

# How to Sanitize Your HP Devices



Cleaning high-touch surfaces of electronic devices with a disinfectant is more crucial than ever. To help maintain a healthy office environment, HP has developed a portfolio of PC devices that are designed to be easily wiped down with commonly available household disinfecting wipes<sup>2</sup>.

## Table of Contents

1. Using a Disinfectant is More Important than Ever .....	2
2. HP Commercial Products: Disinfectant Ready .....	2
3. Designed Tough .....	2
4. The HP Portfolio.....	2
5. Cleaning vs. Using a Disinfectant .....	3
6. Using Disinfecting Wipes .....	3
7. Disinfecting Wipes / Chemical Formulations: Safe for Use .....	4
8. Before Starting.....	4
9. Using Disinfecting Wipes on HP EliteBooks & HP ZBook Mobile Workstations .....	5
10. Using Disinfecting Wipes on HP EliteDesks & Z Workstations .....	5
11. Using Disinfecting Wipes on HP Commercial Displays & Z Displays .....	6
12. Using Disinfecting Wipes on Select HP Premium & Mainstream Accessories .....	7
Appendix I .....	9
Appendix II .....	12

## 1. Using a Disinfectant is More Important than Ever

- 1.1 Proper cleaning and use of a disinfectant on PC devices has become more important than ever due to the recent emergence of the SARS-CoV-2 virus. To aid in the prevention of COVID-19 and other illnesses in everyday office environments, the Centers for Disease Control and Prevention (CDC) recommends frequent cleaning of high-touch surfaces followed by the use of a disinfectant. This recommendation includes cleaning the high-touch, external surfaces of electronic devices such as notebooks, desktops, keyboards, mice, and displays.

## 2. HP Commercial Products: Disinfectant Ready

- 2.1 To help maintain a healthy office environment, HP has developed a portfolio of PC devices that are designed to be easily wiped down with commonly available household disinfecting wipes<sup>2</sup>. The portfolio of HP devices includes a wide range of commercial notebooks, desktops, workstations, displays and accessories. Most outer surfaces of these products, including the display, keyboard, and trackpad, are vigorously tested for up to 1,000 wipe cycles to ensure that there is no damage or wear when cleaned with specific disinfectant wipes<sup>2</sup>.

## 3. Designed Tough

- 3.1 HP has worked with industry leaders in material science and engineering to identify and select robust materials and components that help make our products ready for use with commonly available household disinfectant wipes. Some of these material and design choices include:
  - 3.1.1 Anodized Surfaces & UV Hardened Paints: All HP Elite and Z Workstation products are designed and built using anodized aluminum or magnesium with UV hardened paint, creating a tough and reliable outer surface.
  - 3.1.2 Duracoat Finish / Laser Etched Keyboards: HP Elite Notebooks and Mobile Workstations use keyboards coated with a Duracoat finish that helps them resist wear. Characters and lettering on HP stand-alone keyboards are imprinted using a laser-etching process that also helps them resist wear.
  - 3.1.3 Durable Displays: HP display panels used in our Elite Notebooks, Mobile Workstations, All-in-Ones and Stand-Alone Displays have been extensively tested to ensure that they are not damaged by chemicals used in many common household disinfecting wipes<sup>3</sup>.

## 4. The HP Portfolio

- 4.1 HP builds a wide range of commercial PC devices and accessories that have been designed and tested to withstand up to 1000 cycles of wiping with commonly available household disinfecting wipes. The products listed below have all be tested to meet this criterion:
  - 4.1.1 HP EliteBooks (Excludes Elite Chromebooks)
  - 4.1.2 HP EliteDesks
  - 4.1.3 HP EliteOne (Display Panel Only)<sup>3</sup>
  - 4.1.4 ZBook Mobile Workstations
  - 4.1.5 Z Series Desktop Workstations

4.1.6 HP Education Edition Notebooks (Keyboards Only)

4.1.7 HP Elite and Z Displays (Z, S, E and P series, Display Panel Only)<sup>3</sup>

4.1.8 HP Commercial Accessories (HP Elite Presenter Mouse, HP Premium Keyboard (wireless and USB) and HP desktop wired 320 KB/Mouse only.)

