



Sharing Arc Flash PPE can be considered somewhat of a vague discussion- what we have observed, as a global manufacturer of electrical PPE are companies purchasing suits for each qualified worker. This can be considered the most effective technique to mitigate viral spread amid COVID-19. Certainly, cleaning with disinfectants and proper laundering can help mitigate the risk of viral spread and greatly eliminate the potential of compromising multiple individuals' immune systems, but an even greater step of responsible work practice is to assign each qualified worker their own PPE.

In the following bullet-points we will attempt to address the health concerns facing the electrical safety industry, help shed light on observed best and safest workplace practice for use of AF (Arc Flash) PPE and provide specific safety standards in conjunction with these important topics.

(WHO) The World Health Organization

"It is not certain how long the virus that causes COVID-19 survives on surfaces, but it seems to behave like other coronaviruses. Studies suggest that coronaviruses (including preliminary information on the COVID-19 virus) may persist on surfaces for a few hours or up to several days. This may vary under different conditions (e.g. type of surface, temperature or humidity of the environment)."

Porous & Non-Porous Surfaces

Certain surfaces and compositions of fabrics are deemed to be porous or non-porous when referring to PPE. Non-porous surfaces may include such items as shields, hard hats, insulated tools, etc. Porous surfaces would be considered fabric (jackets, bib-overalls, switchgear hoods, balaclavas, etc.). Porous surfaces can and will hold potentially harmful bacteria, germs, and viral diseases for greater lengths of time, while hard non-porous surfaces can be cleaned more rapidly.

Cleaning of Non-Porous Surfaces (Shields)

"Clean and inspect after use. Clean with a damp cloth unless heavily soiled. Should further cleaning be required, clean with mild soap and water, pat dry. Disassemble if required, for cleaning or inspection. Inspect and replace any damaged or worn components."

-Paulson mfg.

Cleaning of Porous Surfaces (AF PPE Laundering)

Before and after each use of AF PPE there should always be a visual inspection performed of garment(s); looking for rips, tears, abrasions, stains, anything that could potentially jeopardize the integrity of the fabric. After each use, it is best advised to laundry garments (see ASTM F1449 Standard) to help mitigate the risk of spreading viral disease and practicing safe and healthy hygiene.

ASTM F1449 [Standard Guide for Industrial Laundering of Flame, Thermal, and Arc Resistant Clothing]

[5.1] This guide identifies the responsibilities of the fiber, fabric, and clothing manufacturers, as well as the processor, the processor's chemical supplier and the end user. **[5.2]** This guide describes the key components involved in a program for the care and maintenance of flame, thermal, and arc resistant clothing. **[5.3]** The guidelines in this standard will provide a processor assistance to develop a processing system that maintains the flame, thermal, and arc resistant characteristics of the clothing during its useful service life. **[5.3.1]** The development of published formulas for each fabric and level of soiling is difficult at any given point in time due to ongoing continuous improvement of flame, thermal and arc resistant clothing, including new fibers, fabrics, and laundering equipment and procedures. **[5.4]** The guide also provides suggestions as to when flame, thermal, and arc resistant garments should be removed from service.

All OEL clothing has washing and visual inspections located online and on each hangtag that comes with each garment. The general rule of thumb has been [most] at-home laundry detergents are safe to use, provided these detergents do not contain bleach. Secondly, the use of fabric softeners can have a negative impact on specifically treated cottons. There has been no official and/or documented testing done or required of certain brands of detergent on finished goods or textile development.



Sharing vs. Individual Use

Sharing AF PPE, or any PPE in general is typically a shared/communal product in the industrial/construction industry. These items are not inexpensive, but rather very expensive. We are handling high levels of chemistry and advanced textile technology designed to protect lives in the most sobering of circumstances... As the world continues to turn and infectious diseases arise and upset our normal working procedures, there does appear to be a growing concern about this practice of sharing PPE. The question is, "Do we feel confident in the hygiene of the individual who might have used this suit before me? Did they wash everything according to proper washing and laundering instructions? Could the fabric be damaged, and I am unaware of this? Was that person potentially sick and now I am in very close proximity to their garments, breathing in the germs/bacteria/virus they might have had?"

If these diseases can become fatal, we need to consider the long-term repercussions of sharing versus individual PPE. This topic is for every company to consider carefully as there is no resounding standard about the debate of sharing or not; but perhaps we will consider the cost(s) of disease in the same cost consideration of human life.

Cleaning vs. Disinfecting

The **CDC** [Center for Disease Control and Prevention] definition of cleaning vs disinfecting

Cleaning refers to the removal of germs, dirt, and impurities from surfaces. Cleaning does not kill germs, but by removing them, it lowers their numbers and the risk of spreading infection

Disinfecting refers to the using chemicals to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs on a surface after cleaning, it can further lower the risk of spreading infection.

Cleaning should always be a standard routine after each use of AF PPE, coupled with a visual inspection of garments before and after each use. There has been some initial discussion about using higher levels of disinfecting prone detergents and aerosols to further prevent cross contamination, but these are not going to be testable means of prevention [today, perhaps in the future]. Disinfecting the insides of the garments and shields using proper cleaning and disinfecting solutions can be considered the greatest defender against viral spread based on today's standards and assigned PPE requirements.

Safest Work Practice, Final Thoughts

We want to ensure worker safety and not try to promote corporate profits. During a time of pandemic and hysteria, it can be somewhat tactical and distasteful to encrypt falsified accusations of safety measures through the means of fear.

We want to always consider acting in logical and responsible manners and continue to strive for the greatest measure of safety, both personally and professionally.

"To preserve and protect the safety of the Electrical Worker." – OEL Mission Statement

OEL is a true American family business. OEL Worldwide is a large manufacturing company of Arc Flash Safety apparel [NFPA 70E], Double-Insulated Hand-Tools [ASTM 1505-1], and a global leader in supplying Rubber Gloves. OEL is based in Colorado, USA. OEL has emerged in the Electrical Safety Industry (NFPA 70E) as a leader in design, delivery, and quality.