

# Disinfect Your Shield4Dentists

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**⚠** Please follow the disinfecting guidelines that are in effect in your state and community. You may be required to follow specific procedures.

## Before You Get Started

If you can, OSHA recommends that you have a dedicated area to disinfect your equipment away from your work area.

It is important to protect yourself while you clean your shield. Use gloves, a facemask and, if possible, another face shield. **For safety reasons, consider the shield you are about to clean contaminated at every possible surface and take appropriate measures!**

**In case the shield was contaminated directly by aerosol (e.g. cough)** and you have a spare visor at your disposal, consider throwing the contaminated visor into hazardous waste. Otherwise, wash the shield and visor thoroughly under running water first and make sure you have properly disinfected the sink, otherwise consider it **contaminated** and alert your colleagues.

Prepare your workplace, where you will clean the shield and visors. **Disinfect the surface of the desk** properly before you start.

**Don't clean too many your visors or shields at once, separate them** into several batches to avoid cross-contamination.

**To ensure the shield is cleaned properly, we recommend**

- removing the contaminated visor for separate disinfecting
- removing the padding for separate disinfecting

Please refer to our guide on removing the visor from your shield:

## Disinfection Methods

**⚠** While a quick wipe may seem to clean the shield, the **contact time** must be followed to actually disinfect it. The required wet contact time is usually several minutes.

### Recommended Disinfection Methods

Aa METHOD	☰ CONTACT TIME
<a href="#">WHO Handrub disinfection*</a>	75% IPA, 5 mins
<a href="#">Isopropanol (IPA)</a>	96%, 5 mins

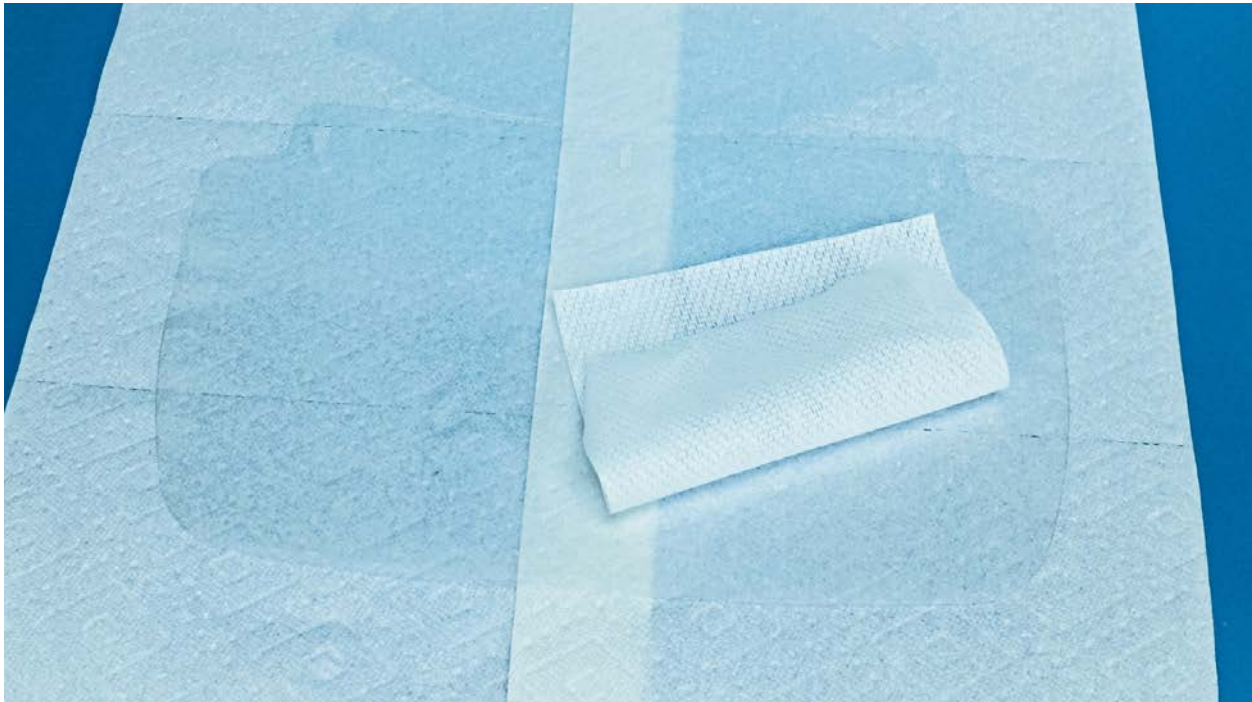
Aa METHOD	☰ CONTACT TIME
<u>Isopropanol (IPA)</u>	75%, 5 mins
<u>Sodium Hypochlorite (household bleach)</u>	min. 0.01 % of hypochlorite 2 mins+
<u>UV-C radiation</u>	30W, wavelength below 280 nm, 15 mins
<u>Ethanol</u>	70-80% max**, 5 mins
<u>Hydrogen Peroxide</u>	25%, 5 mins

