

- ✓ Challenges
- ✓ Research and Solutions
- ✓ Evolution
- ✓ Trials and Testing
- ✓ Effective Methods and Procedures
- ✓ Implementation
- ✓ Effectiveness



Several trends are emerging in the industry...



Reassurance & safety of stakeholders



Effective and efficient ways to disinfect



Easy and safe to use solutions that are cost effective



“Third party” Verified Clean



Access to data and KPIs

...these trends require we do things differently

Employee Health and Safety



- “Fear of infection” will drive worker & customer behavior
- Need to assure safety and health of workers
- Need for new practices that drive productivity, safety and quality
- Monitoring of disease spread, with risk of shutdown and revenue loss if mishandled
- Need for real time visibility and data to manage risk
- Need for enhanced hand care sanitation

Vehicle & Facilities Cleaning & Sanitation



- Require enhanced sanitation standards and improved virucidal performance across all surfaces
- Demand for higher performing, safe in use disinfecting chemical solutions
- Re-specifying chemical requirements and application tools and processes
- Build protection barriers in relentless focus on risk areas – frequent use and exposure

Cleanliness Risk Management



- Facilities, vehicles and shop areas will require new and proven disinfection & sanitation enhancement protocols
- Cleaning and detailing staff will require retraining and oversight to ensure adherence to protocols
- Extensive hygiene monitoring, testing and KPIs will be more critical than ever to manage risk
- Credentialed documentation to provide assurance facilities are safe to occupy

Most Recent CDC Recommendations


- Using soap and water for cleaning of high touch surfaces
- Using disinfectant alone not nearly as effective and not recommended
- Cleaning must be routine and ongoing – especially on high-touch surfaces
- Application of disinfectant (if used) should only be after thorough cleaning activities – especially on high touch surfaces



**CENTERS FOR DISEASE
CONTROL AND PREVENTION**

Cleaning, Disinfecting and Protection

- Everyone entering facilities and vehicles are concerned about Coronavirus disease (COVID -19)
- Correct cleaning and disinfection protocols are critical to prevent risk of spreading infection
- Zep Assure follows CDC standards and uses EPA registered and FDA approved products
- Zep Assure Armor promises longer-lasting antimicrobial protection between cleanings in a safe, non-toxic and environmentally-friendly way




EPA Registered Disinfectants that kill 99.9% pf bacteria and Viruses (COVID- 19)




FDA safety tested and approved hand sanitizers



Cleaning Formula won't damage delicate areas



Zep Assure Armor coatings provide long-lasting protection between cleanings*



Guidance provides reliable, consistent science-based health information



Zep Global Biosecurity program to actively prevent, eradicate and protection measures against SARS-COV-2 (COVID-19) and other microorganisms

*Disinfectants are **NOT** one-and-done (no residual surface protection)

Many disinfectants available

- Quaternary Ammonium Compounds (Quats)
- Chloride Compounds
- Hydrogen Peroxide
- Alcohols
- Many others

... critical to make fit-for-purpose selection



Effectiveness

Does it kill the pathogens we need them to within your facilities and equipment?



Kill Time

How fast can it kill pathogens? Do surfaces need to be wet?



Safety

Is it safe to use for people, the environment and to applied surfaces?



Easy of Use

Are the steps required for effective use practical within your operations and facilities?



Cost

Is the Total Cost of Clean acceptable for the outcome provided?

Different Applications and Methods Available



Fogging



Spray



UV

Developed a 3 step protection program in partnership with Zep

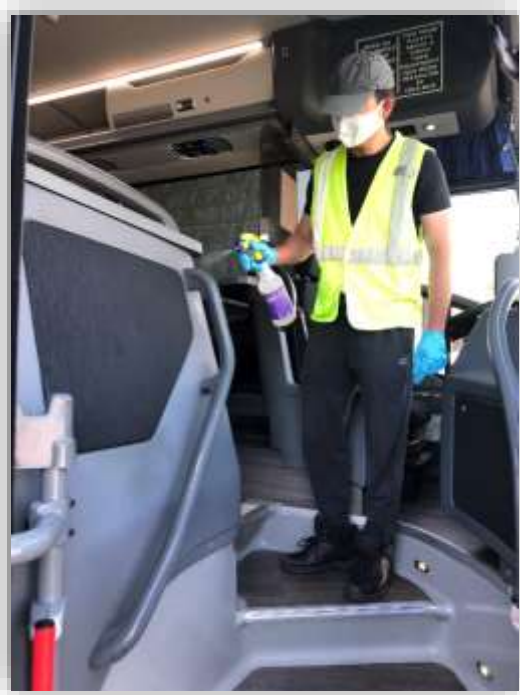
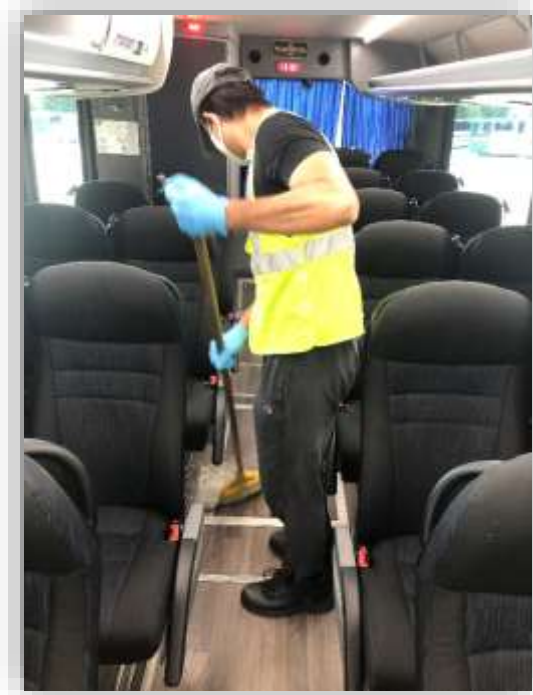


