

Regulation 31 Approval Routes

Flow Diagram

Regulation 31 Approval

The Drinking Water Inspectorate (DWI) provides regulations for the protection of public health through safeguarding the quality of drinking water. The DWI Regulation 31 states that all materials and equipment that are used in the water treatment process, which will come into contact with water intended for supply, need to carry an approval that shows they have been tested and will not affect water quality. This applies to equipment throughout the process from the point at which the water is abstracted right up to the point at which the water crosses the customer boundary.

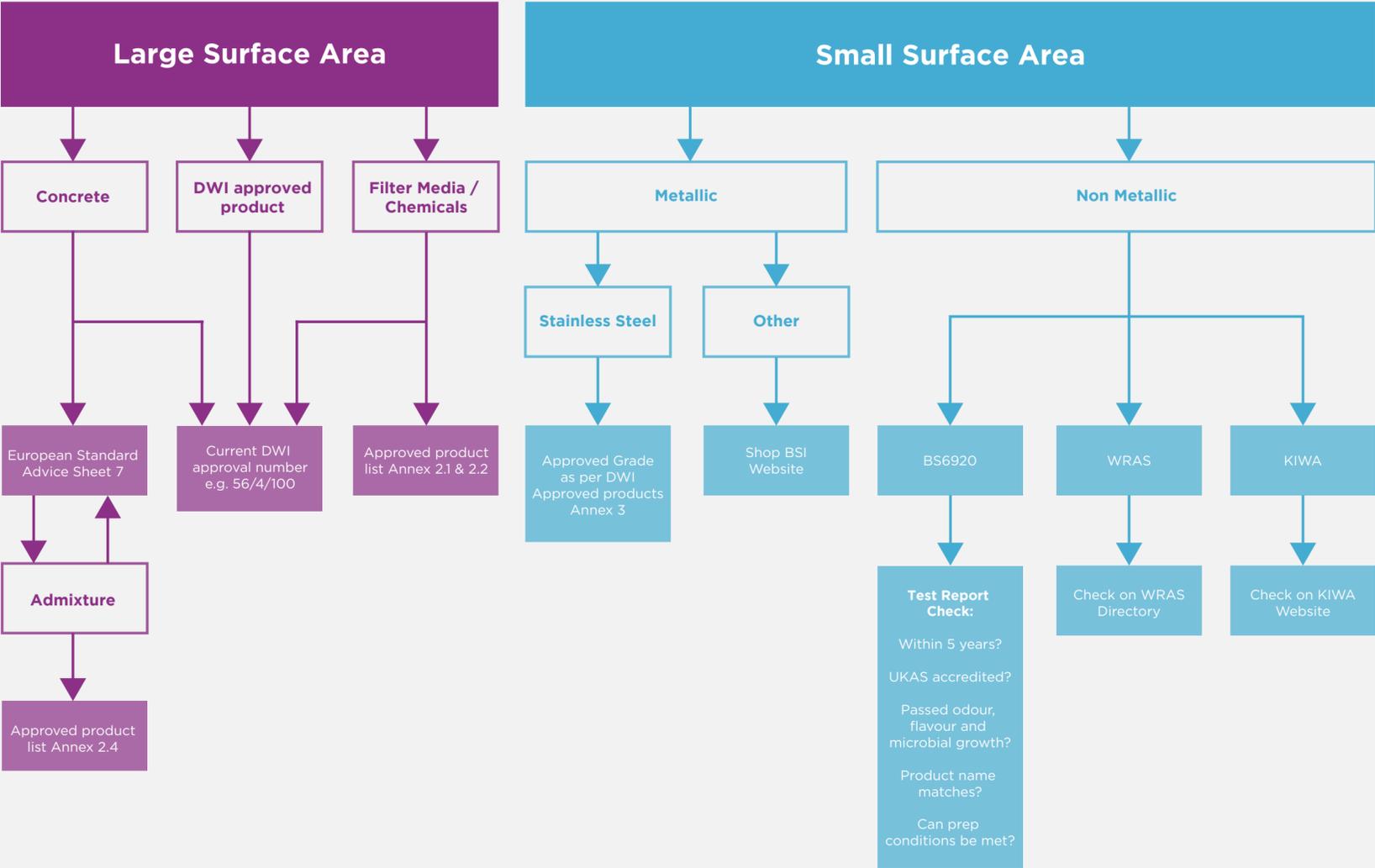
The types of approval required depends largely upon the amount of time that a piece of equipment or material is judged to be in contact with the water. Those pieces of equipment or materials that are deemed to have long contact times with the water are known as 'Large Surface Area' items and will have a more stringent approval than items deemed to have short contact times; these items are known as 'Small Surface Area' items.

