

Cleaning & Disinfection for MSA Fire Safety Products

Committed to Firefighter Health & Safety



Cleanability Value Proposition



- ✓ MSA has evaluated a mechanical cleaning process
- ✓ washing with 45°C, 1% detergent solution **15 to <45 minutes**
 - ✓ We tested M1 SCBA and fabrics to **100 cycles of washing**
 - ✓ **The samples have been evaluated by an external laboratory.**

- ✓ Usage of non tested detergents can cause deterioration or damage on the equipment – *especially higher concentrations of alcohol can cause brittleness on plastic components and in particular on lenses*



Before starting

Wear The Gear | Maintain The Gear | Clean The Gear

- ✓ Users need to perform their own Risk Analysis for choosing appropriate PPE to be used in workshops

- ✓ Combined filter with mask adapter:
 - ✓ Designed to be mounted on G1 FFM
 - ✓ Goal is to protect worker/firefighter against particles and toxic fumes while cleaning

- ✓ Other filters, respiratory devices and PPE can be used
 - ✓ FFP3 masks
 - ✓ PAPRs
 - ✓ Face shields
 - ✓ Gloves
 - ✓ Rubber boots
 - ✓ Other PPE...

- ✓ Personal protective equipment (PPE) provides limited protection

- ✓ Proper use, cleaning, and disinfection of PPE may help to reduce exposure to toxins, contaminants, biological agents, and the risk of viral infection but **IMPORTANTLY IT DOES NOT ELIMINATE** the risk of exposure, infection, illness, or death



M1 SCBA - Cleaning

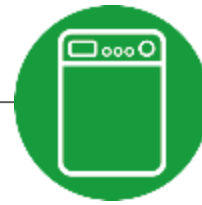
The SCBA usage cycle

- ✓ MSA cleaning guidelines are showing the **7 steps** from operation to readiness for use
- ✓ Special attention must be paid to the assessment of decontamination and cleaning to decide if the equipment may be used again
- ✓ During the cleaning and disinfection process with water and solutions with recommended detergents, **the pressure reducer and the demand valve must be completely dry before being returned to service**
- ✓ The MSA recommendations and guidelines must be strictly adhered to



The usage cycle : cleaning

Background knowledge



- ✓ Definition of **CLEANING**
- ✓ to remove soot particles by manual and/or mechanical + chemical actions
 - ✓ Detergent, brush, sponge (hand)
 - ✓ Detergent, water under pressure (machine)






- ✓ M1 backplate
- ✓ M1 pressure reducer
- ✓ M1 Gauge / electronic devices
- ✓ M1 Advance/Basic/eXXtreme harness
- ✓ Cylinder and valve
- ✓ Cylinder cover
- ✓ M1 LGDV
- ✓ G1 FFM



Please follow the applicable instructions:

Before going into an inherently dangerous or hazardous environment, make sure there is no water, moisture, or dampness on or in any of the SCBA components (e.g. PR18, whistle, etc.). Any moisture on or in the SCBA components can freeze and causing the SCBA to not perform as designed or intended. Make sure all components operate correctly before returning the SCBA to service.

The usage cycle : Cleaning

	Hand	Machine	
			
Hvordan	Kar	Dysemaskin	Trommel maskin
Hvor	Brannstasjon, røykdykkerverksted	Brannstasjon, røykdykkerverksted	
Komponenter	Bakplate, regulator, seletøy, maske, lungeautomat, flaske, flasketrekk	Bakplate, regulator, seletøy, maske, lungeautomat, flaske, flasketrekk	Seletøy, flasketrekk maske
Utstyr/ Kjemikalie	Børste, klut eller svamp Kjemikalie Lejon FFE cleaner	Beskyttelses propper Kjemikalie Lejon FFE cleaner	Vaskepose for maske Kjemikalie Lejon FPG cleaner
Temperatur	Maks. 45°C +/- 5°C	Maks. 45°C +/- 5°C	
Vasketid	15-45 min	15-45 min	15-45 min
Machine Brand/ program	N/A	MSA vaskeprogram spesifikt tilpasset maskin fabrikant for optimal rengjøring	MSA vaskeprogram spesifikt tilpasset maskin fabrikant for optimal rengjøring

The usage cycle : Cleaning



Tools for hand-wash

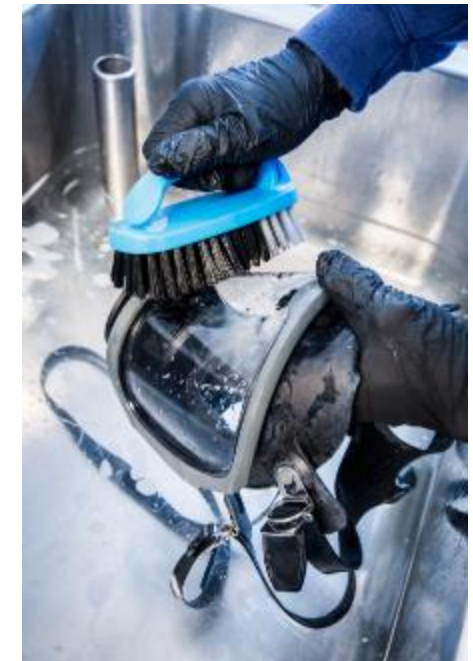
✓ Pre-wash (heavy soiling)