Maintaining hygienic work, learning and mobile environments

1. **Deep clean** surfaces to remove built-up grime and soil and prepare for disinfection
2. **Disinfect** to kill any virus present, following CDC guidelines and standard operating procedures
3. **Protect** by continuously repeating cleaning and disinfection processes; apply Zep's EPA-registered and FDA-certified coating products to create long-lasting protection between cleanings



Proven Results



Areas of Focus

Interior Cleaning

Interior Disinfection

Interior Coating

- All frequently touched surfaces (e.g., arm rests)
- Bathroom
- Floors

Enablement tools

SOP quick reference guide – visual management



Zep interior bus clean, disinfect, protect SOP

Interior cleaning steps

General cleaning

1. Perform walk through of bus assessing cleaning needs, picking up loose debris, and putting down all seat armrest.
 - *When performing steps 2 — 6, heavy soiled areas (spots and stains) should be sprayed with All Purpose Cleaner, allowed to soak, and then blotted a microfiber cloth. Repeat as necessary to remove soils.*
2. Spray all hard surfaces with All Purpose Cleaner (APC). Scrub surfaces with microfiber cloth with added attention to high touch points: arm rest, hand holds at top Of seats, seat belt straps & buckles.
3. Spray cloth seats with APC and wipe with microfiber cloth.
4. Wipe overhead and panels in seating area with microfiber clothes wetted with APC with added attention to high touch areas: panel area with light controls.
5. Remove loose debris from overhead storage racks. Apply APC and wipe clean with microfiber cloth. Apply APC to rails of overhead storage rocks and wipe with a microfiber cloth.

Deep clean



Complete assessments and site plans to ensure safer and more efficient cleaning processes. Prioritize disinfecting high-touch surfaces first. Clean affected surfaces to remove any build up, including soils and grime.



Zep Assure Armor Cleaner Concentrate

Rapidly removes built-up soils and grime in hard to clean but delicate areas. Extremely effective of removing general grit and grime that soils seating areas, floors, and walls. Excellent emulsifying and strong rapid wetting properties.

U61824 (4-1 gal) U60935 (5 gal)

Disinfect



Execute disinfection plan using Zep EPA-registered disinfectant, following CDC guidelines and standard operating procedures. Use Zep ready-to-use, no streaking cleaner and disinfectant (EPA Reg. # 6836-152-1270) Reference label for instructions.



Zep Aviation RTU Cleaner Disinfectant

Ready-to-use, non-streaking cleaner and disinfectant. (EPA Reg. # 6836-152-1270)

**H02501 (12-qt/cs)
H02589 (275 gal tote)**

Protect



Unify cleaning and disinfection processes to reduce risk Of infection. At a minimum, disinfect frequently-touched surfaces daily and display signage to demonstrate commitment to a cleaner and safer work environment. use Zep Assure Armor Surface Coating. Reference label for instructions.



Zep Assure Armor Surface Coating

Surface coating to reduce maintenance cost. Please reference the label for instructions.