The flow diagram on the right shows what approvals would be required for an item depending upon whether it is large or small surface area.

Surface Area Calculation

A calculation can be performed to work out a number (known as a 'C score'). This will determine if an item will be classified as a large or small surface area one for its intended use. Once you know this you will then be able to see what type of approval is required by the item in order to ensure it complies with Regulation 31. In general terms an item with a C score of greater than 100 is a Large Surface area item whilst an item with a C score of less than 100 is a Small Surface area item. How to work out the C score for both large and small surface items can be found on the DWI advice sheet 8, which can be found here:

- [DWI Advice Sheet 8](#)



Large Surface Areas

Items that have a large surface area approval can be used for both long contact and short contact times with water. There are a number of ways to identify whether the product has the correct approvals for long contact time. The Products will either have a DWI number (as listed on the main DWI Approved Products List), a European standard listed on DWI Advice Sheet 7 (for Concretes only), or be listed on DWI approved product list Annex 2 (for filter medias and chemicals only). In the case of concrete admixtures they will be listed on the 4MS Common Approach Admixture Positive List, Part 1. Links to all of these can be found below:

- [DWI Full Approved Products List](#)
- [DWI Advice Sheet 7 for Concretes](#)
- [DWI Annex 2](#)
- [4MS Common Approach Admixture Positive List](#)

If an item is approved in any of the above-mentioned ways, it will therefore meet the requirements set out by the DWI.

Small Surface Areas

Items that are small surface area can be used for short contact times with water only. The type of approval that they should have will depend upon whether the item is metallic or non-metallic.

Items that are metallic will be listed on DWI Annex 3C if they are a particular grade of stainless steel. Any other type of metal should have a valid BS:EN number (this can be checked on the British Standards Shop web site). Links to these can be found below:

- [DWI Annex 3](#)
- [BSI Shop Web Site](#)

Items that are non-metallic should have either a WRAS or KIWA number. These numbers will denote that the item or material has been approved and can be checked on the WRAS or KIWA web sites to authenticate that the approval is valid. If a non-metallic item does not have a WRAS or KIWA number its manufacturer may have had it tested against British Standard BS6920. These are laboratory tests carried out to show that the item will not produce a taste or odour in water and will not promote microbial growth. If this is the case then the manufacturer should be able to provide a BS6920 test report that can be checked to authenticate that the item complies with Regulation 31. Links to the WRAS and KIWA web site databases can be found below:

- [WRAS database](#)
- [KIWA database](#)

Please note

WRAS approvals are considered acceptable as evidence for compliance with Regulation 31 because part of the approval granting process includes checking that any item or material has a valid BS6920 test certificate. Therefore you can always be assured that if an item has a valid WRAS number it has also been BS6920 tested. This is also usually the case for KIWA approvals but is not always so. As such, when accepting KIWA approvals you should always check with KIWA and/or the manufacturer of the item that there is a valid BS6920 test associated with the KIWA approval. KIWA approvals should NOT be accepted without this associated BS6920 testing.

It is important to note that Approvals listed on the main DWI Approved Products list, the WRAS database, the KIWA database and those tested against British standard BS6920 are only valid for 5 years. Any approvals older than this no longer comply with Regulation 31; these types of approvals must be renewed every 5 years if an item's Regulation 31 compliance is to be maintained.

All items and materials that come into contact with water intended for supply must have one of the appropriate approvals listed above to comply with Regulation 31. Whole pieces of equipment may be approved or the individual component wetted parts (that come into contact with the water) may carry the approval. The approval must be appropriate (i.e. large or small depending upon the contact time with the water) and items must be used in accordance with any Instructions For Use (IFU) that is specified on an approval. Failure to follow the correct IFU would invalidate an item's approval and therefore its compliance with Regulation 31.

If manufacturers or suppliers wish to gain appropriate approvals for items or materials that they intend to use, in contact with drinking water intended for supply, then they should contact the appropriate approvals body in the first instance. Links to the main web pages of the relevant bodies are listed below:

- [DWI](#)
- [WRAS](#)
- [KIWA](#)