



## ELPROTECT – CDH20™ (Chlorhexidine Digluconate)

### Technical Datasheet

#### 1. Technical Datasheet

| Property                    | Specification                                                       |
|-----------------------------|---------------------------------------------------------------------|
| <b>Physical Properties</b>  |                                                                     |
| Appearance                  | Colorless to pale yellow aqueous solution (typically sold in water) |
| Physical Form               | Solution                                                            |
| Molecular Weight (g/mol)    | 897.8                                                               |
| Density or Specific Gravity | 1.06 g/mL at 25 °C(lit.)                                            |
| Viscosity                   | 2.51mm <sup>2</sup> /s                                              |
| <b>Chemical Properties</b>  |                                                                     |
| Water Solubility            | 750g/L at 20°C                                                      |
| <b>Thermal Properties</b>   |                                                                     |
| Boiling Point               | 97 °C / 206.6 °F                                                    |
| <b>Solvent</b>              |                                                                     |
| Water                       | 750g/L at 20°C                                                      |
| Ethanol                     | Moderate to high                                                    |
| Methanol                    | Low (<1%)                                                           |
| Glacial acetic acid         | Miscible                                                            |

#### 2. Processing Methods



### Antimicrobial Hand wash

Add CHG at <40°C during the final mixing stage to prevent thermal degradation. Mix gently and uniformly to avoid foam formation and ensure even distribution.

| Key Ingredients                               | Indicative Dosage (% w/w) |
|-----------------------------------------------|---------------------------|
| Chlorhexidine Gluconate (20% active solution) | 2%                        |
| Hydroxyethylcellulose                         | 0.8%                      |
| Propylene Glycol                              | 3%                        |
| Alkyl Polyglucoside                           | 6%                        |
| Cocamidopropyl PG-Dimonium Chloride Phosphate | 0.25%                     |
| Lauryl Dimethyl Amine Oxide                   | 0-2%                      |
| Polyoxyethylene-(10) Tridecanol Ethoxylate    | 1-3%                      |
| Deionized Water                               | ~87%                      |

### Skin Cleanser

Add CHG during the cool-down phase to avoid thermal degradation. Mix gently to avoid foaming and ensure uniform distribution. Maintain the formulation pH around 5.5-7.0. CHG is most stable and effective in this range; acidic pH may reduce efficacy and alkaline pH may degrade the molecule.

| Key Ingredients                                                     | Indicative Dosage (% w/w) |
|---------------------------------------------------------------------|---------------------------|
| Chlorhexidine Gluconate                                             | 2.0%                      |
| Nonionic Surfactant (e.g., fatty alcohol ethoxylate C12-C15, ~10EO) | 5.0%                      |
| Polyoxyethylene-polyoxypropylene Copolymer (e.g., Pluronic)         | ≤10.0%                    |
| Purified Water                                                      | Balance (~85%)            |



## Mouth Wash

CHG is most stable and effective in mildly acidic to neutral pH. Incorporate CHG during the cool-down phase to prevent decomposition. Mix gently and avoid prolonged exposure to heat or light.

| Key Ingredients                                       | Indicative Dosage (% w/w) |
|-------------------------------------------------------|---------------------------|
| Chlorhexidine Gluconate                               | 0.2%                      |
| Polyvinylpyrrolidone (PVP)                            | 15%                       |
| Sodium Saccharin                                      | 0.1%                      |
| Sodium Acetate                                        | 1.4%                      |
| Glycerin                                              | 10%                       |
| Dye Solution                                          | 0.1%                      |
| Ethanol                                               | 5%                        |
| Cremophor RH-60 (Polyoxyl 60-Hydrogenated Castor Oil) | 0.2%                      |
| Flavor Oil                                            | 0.12%                     |
| Deionized Water                                       | ~73%                      |

## 3. Dosing by Application

| Products                           | Typical dosage % |
|------------------------------------|------------------|
| Oral rinse (mouthwash, dental)     | 0.12-0.2%        |
| Skin antiseptic/preoperative scrub | 2-4%             |

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

## EXPLORE ELCHEMY'S PRODUCT PORTFOLIO

[ELPROTECT - CDH20™ \(Chlorhexidine Digluconate\)](#) | [Browse Catalog](#) | [Connect with us](#)