U61624 (4-1 gal)



Completed Pilot demonstrating ability of the program to protect and limit growth of biologics in surfaces. Leveraged ATP testing for protocol validation

ATP Testing is the industry standard for rapidly measuring actively growing microorganisms through detection of adenosine triphosphate / ATP

- Visual inspection of work practices and cleaned surfaces is important
- ATP Testing for Cleanliness – Surrogate Testing
- Testing for biological material on a surface
- Helpful in not only confirming cleanliness but also in helping C&D staff to understand level of effort
- Threshold values are not standardized and vary widely

Representative Pilot Results



Location	Result/day/other													
	6/18/2020 – Initial	6/18/2020 – Post cleaning	6/18/2020 – Dis- infecting	6/18/2020 – Post protecting	6/22/2020 – Prior to in service	6/23/2020	6/26/2020	6/29/2020	7/2/2020	7/6/2020	7/7/2020	7/9/2020	7/14/2020	8/5/2020
Hand Rail	199	-	32	29	8	7	-	11	23	21	16	17	8	10
Window	2	-	3	3	0	0	-	0	0	0	0	0	1	0
Arm Rest	687	-	1	4	0	0	-	0	11	1	0	0	1	4
Floor	739	-	0	1	0	0	-	0	6	10	3	8	2	18
Hand Rail	0	2	0	1	2	8	3	16	20	7	7	-	21	45
Window	102	3	5	3	1	0	0	0	0	0	0	-	0	0
Arm Rest	40	3	3	3	1	1	0	0	43	0	0	-	13	0
Floor	13	3	2	3	1	1	0	1	3	1	1	-	16	13
Wheel Chair Ramp	144	1	2	4	1	0	0	0	17	9	6	-	195	38
Steering Wheel	102	6	5	7	7	11	12	28	101	78	100	-	51	62
Radio	1	2	1	0	1	3	0	0	0	0	1	-	0	10
Wheel Chair Buttons	3	1	3	2	2	4	1	1	16	8	4	-	14	16

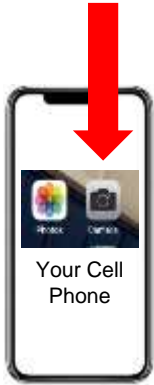
If you outsource your cleaning - ensure proper oversight

- No consistency across sites for SOP's, training, product selection, or best practices
- Contractors typically do not provide new product technologies that could proactively benefit your facilities
- Contractors choose the least expensive products to clean and sanitize the plant, as site managers are under pressure to meet weekly budgets
- Contractors self audit – audit results are typically what the plant does not do
- Contractors verify titrations for cleaners and sanitizers – who verifies them?
- Benchmarking the contractors is not broadly done

Zep assure™: Assure link / Sales Tool Resource Hub



★ Start Here



1. Point your phone camera at the Assure Link QR code shown to scan it

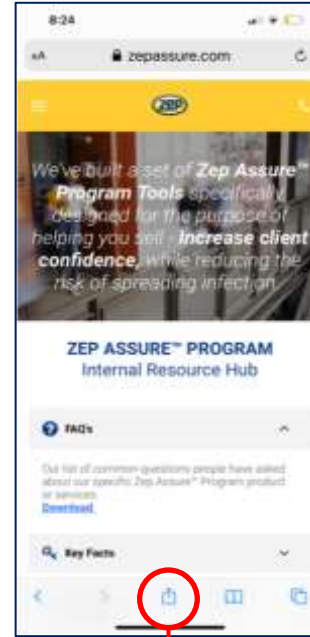


2. Tap the pop-up notification at the top of the screen

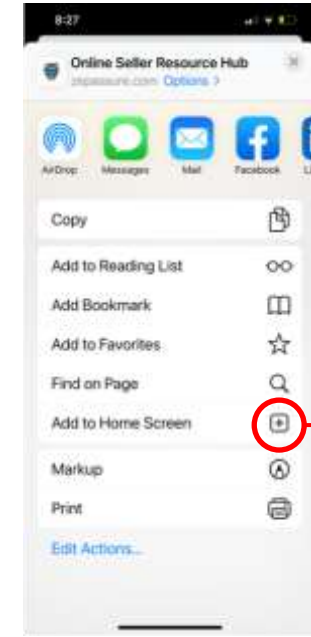


<https://www.zepassure.com/Online-Seller-Resource-Hub>

3. The Assure Resource Hub link will open



4. At the bottom of the page for iPhone/top for iPad locate and press this Icon



5. Press here to add to your screen.

Note: If you do not see a notification pop up, make sure that you have the *Scan QR Codes* feature enabled. You can do this by going to *Settings > Camera* and tapping the slider next to *Scan QR Codes*. You will know it is turned on when it is green.



COVID-19 Created Needs

- Looking for a faster, more effective and efficient way to disinfect vehicles and facilities across multiple sites
- Ability to “third-party” verify clean...to ensure no spot is missed with periodic inspection and verification
- Solutions that are easy and safe in use, lasting in performance and cost effective
 - Third-party verified solutions – CDC, EPA and FDA approvals
 - Dispersible disinfectant to be applied post cleaning
 - “Persistent” anti-microbial agent that provides virucidal/biofilm resistance that last for at least 30 days
 - Contribute to reduced use of PPE across facilities
- Access to data and KPIs to track impact and manage uptime
- Most important, provide comfort and reassurance to employees and riders of their safety and protection
- Plan and execute a program to achieve results, scalable to enterprise



Questions