## 5. Cleaning vs. Using a Disinfectant

5.1 It is important to note that cleaning devices is not the same as using a disinfectant. Cleaning a device removes dirt, dust or other material from its surface and should be done on a regular basis as described in the HP user manual or maintenance service guide. Cleaning a device will often involve removing larger particles or debris by using compressed air and then wiping the device down with a microfiber cloth slightly dampened with water. Using a disinfectant, however, is focused on reducing or eliminating the number of bacterial and viral pathogens that can be found on the surface of the device. To help ensure the proper use and effectiveness of a disinfectant, HP devices should be cleaned as outlined in the user manual and then wiped down by following the directions from the manufacturer of the disinfectant wipe. Excessive cleaning of an HP device beyond 1000 cycles with any cleaning solution can potentially lead to visible wear on the component or its surfaces.

## 6. Using Disinfecting Wipes

6.1 Using a disinfecting wipe is a simple and easy way to apply a disinfectant to HP commercial PC devices or accessories after they have been cleaned. However, there are a few things to keep in mind when using a disinfectant wipe on an HP device:

6.1.1 **Not All Wipes are the Same:** Manufacturers often make different types of wipes under the same brand. While these wipes may all look the same, some of them may contain certain chemicals that can harm the device. It is important to only use those wipes that have the specific formulations identified in the Specification Document found in Appendix I in this document. Always check the formulation of a wipe before using it on an HP product.

### IMPORTANT

Many common household cleaners and disinfectants can damage electronic products. Do not use any of the following chemicals or any solutions that contain them: bleach, peroxides (including hydrogen peroxide), acetone, ammonia, methylene chloride, citrus or citric acid based cleaners or any petroleum-based solvents, such as gasoline, paint thinner, benzene or toluene.

6.1.2 **Wipe Saturation:** Saturation, which is the amount of liquid on the wipe, is extremely important and can vary between manufacturers, between different products from the same manufacturer, or even from wipe to wipe within the same container. When using a wipe to apply disinfectant to a device, the wipe should only be slightly saturated so that it will apply a thin layer of the solution without causing excessive pooling or dripping. Excessive moisture entering the device can permanently damage the electronics inside the device. Always follow the wipe manufacturer's directions for applying the wipe on surfaces to maximize effectiveness.

- 6.1.3 **Wiping Aggressively:** When using a disinfecting wipe, avoid aggressively wiping the surface with the wipe. Sanitization is done chemically via the active ingredients in the cleaning solution. Applying excessive pressure or scrubbing the surface only increases wear on the surface.
- 6.1.4 **Spray Based Disinfectants:** Sprays of any kind (aerosol, pump, etc.) should never be used directly on HP products, as they will result in liquid entering the system and can result in permanent damage of the electronics inside.

## 7. Disinfecting Wipes / Chemical Formulations: Safe for Use

### 7.1 Appendix I: Commonly Available Disinfecting Wipes for Use on Specific HP Products

7.1.1 The list of disinfecting wipes found in Appendix I contains examples of commonly available household wipes for use on the HP devices in section 4.1 of this document. These disinfecting wipes use chemical formulations that have been tested up to 1,000 wipe cycles on a range of product materials and do not contain additional active ingredients known to damage electronic devices (see 7.1.1.1)<sup>1</sup>. This list is not exclusive and is subject to change over time. For a list of tested formulations, see Appendix II in this document, “Disinfecting Chemical Formulations for Use on Specific HP Products”.

### 7.2 Appendix II: Disinfecting Chemical Formulations for Use on Specific HP Products

7.2.1 HP has tested a wide range of formulations and chemicals used in commonly available disinfecting wipes. Of the formulations tested, HP has identified specific formulations and chemical ingredients that can be used on the HP Products in section 4.1 of this document up to 1,000 wipe cycles. These tested formulations and chemicals can be found in the table in Appendix II.

