval decision maker agrees and providing that the reasons for deferral are not related to the schedule of materials, then the information provided in the application file of a deferred application remains valid for up to six months following its deferral.

Approval Documents

- 79) WRAS will issue the approval documents within ten working days of a fitting gaining approval. This includes a certificate. Additional certificates can be issued to the approval holder; however, an administration charge will be made.

Directory Entries

- 80) Duplicate directory entries of the same model of products are not permitted.
- 81) All recently approved WRAS products will be added to the on-line Approvals Directory within ten working days of approval being granted.
- 82) All expired approvals will be automatically removed from public view on the WRAS website on the date that they expire.

Modification to a WRAS Approved Product

- 83) It is a condition of WRAS product approvals that no modification to the approved fitting or assembly, including changes to materials of construction, be made without first notifying WRAS. This must be done by submitting full details of the proposed changes and if required samples for testing and reassessment. Failure to comply with this condition will invalidate an approval.

Alterations and Additions to an Existing Approval

- 84) All requests for alterations or addition to a current approval should be made directly to the Scheme. In the case of additions/alterations to an existing approval only WRAS Approval decision makers, can authorise the change to a WRAS approval.
- 85) Additions to an existing approval without additional testing of the product will only be permitted where the application is submitted with a completed F2, Schedule of Materials, drawings and:
 - a) the products are identical, in that they are manufactured using the same components, have identical water pathways and any difference is purely cosmetic, and/or
 - b) the addition falls within the size range of the original testing. If it falls outside the existing approved product size range, the additional product will require testing, and
 - c) evidence of the markings to be used to identify the products has been received, and
 - d) installation instructions and any other manuals, where available, have been supplied, and
 - e) the approval holder is aware of any restrictions or limitations imposed on this approval and has agreed to the current terms and conditions of approval.

Restrictions to Additions

- 86) There are no restrictions to the number of revisions that can be made to an approval provided that the conditions of the scheme are satisfied.
- 87) Revisions to an existing approval can be made at any time during the lifetime of a valid approval.

Renewal of Approvals

- 88) If an approval holder is seeking a re-approval they are responsible for ensuring applications and testing are performed and submitted with sufficient time for the application to be assessed. The approval holder is responsible for managing applications for re-approval in the period before existing approvals expire.

- 89) Any renewal application made during the last nine months of the original approval can run consecutively 'providing that the newly tested product is identical to the previously approved'

Secondary Approvals

- 90) Approval holders may request a secondary approval where a product is rebranded. These requests will be considered upon receipt of a completed F3 form and provision of a samples requested by WRAS following a review of the application. WRAS Approvals will review the information provided to verify:
- a) the products are identical, in that they are manufactured using the same components, have identical water pathways and any difference is purely cosmetic,
 - b) Models that are not included in the Primary Approval will not be accepted for a Secondary Approval unless they are added to the Primary Approval first.
 - c) the formal statement may be required from the manufacturer confirming that the products have been manufactured using the same components and have identical water pathways, and any difference is purely cosmetic,
 - d) evidence of the markings to be used to identify the products,
 - e) installation instructions and any other manuals, where available,
 - f) the approval holder is aware of any restrictions or limitations imposed on this approval and has agreed to these conditions.
- 91) The expiry date of a secondary approval will be the same as that of the original Primary Approval.