EcoHydra® Antimicrobial Handwash

**Product Overview**

**Product Description**

The EcoHydra® Antimicrobial Handwash is a liquid soap substitute for the wet method of washing and disinfecting to remove dirt and kill germs on the hands and arms, without damaging the skin’s natural integrity or pH level. It contains no Triclosan.

**Regulatory Compliance**

The EcoHydra® Antimicrobial Handwash is 100% compliant with all International hand hygiene protocols and the EU Biocidal Products Directive 98/8 EC. It is also compliant with the 2013 EU Biocidal Products regulations.

**Recommended Areas of Use**

This product is suitable for use in any environment which requires the highest standards of hand hygiene whilst maintaining the integrity of the skin, such as healthcare and catering industries, as well as domestic and institutional areas. The EcoHydra® Antimicrobial Handwash has been independently tested and is highly effective against a number of commonly occurring bacteria.

**Instructions for Use**

Wet hands with warm water and dispense 2-3ml (2-3 squirts) of EcoHydra® Antimicrobial Handwash into cupped hands. Wash for 15-30 seconds rubbing all surfaces particularly fingers & nails.

**Physical Properties**

<table>
<thead>
<tr>
<th>Active Ingredients</th>
<th>0.1% v/v Benzalkonium Chloride 0.25% v/v Didecyl Dimethyl Ammonium Chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous Ingredients</td>
<td>No hazardous chemicals</td>
</tr>
<tr>
<td>Colour</td>
<td>Clear / Yellowish</td>
</tr>
<tr>
<td>Fragrance</td>
<td>Fresh</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Mobile Gel</td>
</tr>
<tr>
<td>Density (Kg/L)</td>
<td>1.005</td>
</tr>
<tr>
<td>pH</td>
<td>5.5</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Complete</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;150°F</td>
</tr>
</tbody>
</table>

**Key Features and Benefits**

- Does not irritate or damage the integrity or pH level of the skin
- Kills up to 99.9999% of germs within 15-30 seconds
- Designed for frequent use
- Remains active and effective against microorganisms after drying
- 100% Triclosan and alcohol free
  - Non-flammable
  - Safe for use with children or mental health patients
  - Suitable for use across all religious beliefs
  - Does not promote superbug resistance

**Safety Data Sheet**

For full information on safe handling, storage and disposal of this product a safety data sheet is available on request from EcoHydra®.
# Packaging Format and Item Numbers

## EcoHydra® Antimicrobial Handwash: 475ml table top pump bottle

<table>
<thead>
<tr>
<th>Item Number</th>
<th>EHT/H 475</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carton Quantity</td>
<td>20</td>
</tr>
<tr>
<td>Carton Dimensions (LxWxH) (mm)</td>
<td>300 x 320 x 270</td>
</tr>
<tr>
<td>Carton Weight (Kg)</td>
<td>11.5</td>
</tr>
<tr>
<td>EAN Barcode</td>
<td>5060311530110</td>
</tr>
</tbody>
</table>

## EcoHydra® Antimicrobial Handwash: 800ml pouch refill for wall unit

<table>
<thead>
<tr>
<th>Item Number</th>
<th>EHT/H 800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carton Quantity</td>
<td>6</td>
</tr>
<tr>
<td>Carton Dimensions (LxWxH) (mm)</td>
<td>455 x 200 x 110</td>
</tr>
<tr>
<td>Carton Weight (Kg)</td>
<td>6</td>
</tr>
<tr>
<td>EAN Barcode</td>
<td>5060311530127</td>
</tr>
</tbody>
</table>

## EcoHydra® Antimicrobial Handwash: Wall dispenser for 800ml pouch

<table>
<thead>
<tr>
<th>Item Number</th>
<th>EHT/ H-WU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carton Quantity</td>
<td>40</td>
</tr>
<tr>
<td>Carton Dimensions (LxWxH) (mm)</td>
<td>520 x 520 x 620</td>
</tr>
<tr>
<td>Carton Weight (Kg)</td>
<td>25</td>
</tr>
<tr>
<td>EAN Barcode</td>
<td>5060311530134</td>
</tr>
</tbody>
</table>
Test Results

Bactericidal and Yeasticidal Efficacy

prEN 12054: Chemical disinfectants and antiseptics – Hygienic handwash test for the evaluation of bactericidal activity (in vitro)

**Purpose:** To determine the bactericidal efficacy of hygienic handwash when used post-contamination of hands.

**Method:** Initial bacterial count is determined. The bacterial test suspension is mixed with the handwash test solution (55% (v/v) dilution) in a sterile universal. After 30 seconds contact time, the bacterial count is again determined.