7.2.1.1 **Important:** Many common household disinfecting wipes contain additional ingredients. When selecting a disinfecting wipe, the formulation should only contain the active ingredients identified in this list and no other ingredients other than pure water. If other active ingredients such as bleach or peroxide are listed, the disinfectant wipe should not be used on HP devices.

## 8. Before Starting

- 8.1 Clean the device of any dirt, food or debris per the product’s user guide or maintenance service guide.
- 8.2 Wear disposable gloves made of latex (or nitrile gloves if latex-sensitive) when cleaning and sanitizing surfaces.
- 8.3 Turn off the device and disconnect AC power (never clean a product while it is powered on or plugged in). Remove batteries from items like wireless keyboards or mouse (if applicable).
- 8.4 Disconnect any external devices.
- 8.5 Completely read all directions for the disinfecting wipe you are using and follow the manufacturer’s instructions exactly.
- 8.6 Use with adequate ventilation.
- 8.7 Ensure that the wipe is lightly saturated. Do not allow any moisture to drip from the wipe into areas such as keyboards, display panels or I/O ports, as moisture entering the inside of an electronic product can cause damage to the product.

## 9. Using Disinfecting Wipes on HP EliteBooks & HP ZBook Mobile Workstations

- 9.1 Follow the “Before Starting” guidelines outlined in section 8 of this document.
- 9.2 Clean the HP device as outlined in the user manual or service guide if required. Cleaning the device of dirt and other particles will help improve the overall effectiveness of the disinfectant
- 9.3 When using disinfecting wipes on HP devices, only use those wipes that contain the active ingredients / formulations outlined in this document. Make sure to read the wipe manufacturer’s directions and follow them exactly.
- 9.4 Notebook Surfaces / Keyboards / Touchpad
  - 9.4.1 Gently wipe the surfaces of the notebook using the disinfecting wipe.
    - 9.4.1.1 When using a wipe to apply disinfectant to a device, the wipe should only be slightly saturated so that it will apply a thin layer of the solution without causing excessive pooling or dripping.
      - 9.4.1.1.1 Use caution around vents, grills, and I/O ports to ensure the solution does not collect and drip into the notebook. This could damage sensitive internal components.
      - 9.4.1.1.2 Do not allow the solution to collect and drip between the keys and into the notebook. This could damage sensitive internal components.
      - 9.4.1.1.3 Be careful around the perimeter of the touchpad as depressing the touchpad may create a gap that could allow the solution to enter the system. This could damage sensitive internal components.
    - 9.4.2 Allow surface to air dry to maximize effectiveness of the disinfectant. Follow all directions provided by the wipe manufacturer to ensure adequate exposure time.
- 9.5 Display
  - 9.5.1 Gently wipe down the display surface using the wipe.
    - 9.5.1.1 When using a wipe to apply disinfectant to a device, the wipe should only be slightly saturated so that it will apply a thin layer of the solution without causing excessive pooling or dripping.
    - 9.5.1.2 Be careful around the perimeter of the display and the display bezel as the solution may collect and enter the display. This could damage sensitive internal components.
  - 9.5.2 Allow the display to air-dry to maximize the effectiveness of the disinfectant. Follow all directions provided by the wipe manufacturer to ensure adequate exposure time.

## 10. Using Disinfecting Wipes on HP EliteDesks & Z Workstations

- 10.1 Follow the “Before Starting” guidelines outlined in section 8 of this document.
- 10.2 Clean the HP device as outlined in the user manual or service guide if required. Cleaning the device of dirt and other particles will help improve the overall effectiveness of the disinfectant.

