



# Biosafe Sanitisers

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BioSafe-Tunnel-sanitiserFAQ  
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## BioSafe Sanitiser FAQ.

Sanitising tunnels, sanitising pods or booths consist of 3 components, the *structure*, the *sanitiser delivery system* and the *sanitiser*. For this article we refer to the structure and the sanitiser delivery system as the sanitiser tunnel. This paper discusses the Sanitiser and is intended to provide information related to what has become a new requirement in the built environment necessitated by COVID19. As a manufacturer and supplier we recognise there is not enough information in the public domain for customers to make an informed choice when selecting sanitising tunnels, BioSafe will endeavour to continue publishing articles as more information or products become available.

The purchase or rental of a sanitiser booth is an unforeseen expense with 2 components, the capital cost of the tunnel and the operational cost made up of consumption of sanitiser and maintenance of tunnel. The capital cost will be dealt with in another article.

Sanitiser delivery systems use pressure generated by a pump to vapourise liquid into a spray mist through nozzles. The sanitiser delivery system has design parameters which define the type of sanitiser used. The suppliers of these systems specify either open or locked defined as:

- Open System. Manufacturers of open systems such as BioSafe provide the operating parameters allowing selection of pre-determined sanitisers.
- Locked System. A specified sanitiser must be used failing which the warranty is void or the the user is in breach of the terms of use.

BioSafe have experienced high demand with stock shortages in this new supply chain where availability is constrained due to COVID19 import and manufacture restrictions. Consider the possibility of having a tunnel where no sanitiser is available from the supplier forcing closure of the tunnel.

Considerations for operational costs are

1. Cost per spray
2. Maintenance

Cost per spray or cost per person is calculated by determining the delivery volume – which is the number of ml (milli liters) of sanitiser used for each activation of the tunnel. The cost of sanitiser is then divided by the delivery volume to determine sanitiser cost. The electrical costs are not considered in this calculation however this can be added by requesting the electrical pump KW rating. Contact BioSafe ([sales@iled.co.za](mailto:sales@iled.co.za)) for more details or assistance.

Maintenance – every electro mechanical system requires maintenance – servicing of pump, cleaning of nozzles, aligning of beams and cleaning the structure are examples. In some instances this is built into the cost per spray simplifying operating cost calculations and budgeting, in others there is a separate maintenance agreement. BioSafe include the maintenance in the cost per spray.



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Spray tunnel sanitising and sanitisers for surface or hand cleaning are not the same – hand sanitiser products must not be used for spray tunnels unless specifically stated by the manufacturer. Disinfectants effective against Covid, their classifications, and actions are detailed in [WHO Environmental Health Criteria 216](#). These chemicals are generally Chlorine, Alcohol or Hypochlorite which cannot be used to spray onto a person. When spraying, toxicity when inhaling plus skin and eye irritation must be considered.

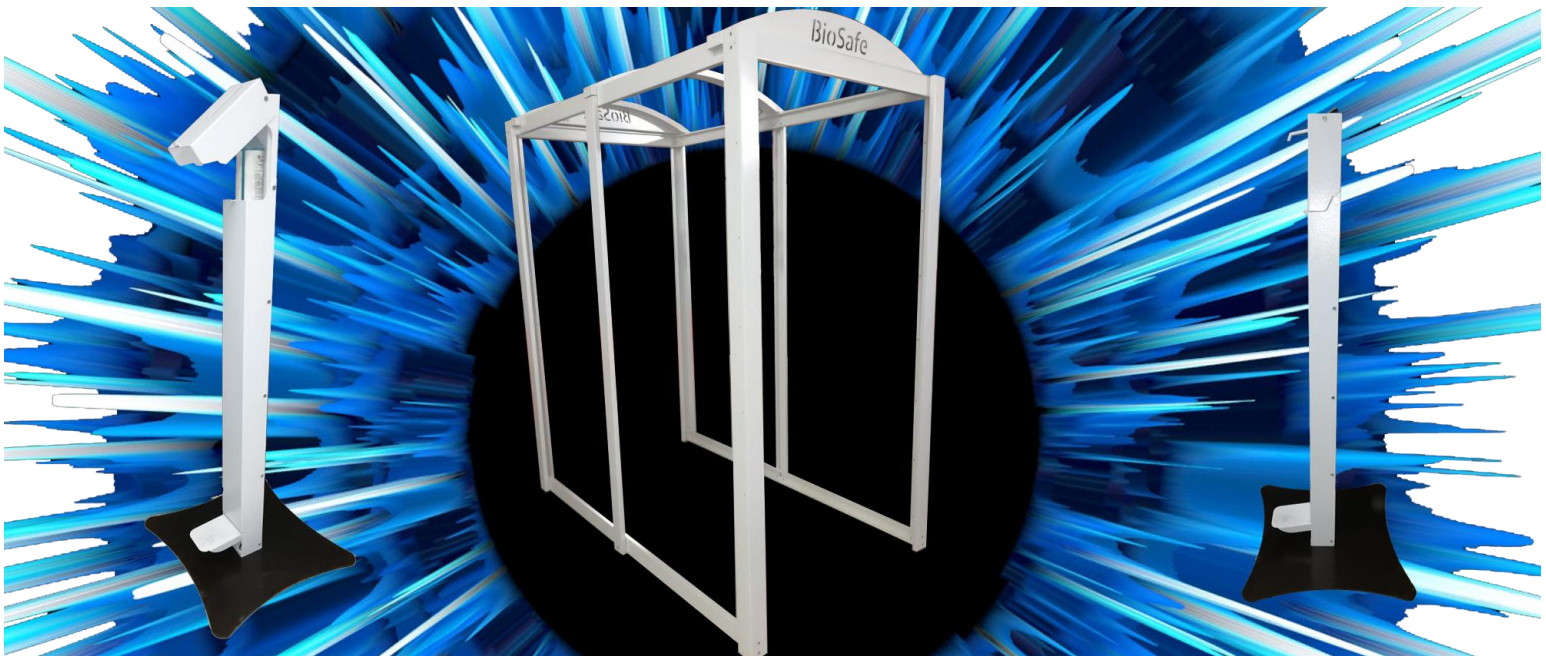
BioSafe tunnels use spray heads that produce a “dry mist” with droplet size of 20-30 um to keep the sanitiser suspended in the air providing maximum coverage. Walking through the mist and lifting arms provides an effective method to deposit sanitiser onto the person. Note – the term dry mist does not mean that there is no moisture – rather the moisture droplets are small enough to remain in suspension – if an object is held against the nozzle, it will get wet. Dry mist is also electronic friendly - no damage to cell phones when walking through the tunnel in normal operation.

