

**DISINFECTANT SOLUTIONS TEST REPORT**

**ONE DISINFECTION CYCLE INVOLVES:**

1. Wipe down shield with disinfectant solution
2. Letting solution set on shield for recommended kill time per manufacturer's instructions
3. Wiping dry with chamois cloth IF residual solution or streaking remain

**Test cycles conducted: 5 times per day • 4 days per week**

•57 cycles were conducted from 7/13/20- 7/30/20

on OPTIM Wipes, CaviWipes, Sani Cloth Wipes & Dish Soap/Water

•87 cycles were conducted from 8/26/20- 9/24/20

on 70% Isopropyl Alcohol Wipes, 3% Hydrogen Peroxide Wipes & Sigma Clear Vision Spray

Disinfectant Solution	Active Ingredients	Results after 20 Disinfection Cycles	Results after 35 Disinfection Cycles	Results after 85 Disinfection Cycles	Compatibility
<b>Dishwashing Soap &amp; Warm Water</b>	Triclosan	Unaffected	Unaffected	Unaffected	Recommended method of disinfection
<b>70% Isopropyl Alcohol Wipes</b>	•70% Isopropyl Alcohol •30% Purified Water	Unaffected	Unaffected	Unaffected. Testing ongoing as of 9.24.20	Compatible
<b>3% Hydrogen Peroxide Wipes</b>	•3% Hydrogen Peroxide •97% Purified Water	Unaffected	Unaffected	Unaffected. Testing ongoing as of 9.24.20	Compatible
<b>Sigma Clear Vision 63 Anti-Fog Coating (pending FDA approval)</b>	•Propan-2-ol 60-66% •Quaternary ammonium compounds, Benzyl-C12-C16 alkyl dimethyl, chlorides <0.2%	Unaffected	Unaffected	Unaffected. Testing ongoing as of 9.24.20	Compatible
<b>SciCan-OPTIM 1 Wipes</b>	0.5% Accelerated Hydrogen Peroxide	Signs of minor crazing; visibility unaffected	Moderate signs of crazing; visibility distorted	This product was deemed too abrasive after 57 cycles/ testing concluded.	NOT Compatible
<b>Metrex-CaviWipes1 Surface Disinfectant Wipes</b>	0.76% Didecyl dimethyl ammonium chloride 7.5% Ethanol 15% Isopropanol	Signs of minor crazing; visibility unaffected	EXTREME signs of crazing to the point of polycarbonate deterioration; visibility completely distorted	This product was deemed too abrasive after 57 cycles/ testing concluded.	NOT Compatible
<b>PDI- Sani Cloth AF3 Germicidal Wipes</b>	• .14% Alkyl C12-18 Dimethyl Ethyl-benzyl Ammonium Chloride • .14% Alkyl C12-18 Dimethyl Benzyl Ammonium Chloride	Signs of minor crazing; visibility unaffected	Moderate signs of crazing; visibility distorted	This product was deemed too abrasive after 57 cycles/ testing concluded.	NOT Compatible

Because manufacturers sometimes change their formulas without notification, compatibility in perpetuity can not be presumed. These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control.

**ENVIRONMENTAL STRESS CRACKING & CRAZING**

Crazing lines are fine, silvery cracks that are the result of Environmental Stress Cracking (ESC) often seen in components subjected to regular exposure to cleaning agents. This is often the result of an external chemical acting on a plastic part that contains internal stresses. ESC may not lead to parts failure or loss of functionality, though its marred appearance may effect visibility.

To avoid such issues, we recommend using dishwashing soap & warm water for successful, uneffected long term use of this product.

**TEST CONCLUSION**

After conducting rigorous testing with commonly used industry disinfectants, ProKnee DOES NOT support the use of disinfectant products that result in ESC and crazing (refer to definition above). **We strongly encourage the use of dish soap & warm water, which will guarantee the longevity of our shields and prevent the effects of ESC . When this method is not feasible, please refer to the list on the front side of this page for acceptable alternatives that will provide (at a minimum) 85 disinfecting cycles free of the effects of ESC.**

**EXAMPLE OF EXTREME EFFECTS OF CRAZING**



**EXAMPLE OF MODERATE EFFECTS OF CRAZING**



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