



Benefits of Resin-Set DRS® Brushware over Standard Technology Manufacturing Methods

The food industry continually faces new challenges. The most important of these is how to control the contamination of products during the manufacturing process. This will include cleaning processes, cleaning techniques and the tools used to carry out these tasks.

Throughout the food manufacturing industry, the main concern when using brushware to clean production equipment, is the risk of filament loss. Should brush filaments contaminate the product, it can have far reaching implications for the business, that can be particularly expensive to address.

Hillbrush are the originators of the Dual Retention System (DRS®), which is proven to be one of the most effective retention technologies, and the most advanced from a manufacturing perspective. The first element in the DRS® method is to secure tufts in place with a stainless steel staple. This is then combined with epoxy resin setting to form a secure barrier. This process ensures that the resin permeates deep into the tuft area, sealing the void in the base of the tuft, preventing bacteria from penetrating the tuft hole.

The Resin-Set DRS® method is an EU community registered trademark and is a closely guarded process. Other manufacturers have appropriated the resin-set technique, but none have managed to achieve the same results as Hillbrush. The epoxy resin contains Silver-ion technology as standard, the Anti-Microbial properties of which, actively inhibit the growth of mould, mildew and bacteria, for unparalleled protection.

The active Anti-Microbial ingredient is also used in the production of the Anti-Microbial Hygienic Tools™ range. Giving ultimate protection, these products are manufactured using food grade polypropylene which includes the active Silver-ion ingredient, giving complete contamination control.

Hillbrush understands the challenges facing the food industry and controlling the risk of cross-contamination is crucial. During the rigorous cleaning of food manufacturing equipment, it's possible for part of the cleaning tool to accidentally enter the food product. To combat this challenge, Hillbrush introduced the world's first range of fully metal and x-ray detectable brushware, Total MDX Hygienic Tools®. Containing the Resin-Set DRS® filament retention method, combined with metal and x-ray detectable brush backs, filaments and resin, this unique range offers robust protection. Every component of the Total MDX range is food contact approved and provides a solution to one of food producers' biggest challenges.

Our competitors have tried several different methods of manufacture to remove the risk of contamination. Surface fused brushware is fundamentally flawed as it uses no secondary retention mechanism i.e. a staple, giving poor knot retention. Base fused brushware gives



Cross-section of Base Fused Brushware

marginally better knot retention, but creates voids in the base of the tufts where bacteria can harbour and grow. In addition, the knot pattern, which is controlled by the process, is not conducive with ease of particle brushing. Taking this consideration, Hillbrush argues that effectiveness of surface and based fused brushware technology is limited. With such tight regulations in the food manufacturing industry, brushware that utilises this technology is risk averse and could compromise other food safety measures.

In conclusion, Hillbrush employs stringent manufacturing methods and quality control procedures and is best placed to provide hygienic cleaning tools to combat the challenges facing food manufacturers. Resin-Set DRS® offers the most comprehensive protection in the battle against cross contamination and as this method is available with Anti-Microbial and metal and x-ray detectable properties, it provides the most comprehensive range to the end user.