- 10.3 When using disinfecting wipes on the HP device, only use those wipes that have the active ingredients / formulation outlined in this document. Read and follow all directions provided by the wipe manufacturer.
- 10.4 Desktop Surfaces / Keyboard / Mouse
  - 10.4.1 Gently wipe the surfaces of the desktop using the wipe.
    - 10.4.1.1 When using a wipe to apply disinfectant to a device, the wipe should only be slightly saturated so that it will apply a thin layer of the solution without causing excessive pooling or dripping.
      - 10.4.1.1.1 Use caution around vents, grills or I/O ports to ensure the solution does not collect and drip into the unit. This could damage sensitive internal components.
      - 10.4.1.1.2 Do not allow the solution to collect and drip between the keys and into the keyboard. This could damage sensitive internal components.
      - 10.4.1.1.3 As mouse configurations may vary, be careful around the mouse buttons or other areas that could allow the solution to enter the mouse. This could damage sensitive internal components.
    - 10.4.2 Allow surface to air-dry to maximize effectiveness of the disinfectant. Follow all directions provided by the wipe manufacturer to ensure adequate exposure time.
- 10.5 Display (HP EliteOne Desktop Only)
  - 10.5.1 Important: Disinfecting wipes can *only be used on the display panel* on HP EliteOne All-in-One Desktop devices. Disinfecting wipes should not be used on the surrounding plastic on these devices as they are not chemical resistant and can be damaged by disinfecting wipes.
  - 10.5.2 Gently wipe down the display surface using the wipe.
    - 10.5.2.1 When using a wipe to apply disinfectant to a device, the wipe should only be slightly saturated so that it will apply a thin layer of the solution without causing excessive pooling or dripping.
    - 10.5.2.2 Be careful around the perimeter of the display as well as the display bezel as the cleaning solution can collect and enter the display. This could damage sensitive internal components.
  - 10.5.3 Allow the display to air dry to maximize the effectiveness of the disinfectant. Follow all directions provided by the wipe manufacturer to ensure adequate exposure time.

## 11. Using Disinfecting Wipes on HP Commercial Displays & Z Displays

- 11.1 Important: Disinfecting wipes can only be used on the display panel on the HP stand-alone displays devices. Disinfecting wipes should not be used on the surrounding plastic on these devices as they are not chemical resistant and can be damaged by disinfecting wipes.
- 11.2 Follow the “Before Starting” guidelines outlined in section 8 of this document.
- 11.3 Clean the HP device as outlined in the user manual or service guide if required. Cleaning the device of dirt and other particles will help improve the overall effectiveness of the disinfectant.

- 11.4 When using disinfecting wipes on HP devices, only use those wipes that have the active ingredients / formulation outlined in this document.
- 11.5 Gently wipe down the display surface using the wipe.
  - 11.5.1 When using a wipe to apply disinfectant to a device, the wipe should only be slightly saturated so that it will apply a thin layer of the solution without causing excessive pooling or dripping.
  - 11.5.2 Be careful around the perimeter of the display as well as the display bezel as the solution can collect and enter the display. This could damage sensitive internal components.
  - 11.5.3 Allow the display to air-dry to maximize the effectiveness of the disinfectant. Follow all directions provided by the wipe manufacturer to ensure adequate exposure time.

## 12. Using Disinfecting Wipes on Select HP Premium & Mainstream Accessories (see Section 4)

- 12.1 Follow the “Before Starting” guidelines outlined in section 9 of this document.
- 12.2 Clean the HP device as outlined in the user manual or service guide if required. Cleaning the device of dirt and other particles will help improve the overall effectiveness of the disinfectant
- 12.3 When using disinfecting wipes on HP devices, only use those wipes that have the active ingredients / formulation outlined in this document.
- 12.4 Keyboard / Mouse / Docking Station
  - 12.4.1 Gently wipe the keyboard surface down using the wipe.
  - 12.4.2 When using a wipe to apply disinfectant to a device, the wipe should only be slightly saturated so that it will apply a thin layer of the solution without causing excessive pooling or dripping.
    - 12.4.2.1 Do not allow the solution to collect and drip between the keys and into the keyboard. This could damage sensitive internal components.
    - 12.4.2.2 As mouse configurations may vary, be careful around the mouse buttons or other areas that could allow the solution to enter the mouse. This could damage sensitive internal components.
    - 12.4.2.3 As docking station designs and layouts may vary, be careful around the ports, grates and other areas that could allow the cleaning solution to enter. This could damage sensitive internal components.
  - 12.4.3 Allow the surface to air-dry to maximize the effectiveness of the disinfectant. Follow all directions provided by the wipe manufacturer to ensure adequate exposure time.