**Results:**

<table>
<thead>
<tr>
<th>Organisms Tested</th>
<th>Results (log reduction)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15 secs</td>
</tr>
<tr>
<td>Staphylococcus epidermidis ATCC 12228</td>
<td>8</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa ATCC 9027</td>
<td>5</td>
</tr>
<tr>
<td>Methicillin Resistant Staphylococcus aureus (MRSA) ATCC 43300</td>
<td>5</td>
</tr>
<tr>
<td>Staphylococcus aureus ATCC 6538, ATCC 12493S</td>
<td>4</td>
</tr>
<tr>
<td>Enterococcus faecalis ATCC 29212</td>
<td>6</td>
</tr>
<tr>
<td>Candida albicans ATCC 10231</td>
<td>5</td>
</tr>
<tr>
<td>Serratia marcescens ATCC 8100</td>
<td>4</td>
</tr>
</tbody>
</table>

**Conclusion:** EcoHydra® Antimicrobial Handwash demonstrated a log reduction in initial bacterial count of at least 5 within 30 seconds against all but one of organisms tested, and a log reduction of at least 4 after only 15 seconds against all organisms tested.
**Frequently Asked Questions**

**Q. What is an antimicrobial handwash?**

A. An antimicrobial handwash is an antiseptic liquid soap that is used to wash away dirt from physically dirty hands, at the same time as disinfecting by quickly killing, neutralising, or inhibiting the growth of pathogens on the hands, with the aim of avoiding transmission of pathogens. Water is required to lather and then rinse the product off.

**Q. What is the most effective handwashing technique?**

A.  
- Wet hands.  
- Apply soap.  
- Rub hands together for 20 seconds or more. Rub fingers, thumbs, around the nail bed, the backs of the hands, between the fingers and the palms of the hands.  
- Rinse well with clean running water.  
- Dry on a towel. (If outside of your home or in a healthcare setting, use disposable paper towels or a hand blow dryer).

**Q. Why is the EcoHydra Antimicrobial Handwash so unique?**

A. EcoHydra’s Antimicrobial Handwash is a new hand cleanser with an antimicrobial agent that does not dry the skin. Its unique formula kills up to 99.9999% of known microbes instantly. It is formulated with the moisturising properties of Aloe Vera to add additional skin conditioning and healing.

**Q. How does the EcoHydra® Antimicrobial Handwash kill pathogens?**

A. The EcoHydra® Antimicrobial Handwash contains the active ingredient Benzalkonium chloride (BAC). This ingredient has inherent antimicrobial properties and has a well-established safety record – for example, it has been approved by the FDA for use as an active ingredient in the oral cavity. The concentration of BAC in this product (0.1%) is very low, decreasing the possibility of skin irritation. Surfactants are another important component in this handwash. They complement the BAC by penetrating the skin to deliver the BAC to attack the pathogens. Aloe Vera and emollients are key in conditioning and soothing the skin to maintain its integrity with repeated use.

**Q. Why is EcoHydra’s Antimicrobial Handwash so gentle on the skin?**

A. Other actives strip away your skin's own natural, protective oils, causing drying which may lead to open sores on the skin. These sores can attract bacteria, leaving your skin more vulnerable. EcoHydra’s Antimicrobial Handwash has cationic properties, which means it is positively-charged. These properties are more compatible with the essential oils of the skin than those of the negatively-charged (anionic) active ingredients found in most alternative soaps. The majority of the industrial hand cleansers currently available on the market rely on negatively-charged actives to clean in the presence of water. Such alternative actives tend to irritate and dry the skin. Damaging the skin can trigger the release of inflammatory agents from the cells, and can lead to an inflammatory response. These negatively-charged actives tend to destroy the skin's water-retaining oils and lipids, causing problems similar to those produced by alcohol-based instant hand sanitisers. Overall, the net result is that anionic soaps damage skin cells, and dry the skin.

**Q. How effective is the EcoHydra® Antimicrobial Handwash against harmful microorganisms?**

A. The handwash is effective against a wide range of common bacteria and yeast, killing up to 99.9999% of disease-causing pathogens in as little as 15-30 seconds.

**Q. How much of the EcoHydra® Antimicrobial Handwash needs to be used?**

A. An amount of 2-3ml (2-3 squirts) is sufficient to produce the desired effects.
Q. Can the EcoHydra Antimicrobial Handwash be used as part of a general handwashing protocol for hospital personnel?

A. Yes. The handwash meets the performance standards set by the FDA in the 21CFR 333.470: Effectiveness testing of a healthcare personnel handwash. This protocol requires these products to:

1. Be fast acting,
2. Kill a broad spectrum of microbes,
3. Work under a heavy soil load, and
4. Demonstrate a persistence of action (killing power is retained in the skin after the product has dried).

EcoHydra’s products were designed with the clinical environment in mind; however, they are gentle enough for daily use on the sensitive skin of children. Therefore, they have applications in all businesses, for example medical clinics, food preparation services, and schools.

Q. Under what conditions would the EcoHydra Antimicrobial Handwash not be used?

A. Whilst this product meets the performance criteria for healthcare personnel antiseptic handwashes, it is not intended to be used as a surgical scrub.