\*\*Tested with the [WHO Handrub formulation 2](#)

\*Higher Ethanol concentration has a significantly lower effectivity

## What about Disinfecting Wipes?

If you use disinfecting wipes, note that even though the wipe does literary wipe off a good part of the contaminants, the surface it leaves behind still needs to stay wet for a certain period of time to disinfect the visor! Commercial wipe solutions differ so we can't tell you what that time is, but it's usually in the range of 3-5 minutes! If the visor dries to fast, you need to re-apply fresh disinfectant.



## Apply the Disinfection to the Frame (+ the Padding)

First, carefully remove the contaminated visor.

We recommend that you submerge the shield (frame...) into disinfecting solution to ensure you cover 100% of the surfaces. You can also use aerosol, but make sure to apply liberally to **ensure both coverage and the contact time**.

If you use aerosol, you have to remove the padding and submerge it in disinfection separately or thoroughly launder it.

## Apply the Disinfection to the Visor

We recommend that you also submerge the visor into disinfecting solution to ensure you cover 100% of the surfaces. You can also use aerosol, but make sure to apply liberally to **ensure both coverage and the contact time**. You will also need to

make sure to disinfect both sides.

Select one of the disinfecting methods from the list below, and the solution do its job. Most of the solutions will evaporate after several minutes. You can remove the remains using a paper towel, avoid using the same towel on multiple shields, avoid cross-contamination. Always wipe in one direction.

## Soap and Warm water?

Soap and warm water have shown fairly good results in laboratory tests, however, the effectivity is more variable and the procedure is more time consuming and error-prone. You also have to be careful not to contaminate other areas and items during the washing procedure. Therefore, **it is, highly advisable to use one of the "recommended methods" instead** (see above)

However, if no proper disinfectant solution is available to you

- pre-wash all parts of the sheet using a warm water (the plastic the frame can withstand temperature up to **80°C or 175°F**)
- apply the soap and warm water, make sure you've covered all surfaces
- wash all the parts carefully for at least 2 minutes
- apply fresh warm water and remove all the soap
- (optional) repeat the entire process once again
- let the parts air dry

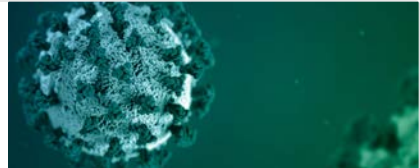
## Sources

The information in this article is largely based on verified face shield disinfection tests done in the Czech Republic under the patronage of PrusaResearch - a Czech 3D printing manufacturer.

### Coronavirus Disease 2019 (COVID-19)

This slide deck is a reference for content on this page and can be used for training. This document provides specific operational considerations that healthcare settings and healthcare authorities can review in the context of global supply shortages of personal protective equipment (PPE), to help with decision making in

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/non-us-settings/emergency-considerations-ppe.htm>



### COVID-19 - Control and Prevention | Dentistry Workers and Employers | Occupational Safety and Health Administration

This guidance is not a standard or regulation, and it creates no new legal obligations. It contains recommendations as well as descriptions of mandatory safety and health standards. The recommendations are advisory in nature, informational in content, and are intended to assist employers in providing a safe and healthful workplace.

<https://www.osha.gov/SLTC/covid-19/dentistry.html>



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