## Notes

1. See Appendix II for a list of chemical formulations for use up to 1000 wipe cycles on the products listed in Section 4.
2. See Appendix I for the list of commonly available disinfecting wipes that can be used up to 1000 wipe cycles on the products listed in Section 4.
3. Disinfecting wipes can only be used on the display panel on the listed HP Displays and All-in-One Desktop devices. Disinfecting wipes should not be used on the surrounding plastic on these devices.



## Appendix I – Commonly Available Disinfecting Wipes for Use on Specific HP Products up to 1000 Wipe Cycles

Disinfecting wipes in the table below are listed in United States Environmental Protection Agency List N: Disinfectants for Use Against SARS-CoV-2<sup>1</sup> (as of 5/20/20) and use chemistries that have been tested for compatibility with materials in specific HP products.

In order for a List N wipe to be included in this table, a representative wipe chemistry (though not necessarily a specific wipe product) would have been tested on a range of materials found on the exterior surfaces of certain HP products. The wipes on this list are not expected to impact device functionality, however, it is possible that some minor cosmetic changes may occur on HP products after repeated and prolonged use of wipe-based disinfectants.

**Note:** Manufacturers often make different types of wipes under the same brand. While these wipes may look the same, some of them may contain certain chemicals that can harm the device. It is important to only use those wipes that have the specific formulations identified in the table below. Always check the formulation of a wipe before using it on an HP product. Never use wipes with any of the following chemicals or any solutions that contain them: bleach, peroxides (including hydrogen peroxide), acetone, ammonia, methylene chloride, citrus or citric acid based cleaners or any petroleum-based solvents, such as gasoline, paint thinner, benzene or toluene.

This list is subject to change as additional EPA-registered disinfectants are added to List N and wipes are subsequently reviewed by HP. For a list of tested chemical formulations, see Appendix II in this document, “Disinfecting Chemical Formulations for Use on Specific HP Products”.

PRODUCT NAME	COMPANY	EPA REGISTRATION NUMBER	CHEMISTRY
PJW-622	Clorox Professional Products Company	67619-9	Quaternary ammonium
Clorox Commercial Solutions® Clorox® Disinfecting Wipes	Clorox Professional Products Company	67619-31	Quaternary ammonium
Clorox Healthcare® VersaSure® Wipes	Clorox Professional Products Company	67619-37	Quaternary ammonium
Mitersaw	GOJO Industries Inc	84150-2	Ethanol
PURELL Professional Surface Disinfectant Wipes	GOJO Industries Inc	84150-1	Ethanol

