# BEST PRACTICES TO HELP REDUCE FIREFIGHTER RISK


*The role of a firefighter has never been more challenging. Some of these challenges are because of climate change with firefighters called out to incidents of flooding, wildfires and other natural disasters, but others are as a result of the changes in the fabric of our own lives.*

*Recently, the fire service industry has become aware of long-term health and safety risks inherent in the fire service profession, including indications of higher incidence rates of cancers and other malignancies believed to stem from occupational exposure. While it is impossible to precisely discern the causes of long-term malignancies, it is now generally accepted that firefighting is linked to long-term health hazards, which is believed to be connected to exposure to unknown chemicals and constituents released during the fire.*

*Industry organizations and leaders are making a push to raise awareness about these risks and have suggested several best practices by which firefighters can help to reduce their risk. Firefighters must properly wear the best protective gear, and, more importantly, maintain, clean and disinfect it.*

## How does MSA address that topic to the Firefighter community?

For many fire departments, garment cleaning and maintenance already has an established protocol, with many brigades working with garment suppliers who provide a full-service solution for regular repair and maintenance. However, there has been a strong culture that says, *"The dirtier the kit the more of a hero the firefighter!"*. There's a growing realisation that actually, the dirtier the kit, the greater the risk of exposure to harm. In some regions, the culture is changing with firefighters having a better understanding of the risk and demanding a clear set of guidelines to help them safely wear, remove and decontaminate or clean their kit.

**MSA is working with its customers to provide a "head to toe" recommendation on cleaning and disinfection of its flagship products, such as SCBA and Fire Helmets. As a trusted advisor to brigades all over the world, MSA has established a set of recommended guidelines on cleaning and disinfection available in the product manuals.**

Cleanability is now one a key focus for all new product development. MSA is helping to advise its customers of industry-accepted cleaning and disinfecting processes and procedures in an effort to help maintain firefighters' equipment and protect it from damage caused by cleaning agents or the cleaning methods themselves.

## M1 SCBA – Designed with full protection in mind

Talking to our customers, we've learned that, not surprisingly, equipment cleaning is their number 1 concern. As well as wanting to bring the most innovative equipment on the market, MSA considers various aspects of a fire fighter's working environment and designs a product that can be easily cleaned and disinfected (for example relying more on self-repelling textiles).

The MSA **M1 SCBA** has been designed with this in mind. All of the backplate narrow spaces and angles are easily reached, the harness is made from dust and water repellent materials that reduces time for mechanical cleaning, aids fast drying and is tear resistant, making it suitable for repeated mechanical wash.

The kit is easy to disassemble and maintain. For example, the **G1 mask** can be disassembled in less than 30 seconds – and the entire SCBA can be machine washed with no disassembly required.


## At the Fire Scene – Gross Cleaning

The first step towards decontamination should take place at the Fire Scene. The M1 SCBA is designed to be fully flushed at the incident. There is a protocol for donning and doffing equipment and clothing and, of course if the fire fighter was to remove his or her SCBA immediately, he or she would remain at risk from contamination whilst the cleaning process continues. Therefore, MSA offers a filter that is fixed to the full-face mask outlet once the demand valve has been removed. This also allows the fire fighter to remove outer garments that may be contaminated and prevents any inhalation of particles during the process.

## At the Fire Station – Daily Cleaning

### Hand Cleaning

For light soiling the entire SCBA, hoses, pressure reducer and pressure gauge cleaning can be carried by hand with a brush or damp cloth or underwater, ensuring the correct steps are taken to avoid water ingress or penetration.

### Machine Cleaning

Machines can be used to clean complete and pressurised SCBA. Rough dirt should be removed with a water hose before the equipment goes into the machine.

### At the Workshop – Deep Cleaning

After heavy soiling, the M1 SCBA can be cleaned first with a hand pre-wash, followed by machine cleaning, following the same protocols as machine cleaning.

### The notion of Disinfection in the cleaning process

All components of any SCBA that have come into contact with the saliva or the exhaled breath of the user must be disinfected such as full face masks or lung-governed demand valves (LGDV). As opposed to general cleaning, disinfection destroys micro-organisms such as bacteria and fungi. Only clean breathing apparatus components can be disinfected so users should follow the hand and machine cleaning protocols first, before disinfection takes place.

### Importance of the drying step

It is critical to make sure that the pressure reducer is dry before it is returned to service to avoid the potential risk of icing. You may use an air gun to dry the pressure reducer (provided that it is compressed air with breathing air quality according to EN 12021).

## SCBA Accessories

MSA designed, developed and manufactures an SCBA, and accessories, that can be cleaned either manually or mechanically. In addition, MSA educates its customers on industry-accepted best practices on *cleaning and disinfecting.*

## GALLET F1XF Fire Helmet

Fire brigades have also asked about cleaning procedures for the flagship GALLET F1XF Fire Helmet. While focus has been given to turnout gear and SCBA, mainly because they are shared equipment, individual fire helmets can be easily cleaned according to *manual or mechanical procedures,* depending on the level of equipment of each fire brigade.

## The Future?

*As a leading safety products manufacturer, MSA is focussed on continuing to innovate on behalf of firefighters around the world so that their personal protective equipment will work together to help keep them safer than ever before. With heightened awareness of the inherent risks they are facing, MSA is actively working with its customers to provide guidance by communicating industry accepted best practices on the total care of equipment.*

**To find out more about MSA's M1 SCBA, click here: *https://gb.msasafety.com/M1***

**To sign up for MSA's newsletter, go to: *https://gb.msasafety.com/NewsletterRegistration***