



Your Infection Control Specialist™

## Competitive Product Summary

### Clorox Healthcare Hydrogen Peroxide Cleaner Disinfectant RTU and Wipes EPA #67619-24 and 67619-25

Clorox requires nearly 3X more hydrogen peroxide to achieve similar germicidal efficacy as Optim 33 TB, but as a direct result compromises the toxicity profile of the product. Potent disinfectants are easy to formulate, however the challenge is to remain potent and minimize toxicity. Accelerated Hydrogen Peroxide (AHP) has accomplished this like no other. Optim 33 TB remains essentially non-irritating to eyes and skin and carries the lowest EPA toxicity rating possible (Category IV) while achieving rapid, broad spectrum disinfection. Optim 33 TB's consistent contact times are also likely to mitigate confusion and ensure accurate product use.

| Criteria of Ideal Disinfectant |  | Optim 33 TB RTU & Wipes            | Clorox Healthcare Hydrogen Peroxide Cleaner Disinfectant RTU and Wipes     | The AHP Advantage   |
|--------------------------------|--|------------------------------------|--|---|
| Key Product Characteristics    | Active Ingredient                          | 0.5% Accelerated Hydrogen Peroxide | 1.4% Hydrogen Peroxide   | Potent disinfectants are easy to formulate, however are often quite toxic. The challenge is to remain potent and minimize toxicity. Accelerated Hydrogen Peroxide (AHP) has accomplished this like no other.  |
|                                | Efficacy Profile*                          |                                    |  | AHP RTU and Wipes disinfectants carry consistent contact times between products and between like pathogens. This is likely to mitigate confusion and ensure accurate product use.   |
|                                | Bactericidal                               | ✓ Yes (1 Minute)                   | ✓ Yes (30 sec. - 1 Minute)   |   |
|                                | Enveloped Virucidal                        | ✓ Yes (1 Minute)                   | ✓ Yes (30 sec. - 1 Minute)   |   |
|                                | Non-Enveloped Virucidal                    | ✓ Yes (1 Minute)                   | ✓ Yes (1 - 3 Minutes)<br>(Wipes require 3 min. contact time for Norovirus) |   |
|                                | Tuberculocidal                             | ✓ Yes (5 Minutes)                  | ✓ Yes (4 - 5 Minutes)<br>(RTU = 4min; Wipes = 5min)                        |   |
|                                | Fungicidal                                 | ✓ Yes (10 Minutes)                 | ✓ Yes (3 - 8 Minutes)<br>(RTU = 3 min; Wipes = 8 min)                      |   |
|                                | Broad-Spectrum Non-Food Contact Sanitizing | ✓ Yes (30 Seconds)                 | X No   |   |
| Cleaning Profile               | One-Step Cleaner Disinfectant              | ✓ Yes                              | ✓ Yes  | AHP has proven cleaning <sup>2</sup> efficiency resulting in added confidence that disinfection can occur.<br><sup>2</sup> Rochon, M., Sullivan, N. (1999) Products based on accelerated and stabilized hydrogen peroxide: Evidence for Cleaning and Sanitizing Efficiency CJIC p. 51-55. |

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|                   |   |       |   |   |
|-------------------|---|-------|---|---|
| Toxicity Profile* | HMIS Rating**                                   | 0/0/0 | 2/0/0                                   | <p>AHP is Designed to be easier on employees<sup>3</sup>. AHP Products are VOC free, essentially non-irritating to skin and eyes, do not require the use of PPE, and have the lowest EPA toxicity rating possible (Category IV) in all 6 studies at in use dilutions.</p> <p><sup>3</sup> Omidbakhsh, N., Sattar, S.(2006) Broad-spectrum microbicidal activity, toxicologic assessment, and materials compatibility of a new generation of accelerated hydrogen peroxide-based environmental surface disinfectant, AJIC International, Vol 34 No 5, p. 251-257.</p> <p>AHP reduces environmental impact whenever possible. The active ingredient, Hydrogen Peroxide, breaks down into water and oxygen leaving no active residual.</p> |
|                   | Essentially Non-Irritating to Eye               | ✓ Yes | X No<br>(Moderately irritating to eyes) |   |
|                   | Essentially Non-Irritating to Skin              | ✓ Yes | X No<br>(Slightly irritating to skin)   |   |
|                   | Essentially Non-Irritating to Respiratory Tract | ✓ Yes | ✓ Yes                                   |   |
|                   | VOC Free  | ✓ Yes | ✓ Yes                                   |   |
|                   | Sustainable                                     | ✓ Yes | ✓ Yes                                   |   |

\*Based on claims and contact times found on the EPA Stamped Master Labels dated September 13, 2011 and MSDS' dated April, 2012.

\*\*HMIS is a color and number system used to signal degree of health hazard, flammability hazard and reactivity hazard.

The Health Hazard conveys the health hazards of the material:

4. Life-threatening, major or permanent damage may result from single or repeated overexposures
3. Major injury likely unless prompt action is taken and medical treatment is given.
2. Temporary or minor injury may occur.
1. Irritation or minor reversible injury possible.
0. No significant risk to health

Flammability Hazards are defined according to OSHA standards:

4. Flammable gases, or very volatile flammable liquids.
3. Materials capable of ignition under almost all normal temperature conditions.
2. Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur.
1. Materials that must be preheated before ignition will occur.
0. Materials that will not burn

Reactivity Hazards are assessed using the OSHA criterion of physical hazard.

4. Severe Hazard. Materials that are reactive at normal temperature and pressure
3. Serious Hazard. Materials that may form explosive mixtures
2. Moderate Hazard. Unstable Materials that can undergo violent chemical changes.
1. Slight Hazard. Become unstable at high temperatures and pressures.
0. Minimal Hazard. Non-explosives.