Q. What is the shelf life of the EcoHydra® Antimicrobial Handwash?

A. EcoHydra® Antimicrobial Handwash has a shelf life of three years. We have a symbol on our label which denotes “Use within 18 months of opening”.

Q. What legislation and regulations apply to the EcoHydra® Antimicrobial Handwash?

A. The EcoHydra® Antimicrobial Handwash is governed by the Biocidal Products Directive (EU Regulation 98/8/EC), and thus we are able to make claims on its efficacy.

Q. What specific certification or EN standards does the EcoHydra® Antimicrobial Handwash meet?

A. The EcoHydra® Antimicrobial Handwash complies with the standard certification prEN 12054.
Antimicrobial
An agent that has the ability to destroy or inhibit the growth or reproduction of microorganisms.

Antiseptic
Free from or cleaned of germs and other microorganisms.

Bacteria
Ubiquitous unicellular microorganisms that reproduce rapidly by dividing in two, and of which some can cause disease.

Bactericidal
Preventing infection by inhibiting the growth or action of microorganisms.

Candida Albicans (yeast)
*C. albicans* is a normal resident of the gut and under normal conditions it does not cause harmful effects. However, overgrowth of *C. albicans* causes candidosis, which is usually confined to severely immunocompromised people, resulting in infections of the blood and the stomach, for example. It is transferred via contact with fecal matter or contaminated surfaces or biomedical materials.

Contact Time
The length of time the sample of hand sanitiser is in contact with the organism being tested.

Disinfectant
An agent that destroys, neutralises, or inhibits the activity of microorganisms that cause disease.

Efficacy
The ability to produce a desired or intended result; effectiveness.

Enterococcus faecalis (bacteria)
This bacterium is found in soil, water, and plants, as well as being a normal inhabitant of the intestinal tract and female genital tract. Whilst harmless in healthy humans, it can transform and invade wounds and burns. It has intrinsic resistance to many antibiotics and can survive in extreme environments, making it a leading cause of bacterial infection among hospital patients. This bacterium can be transferred via contamination with fecal matter, and in the hospital setting can be transferred from person to person on the hands of healthcare workers, causing many infections within the human body, such as urinary tract infections.

Glossary of Terms

In Vitro Test
A test performed in an artificial, controlled experimental environment, such as a test tube, rather than within a living organism or natural setting.

Log Reduction
In tests evaluating the bactericidal activity of hand sanitisers, the effectiveness can be measured by calculating the difference in the bacterial count between a test sample containing the hand sanitiser and a control sample in the absence of the hand sanitiser. The result is quoted as a Log or percentage reduction. Reductions of Log 1, 2, 3, 4 and 5 correspond to 90%, 99%, 99.9%, 99.99% and 99.999% reductions respectively, and so on.

Methicillin Resistant
*Staphylococcus aureus* (MRSA) (bacteria)
MRSA is a strain of *Staph. Aureus* and is resistant to a number of different antibiotics, including methicillin, and is therefore a very significant clinical challenge. MRSA can cause severe infections within the human body, such as skin infections, blood poisoning, endocarditis, and urinary tract infections, and the bacterium is transferred via contact with contaminated objects, surfaces, and people through skin-to-skin contact.

Pseudomonas aeruginosa (bacteria)
An opportunistic pathogen found in many environments including water, air and soil, as well as in humans. It rarely causes diseases in healthy humans, but targets immunocompromised individuals such as cancer or burn victims, or cystic fibrosis patients, and is therefore a very common cause of hospital-acquired infections. It is transferred via the air or contact with the damaged skin, and accesses the patients’ tissues, replicating, producing toxins, causing, for example, lung and urinary tract damage.
**Glossary of Terms (continued)**

*Serratia marcescens (bacteria)*
An opportunistic pathogen commonly found in water, soil, plants and animals. It causes infections in hospitals by targeting immunocompromised patients. *S. marcescens* can be transferred by direct contact with contaminated biomaterials and people, resulting in a wide range of disease such as urinary tract infections, wound infections, and respiratory tract infections. Most strains are resistant to many antibiotics used to treat bacterial infections.

*Staphylococcus aureus (bacteria)*
A normal inhabitant of the skin and mucous membranes in the nose of a healthy human. Food contaminated with *Staph. aureus* can cause food poisoning, and the bacterium is also a leading cause of hospital-acquired infections, such as skin infections, blood infections, meningitis, and pneumonia. It is also capable of releasing numerous toxins and has acquired resistance to nearly all antibiotics.

*Staphylococcus epidermidis (bacteria)*
A bacterium existing on human skin and mucosa. *Staph. epidermidis* can adhere to biomedical devices, such as catheters and prostheses, and subsequently be transferred to and infect the patient. It is a main pathogen that causes serious infections in hospital, and is resistant to many commonly used antibiotics.

**Yeasticidal**
An agent with the ability to destroy or inhibit the growth of yeast.