



Groundbreaker Systems Regulation 31 Compliance:

Regulation 31 of the UK's Water Supply (Water Quality) Regulations 2016 requires that any substance or product used in the treatment or distribution of drinking water must be approved and cannot adversely affect water quality. The Drinking Water Inspectorate (DWI) provide guidance on their website on this Regulation here: <https://www.dwi.gov.uk/drinking-water-products/what-is-reg31/>

Our NRv2 range of products fall under this Regulation.

We demonstrate compliance with Regulation 31 under 31(4)(b) – Small Surface Area Products. The DWI's advice sheet 8 provides full details of this approval route and can be found on their website here: [Small Surface Area Products\(regulation 31\(4\)\(b\)\)\(Advice Sheet 8\) - Drinking Water Inspectorate](#)

This advice sheet notes:

The Secretary of State is satisfied that substances or products either alone or in combination with any other substance or product in the water is unlikely to affect adversely the quality of the water supplied when:

- 1. that product offers only a small surface area contact ratio with the water; and*
- 2. that the material of which the product is made, despite the small surface area contact with the water, does not give rise to unintended odour/flavour to the water and does not support the growth of microbial organisms.*

When products meet these criteria they are permitted to be used under regulation 31(4)(b) of the Regulations.

There is an exemplar list of small surface area contact ratio product types on advice sheet 8, the closest to our NRv2 product is '*Water meters and associated fittings*' and demonstrates that we meet requirement (1).

For Requirement (2), our NRv2 range of products have been tested and certified under KUKReg4. This demonstrates that the fittings meet the requirements for products used with water supplied by the water undertaker, and checks all materials used within the fitting that they meet the appropriate standards and specifications. In addition, Our NRv2 product is manufactured from virgin acetal to ensure our product always remains compliant with Regulation 31.

It is our opinion that use of reworked and recycled materials is **NOT** viable in the manufacture of our NRv2 products for the following reasons:

- The DWI's position on the use of reworked and recycled materials is set out in FAQ10 which can be found on their website here:
<https://www.dwi.gov.uk/drinking-water-products/faqs-and-letters/faq10-the-use-of-reworked-recycled-materials/>
- This states:

The only reworked/recycled material acceptable for use in products in contact with water intended for human consumption under the relevant regulations shall meet ALL of the following requirements –

- *Be derived solely from the production line for the final product for which approval is sought, and*
- *Be subject to no change whatsoever (e.g. addition of any ingredients) and only subject to minimal processing, e.g. re-grinding, and*
- *Be under the full control of the manufacturer at all times, e.g. shall have been within the specific product manufacturing facilities at all time.*

The use of any other reworked/recycled material, including that from other production lines or sources, is not acceptable for consideration under Regulation 31 (4)(a).

- Due to the efficient design of our NRv2 flow valve housing, the only material that would meet the above criteria, would be the sprue (the channel through which the molten plastic is poured). Due to the number of products manufactured on a specific manufacturing run, this quantity would be very low in comparison to the quantity of virgin plastics used to create the NRv2 Product. This is estimated to be <0.5%.
- Due to the very small quantity of waste plastic produced in the manufacture of the NRv2 flow valve housing, the risks of using recycled polymer outweigh the benefits; especially as the tiny amount of waste produced would be ground up and used in other products such as NRv2's sister products (Groundbreaker and INSUduct) which don't come into contact with drinking water.
- Under Reg 31(4)(b) – through which we demonstrate compliance with Reg 31 – we need to ensure that despite the small surface area contact with the water, the product does not give rise to unintended odour/flavour to the water and does not support the growth of microbial organisms. To achieve this, we do **NOT** believe it is possible to use recycled polymers and guarantee compliance.

Our product is consistent and will always be the same as what has been tested and approved via our KUKReg4 approval.