The products below have statements from the manufacturers that they are safe for use in BioSafe sanitiser tunnels – we have provided this documentation to allow each customer to determine their option based on the documentation and selected price point. Pricing is expressed as cost per spray excluding operating costs and maintenance based on an 80ml dose divided into 3 categories

1. Low < R1.00.
2. Medium >R1.00 <R2.00
3. High >R2.00

Products are listed in alphabetical order

BioSafe tunnels and sanitizer dispensing products are manufactured in South Africa – IOS9001:2015 certified.





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## Sanitiser product details.

### BioTech

This is a Probiotic with the following efficacy statement - [Corona Virus and Probiotics by Green Worx Cleaning Solutions](#). The motivation for using probiotic is that it is safe for spray and effective as a cleaning product against bacteria and viruses such as Covid19 as proposed in the paper by American Society for Microbiology [Anti-influenza Activity of a Bacillus subtilis Probiotic Strain](#) – an extract from page 1 “Bacillus spores can operate as mini enzyme factories, delivering these types of enzymes directly to the soiling source and without the issues of sensitisation by inhalation. Bacillus will continue to work until all the available food has been used up and will then revert to the spore form and sit in the matrix until more food comes along . 1 Thus Bacillus based formulae can give long term cleanliness and activity between product applications which no chemical can deliver”

The disinfecting efficacy of Biotech is explained in the manufacturers cleaning solution document. The toxicology information [BioTechGTProbioticSurfaceSpray.doc](#). Eye irritation category 2. This is based on full concentration exposure. Manufacturers statement is that this is safe in the dosage dispensed in a tunnel at the dilution rate specified. The GHS classification is “This product poses no physical, health or environmental hazards according to the GHS”. BioSafe tunnels use spray heads that produce a dry mist with droplet size of 20-30 um. This will have no affect on cell phones when walking through the tunnel.

**Manufactured in South Africa. Stock available. Cost per spray Low**

### ERSA

Extract from ERSA Datasheet - [MDS ERSA 150 ENG 20](#). “Silver Dihydrogen Citrate (SDC), a worldwide patented technology, SDC provides silver ions stabilized in citric acid. Viruses are much smaller than bacterial and fungal cells and do not have metabolic activity. Viruses present fewer targets sites on which a biocide can act. Silver targets the viral envelope or capsid and the viral nucleic acid. Silver not only destroys the viral envelope or capsid, preventing the virus from attaching to a host cell, it also destroys the infectious component of the virus, the nucleic acid.” ERSA toxicity falls in is US EPA Category IV which requires no toxicity warnings.

**Imported. Stock availability limited. Cost per spray High**

### Virol-Oxy

Manufacturers statement is the product is safe for tunnels, I have therefore not added additional information. Extract from [VIROL-OXY disinfection tunnels](#). “According to manufacturer’s note this product is safe for disinfecting tunnels.” [Extract from VIROL-OXY testing signed](#) “Based on the results of the abovementioned testing, this letter serves to confirm that Vitol-Oxy successfully passed the compliance tests for both EN 14476 and EN 13727 and is consequently compliant for virucidal activity against CORONAVIRUS and bacterial activity...”

**Imported. Stock availability . Cost per spray Low**



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## Reference documents

In the interests of providing a professional and transparent service we have published our documents – the risk is that our intellectual property is used by our competitors – we have decided that full disclosure is important in the interests of public health.

These are available for download from our website using the hyperlink.

- World Health Organisation
  - [Environmental Health Criteria 216 DISINFECTANTS AND DISINFECTANT BY-PRODUCTS](#)
- BioTech
  - [Corona Virus and Probiotics by Green Worx Cleaning Solutions.pdf](#)
  - [Anti-influenza Activity of a Bacillus subtilis Probiotic Strain.pdf](#)
  - [BioTechGTProbioticSurfaceSpray.pdf](#)
- ERSA
  - [MDS ERSA 150 ENG 20.pdf](#)
- Virol-Oxy
  - [VIROL-OXY disinfection tunnels.pdf](#)
  - [VIROL-OXY testing signed](#)
  - [MSDS VIROL-OXY.pdf](#)
  - [Virol-Oxy-EN-13727.pdf](#)
  - [Virol-Oxy-EN-14476.pdf](#)
  - [Virol-Oxy-Brochure](#)

iLED PTY LTD – the manufacturers of BioSafe tunnels invite suppliers to submit documentation and pricing – we will include this in our list of available sanitisers.

iLED PTY LTD rely on the manufacturers to provide information – we do not endorse the products listed.

BioSafe products are available through a national dealer network. Contact [sales@iled.co.za](mailto:sales@iled.co.za) to place your order or request a sales person to contact you.