Advantage® 900 Half-Mask Respirator

Frequently Asked Questions - EMEA

If I have successfully fit tested on an Advantage 200LS or Advantage 400, will a new fit test be required if I move to the Advantage 900 Half-Mask Respirator?

Yes—although the respirator facepiece has the same contours as the other respirators, there is a different head harness, yoke, and attachment method. Further, since this is a different respirator model number, a new fit test would be required. Fit testing is mandatory in some countries. Please check local regulations.

Can the Advantage 900 Half-Mask be used with chemical (such as ABEK) or combination (such as ABEK P3) cartridges or Flexi Filters?

The Advantage 900 Respirators are approved with the P2 filter cartridges that are in current production. It is **NOT** approved for use with chemical filters. The use with chemical or combined cartridges create an increase breathing resistance as there is no exhalation valve. The Advantage 900 only meets EN requirements for breathing resistance with Advantage P2 filters.

Does the speech diaphragm in the Advantage 900 Half-Mask make it unsafe or problematic for use around MRI devices?

No—our speech diaphragm is composed of anodized aluminum. The magnetic field(s) imposed by Magnetic Resonance Imaging (MRI) devices do not interact with non-magnetic/non-ferromagnetic materials such as aluminum and titanium. The Advantage 900 Respriator can be considered safe for use in MRI suites. All other items on the Advantage 900 represent no risk of MRI interference.

Does the lack of an exhalation valve result in increased breathing resistance?

The Advantage 900 Respirator, with P2 filters, meet EN requirements for breathing resistance. For inhalation resistance, the Advantage 900 used with P2 filters achieves similar performance to that of similar half mask respirators with exhalation valves.

Since the filters are being used to filter both inhaled and exhaled breath, does any increased moisture buildup affect the filtration performance or service life of the filters?

This is unlikely. Filtration efficiency is not impacted with normal condensing moisture buildup. Filtration penetration performance would only be impacted when filter media reaches near saturation (>8 ml per cartridge), such as following direct splash or immersion with water. In these conditions, breathing resistance would increase substantially which is an indicator to change filters, per the user's instructions.

Since the filters are being used to filter both inhaled and exhaled breath, is there a risk that viral particulates that were captured in the filter through inhalation can be dislodged and reintroduced in the atmosphere on exhale?

Although filters without exhalation valves are already used throughout healthcare in the form of filtering facepiece/FFP2 respirators, MSA conducted screening tests on our P2 filters during the development of the Advantage 900 Respirator. Filters were saturated with up to 115 mg of aerosolized particulate test solution (DOP). Once fully loaded, filters were flipped and tested in the exhalation direction with air flow rates as called out in the EN Standard Test Protocols for filter efficiency testing. During the testing, MSA did not observe re-release of particulates. MSA has not conducted evaluations of particulate release using biological agents.

What is the required changeout schedule for particulate cartridges or filters?

Filter replacement schedules are typically determined by a couple of factors including filter loading (increased breathing resistance) and a facility's established infection control policy. Generally, in industrial settings, filters are replaced when soiled or contaminated, damaged, and when breathing resistance increases. However, in healthcare settings breathing resistance will unlikely be a reason for filter replacement since filters should seldom, if ever, become loaded with heavy concentrations of dust. In the European Standard EN 1827:1999+A1:2009, particles filters are intended for a single shift use only. The maximum service time depends on the conditions of use. Increased breathing resistance indicates the end of the service time. The filters must then be replaced at the latest. Always exchange both particle filters.

Testing according to EN 143:2021, which includes the reusability of particle filters, and additional field tests have given evidence that if used in environments with low particle concentration, e.g., medical applications, the Advantage P2 particle filters can be used for more than one shift. This requires that the filters are clean and undamaged, and that there is no indication of increased breathing resistance. Advantage P2 particle filters shall be exchanged after one year after first use, at the latest.