Nugen NR Disinfectant Wipes	Lonza LLC	6836-379	Quaternary ammonium
Nugen 2m Disinfectant Wipes	Lonza LLC	6836-372	Quaternary ammonium
Lonza Disinfectant Wipes	Lonza LLC	6836-313	Quaternary ammonium
Lonza Disinfectant Wipes Plus 2	Lonza LLC	6836-340	Quaternary ammonium
Lonza Disinfectant Wipes Plus	Lonza LLC	6836-336	Quaternary ammonium
Nugen Low Streak Disinfectant Wipes	Lonza LLC	6836-382	Quaternary ammonium
Panther Disinfectant Towelette	Maxill Inc	88897-1	Quaternary ammonium; Ethanol; Isopropanol
Caviwipes 1	Metrex Research	46781-13	Quaternary ammonium; Ethanol; Isopropanol
Opti-cide Max Wipes	Micro-Scientific LLC	70144-4	Quaternary ammonium; Ethanol
Opti-Cide 3® Wipes	Micro-Scientific LLC	70144-2	Quaternary ammonium; Isopropanol
Peak Disinfectant Wipes	North American Infection Control Ltd	88494-4	Quaternary ammonium; Ethanol
Discide Ultra Disinfecting Towelettes	Palmero Healthcare LLC	10492-4	Quaternary ammonium; Isopropanol
AF3 Germicidal Disposable Wipe	Professional Disposables International Inc	9480-9	Quaternary ammonium
Sani-cloth Germicidal Disposable Cloth	Professional Disposables International Inc	9480-5	Quaternary ammonium

Sani-Cloth Prime Germicidal Disposable Wipe	Professional Disposables International Inc	9480-12	Quaternary ammonium; Ethanol; Isopropanol
Super Sani-Cloth Germicidal Disposable Wipe	Professional Disposables International Inc	9480-4	Quaternary ammonium; Isopropanol
Lysol® Disinfecting Wipes (All Scents)	Reckitt Benckiser LLC	777-114	Quaternary ammonium
Caterpillar	Reckitt Benckiser LLC	777-130	Quaternary ammonium
Stepan Towelette	Stepan Company	1839-174	Quaternary ammonium
Stepan Disinfectant Wipe	Stepan Company	1839-190	Quaternary ammonium
Spruce-ups	The Clorox Company	5813-58	Quaternary ammonium
CDW	The Clorox Company	5813-113	Quaternary ammonium
Clorox Disinfecting Wipes	The Clorox Company	5813-79	Quaternary ammonium

1. <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

## Appendix II – Disinfecting Chemical Formulations for Use on Specific HP Products up to 1000 Wipe Cycles

The substances in the table below were tested on materials used in the exterior surfaces of certain HP products. Substances on this list are not expected to impact device functionality when used on the specific HP devices identified in section 4.1 of this document up to 1,000 wipe cycles, however, it is possible that some minor cosmetic changes may occur on HP products after repeated and prolonged use of wipe-based disinfectants.

Important: Always check the formulation of a wipe before using it on an HP product. Many common household disinfecting wipes contain additional ingredients that may damage electronics. When selecting a disinfecting wipe, the formulation should only contain the active ingredients identified in this list and no other ingredients aside from pure water. If other active ingredients such as bleach or peroxide are listed, the disinfectant wipe should not be used on HP devices. Never use wipes with any of the following chemicals or any solutions that contain them: bleach, peroxides (including hydrogen peroxide), acetone, ammonia, methylene chloride, citrus or citric acid based cleaners or any petroleum-based solvents, such as gasoline, paint thinner, benzene or toluene.

This list is subject to change.

### QUATERNARY AMMONIUM SALTS (ALONE OR IN COMBINATION)

MAXIMUM CONCENTRATION	ACTIVE INGREDIENT
0.07% in water	Benzyl-C12-18-alkyldimethyl ammonium chlorides
0.07% in water	Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides
0.5% in water	Quaternary ammonium compounds, C12-18-alkyl [(ethylphenyl) methyl] dimethyl, chlorides
0.5% in water	Benzyl-C12-18-alkyldimethyl ammonium chlorides
0.25% in water	Alkyl dimethyl benzyl ammonium chlorides
0.25% in water	Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride
0.28% in water	Diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride
0.5% in water	Benzalkonium chloride
0.5% in water	Didecyl dimethyl ammonium chloride
	Alkyl(C12-C16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16))
	Didecyldimethylammonium chloride (DDAC)
	Alkyl(C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14))

### ALCOHOLS

MAXIMUM CONCENTRATION	ACTIVE INGREDIENT
75% in water	Isopropyl Alcohol
75% in water	Ethyl Alcohol

