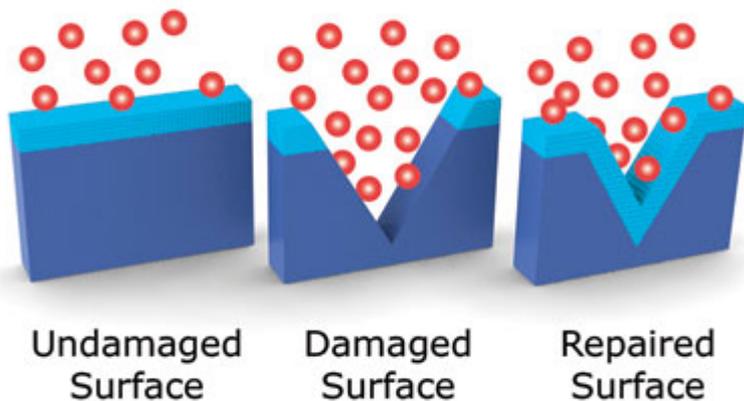


Keeping your Reputation Stainless



Managing any business can be a thankless task. There is a well-established principle that if you keep a customer happy for five years and then make one mistake, they will only remember you for the error. This in itself will not be disastrous for most industries. However, where food preparation is concerned, the stakes are infinitely higher. The fear of food poisoning plagues companies because the stigma and adverse publicity it brings can lead to irreversible damage.

There are two main types of food poisoning: infectious agent and toxic agent. The former relates to the consumption of harmful bacteria that have become attached to and contaminated food which subsequently infect the body. Toxic poisoning is the ingestion of harmful contaminants that are present within the food itself. Of the two, most reported cases stem from infectious agents, usually caused by poor hygiene standards. Although there have been improvements in hygiene standards over recent years, the threat of food-related illness still exists. While Salmonella and E. coli O157 outbreaks have been decreasing, incidences of Campylobacter and viral agents of gastroenteritis have remained relatively constant.

One often overlooked area in the catering industry is that of food preparation surfaces. Although cleaned and disinfected, wear and tear inevitably leaves many surfaces worn and scratched and therefore vulnerable to bacterial harboring. One option is to use antibacterial glass surfaces which minimize bacterial contamination by the inclusion of silver ions into the upper layers of the glass. However this process is costly and can only be used as surface cladding, necessitating the need to find an appropriate structure on which to install it. There is another equally suitable material which offers the same benefits as glass but which has the advantage of being stronger, more durable and suitable for the whole structure on which food needs to be prepared.

Stainless steel is probably the most common material used in food preparation environments. For the chemically minded, stainless steel is an iron based alloy which contains a minimum of 10.5 percent chromium and a maximum of 1.2

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Published on Chem.Info (<http://www.chem.info>)

percent carbon. The chromium content provides a protective layer of chromium oxide on the surface. However to be suitable for use in food preparation areas, a minimum chromium content of 18 percent is recommended.

The material used in stainless steel preparation surfaces is defined as austenitic steel classed as type 304 which states a chromium level of between 18 and 20 percent. This improves the corrosion resistance by increasing the stability of the passive film. Stainless steel also includes 8 to 10.5 percent nickel which further increases the corrosion characteristics as it assists the formation of the passive film during smelting. This film actually heals itself when damaged, enabling the surface to retain its hygienic properties. Tests using standard domestic dishwashers and commercial detergents have found that typically 97 percent of microorganisms are eliminated on stainless steel surfaces.

Stainless steel is probably the most common material used in food preparation environments. For the chemically minded, stainless steel is an iron based alloy which contains a minimum of 10.5 percent chromium and a maximum of 1.2 percent carbon. The chromium content provides a protective layer of chromium oxide on the surface (also known as the passive film or layer). However to be suitable for use in food preparation areas, a minimum chromium content of 18 percent is recommended.

Austenitic steel is classed as type 304, which states a chromium level of between 18 to 20 percent. Using this material can greatly improve the corrosion resistance by increasing the stability of the passive film. Another benefit of using 304 grade stainless steel is its inclusion of 8 to 10.5 percent nickel which further increases the corrosion characteristics as it assists the formation of the passive film during smelting. It is this film which actually self-heals itself when damaged, enabling the surface to retain its hygienic properties.

All grades of stainless steel will stain and discolor due to surface deposits and can never be accepted as completely maintenance free. To achieve maximum corrosion resistance the surface of the stainless steel must be kept clean. Provided the cleaning schedules are carried out on a regular basis, good performance and long service life are assured. Washing with soap or a mild detergent and warm water, or using an antibacterial treatment is usually quite adequate. Finally a clean water rinse followed by a wipe dry will help retain an enhanced aesthetic appearance.

The food industry faces challenges everyday as it continues to deal with the threat of food poisoning and the impact it can have on business. Maintaining clean food preparation facilities helps ease these concerns and keep food companies' reputations — as well as the public — safe.

For more information, please e-mail Teknomek [1] at mail@teknomek.co.uk [2] or visit www.teknomek.co.uk [3].

Source URL (retrieved on 09/20/2014 - 6:24pm):

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