CDC and ECDC (US Centers for Disease Control and Prevention and European Centre for Disease Prevention and Control) has provided guidance for healthcare settings regarding cartridge reuse during the pandemic:

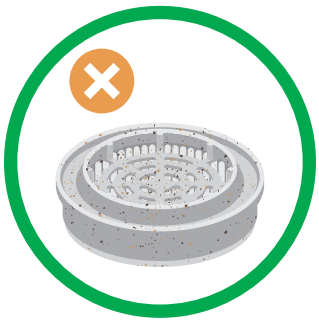
https://msa.webdamdb.com/embeddables/download.php?token=JWBoKOaEBzs83eFLo1

Filter cartridges *(except for unprotected disc type, i.e., pancake style)* may be used for an extended period if the cartridge is disinfected after each patient interaction provided the disinfectant or cleaning agent does not come in contact with the filter media; *and*

Filter cartridges must not be dipped or immersed in a cleaning or disinfection solution because this may damage or render the filter material ineffective. When using a cleaning or disinfectant wipe on the external surface of a filter cartridge, users should avoid contact with the filter media on the inside of the cartridge.

Each healthcare organization should follow their established infection control policy and replace the filter cartridges when:

It becomes difficult to breathe comfortably *(will vary from individual to individual)*.



The filter becomes dirty or physical damage occurs.

The filter is wet or submerged.

Are alternate cleaning and disinfection methods available?

MSA has provided detailed cleaning instructions in the product manual. Certain settings in healthcare and pandemic situations may present the need to employ alternate procedures which may have variations to this instruction. If such actions are deemed necessary by the provider or as part of that program, the following alternate instruction is provided.

Remove cartridges and disassemble facepiece.

Inspect the facepiece and filter cartridges per User Instructions for wear or damage, and remove from service or replace parts, as necessary.

To remove debris and soil, manually clean the facepiece by immersing it in warm water with neutral detergent, scrub with soft brush until clean. Rinse thoroughly with fresh warm water.

Disinfect by soaking, wiping, or spraying the facepiece according to facility protocol and User Instructions. Rinse thoroughly with fresh warm water. Air dry in a non-contaminated area.

Inspect and reassemble the respirator, as described in the User Instructions.

On an interim basis, wipe-cleaning of the facepiece and cartridge filters can be employed, but should not be the only method of cleaning and disinfection. Wipe all components with appropriate cleaning solution, including the interior and exterior of the facepiece and head harness, as well as outside of hard plastic cartridges. Allow to dry prior to next use in a non-contaminated area. Inspect prior to use as described in the User Instructions.

Recommended disinfectant for the half mask: Neoform K Plus/Dr. Weigert or Oxivir Excel. Follow the instructions on the cleaner for contact time and concentration for disinfection.

Advantage Half-Mask Respirator FAQs

If I am already cleaning and sanitizing my PPE in accordance with CDC (Centers for Disease Control and Prevention) and manufacturer guidelines, can the exterior of a particulate cartridge be sanitized using the same or similar solution or method?

For filter cartridges, the outside surface of the hard-plastic case should be wiped down for cleaning and disinfection using a clean damp cloth soaked in solution. For disinfecting solution, apply until visibly wet for appropriate contact time and then remove the disinfecting solution with a clean, water-soaked cloth and air dry. Do not allow the cleaning or disinfecting solution to reach the internal filter media. Never submerge cartridge filters in any liquid.

What is the shelf life of MSA particulate respirator cartridges?

Low Profile P2 filter cartridge employ mechanical filtration and are composed of micro-glass filtering materials which have an inherent resistance and/or are formulated to have resistance to atmospheric storage conditions. These products have a proven shelf life of 10 years. Filters should not be used if their age is greater than ten years from the date of manufacture.

Respirator masks may be deployed, regardless of age, provided that pre-use inspections and tests outlined in the instruction manual are successfully passed at the time of deployment.

It is recommended that respirator masks and filters be stored indoors, free from temperature and humidity extremes, with filter cartridges in their original packaging.

Where to store the used filter after use?

Each user will need to be individually supplied with a pair of filter, will write the 1st day of use on the filters pair + his name. He will have to clean the filters as per cleaning instructions and store them in the advantage pouch in his locker. The mask can be cleaned in depth so the mask can be supplied individually or not.

Our Mission

MSA's mission is to see to it that men and women may work in safety and that they, their families, and their communities may live in health throughout the world.

MSA: WE KNOW WHAT'S AT STAKE.

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit ***MSAsafety.com/offices***.

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