- ✓ Remove compressed air cylinder
- ✓ Disconnect LGDV
- ✓ Separate harness assembly and cylinder cover
- ✓ Remove shoulder strap from the slots of the backplate
- ✓ Clean the equipment with a **brush, damp cloth or similar**
- ✓ Clean harness assembly and cylinder cover in a separate tumbling machine



✓ Daily wash (light soiling)

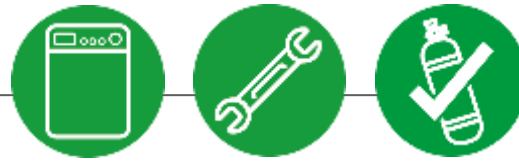
- ✓ **With a brush, damp cloth or similar**
- ✓ Clean hoses, pressure reducer and pressure gauge preferably by hand
- ✓ To clean under water: **Pressurize** the pressure reducer and seal the warning signal with **yellow protective cap** (10190947-SP) to avoid potential water ingress
- ✓ Make sure no water penetrates in high and medium pressure cavities





KEY TAKEAWAY

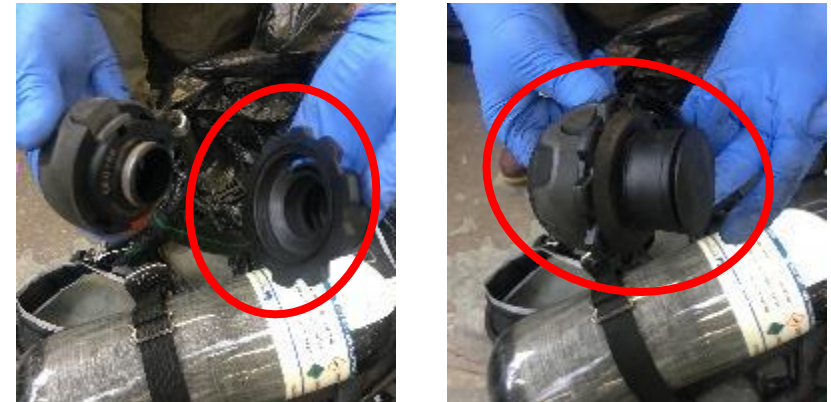
Light vs. heavy soiling should be based on customer's risk analysis and assessment.
MSA guidelines must be followed.
Do not use solvents (e.g. acetone, spirit, alcohol, petrol)

The usage cycle : Cleaning



Tools for machine-wash

- ✓ Place the entire SCBA in washing machine with open cylinder or high pressure connection
 - ✓ Seal warning signal (whistle) 
 - ✓ Yellow protective cap 10190947-SP
 - ✓ (low) pressurize LDGV
 - ✓ No disassembly required
 - ✓ AS washing adapter 10200071 
 - ✓ Switch LDGV on to produce continuous air flow of 5l/min
- ✓ Ready to wash!
- ✓ After cleaning, close cylinder, remove washing adapters and whistle cap and release air from LDGV



The usage cycle : Cleaning

Vaske kjemi

MSA testet kjemi for vask av pusteluftsett i maskin
Lejon FPG Cleaner



MSA testet kjemi for vask av masker i trommelmaskin
Lejon FPG Cleaner



Anbefalte vaskeposer for trommelmaskin
Lejon Fleece high flow



SCBA - Flushing and Drying

Warning

Important rules before cleaning and disinfection



Please follow the applicable instructions:

Before going into an inherently dangerous or a hazardous environment :

- Make sure there is no water, moisture, or dampness on or in any of the SCBA components.
- Any moisture on or in the SCBA components can freeze and result the SCBA not performing as intended or designed.
- Make sure all components operate correctly before returning the SCBA to service.
- Make sure there is no water or ice on the inner surfaces and components of the Demand Valve, Demand Valve buttons, and bypass valve (if applicable).
- Make sure the buttons and bypass valve operate correctly.
- Do NOT use a Demand Valve that has water contamination on the inner surfaces or components.
- Remove the Demand Valve from service and dry all surfaces and components fully.
- Make sure all Demand Valve components are fully dry before returning the Demand Valve to service.

The usage cycle : Flushing and Drying

Flushing and Drying the SCBA and its components



MSA
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- ✓ After using disinfectants it is recommended to fully rinse the product to eliminate any residue that may impact the product over time
- ✓ Rinsing **FFM**
 - ✓ Thoroughly rinse with clear, lukewarm running water
- ✓ Rinsing **LGDV**
 - ✓ Rinse and submerge in water again

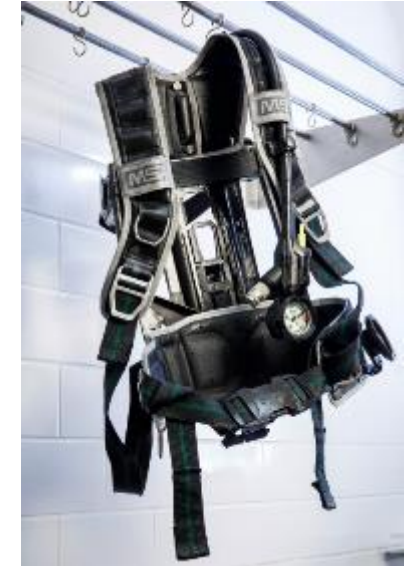


The usage cycle : Flushing and Drying

Flushing and Drying the SCBA and its components



	Ambient air	Drying cabinet
		
Where	Fire station, workshop	Fire station, workshop
Component	Backplate, harness, LGDV, FFM, cylinder, cylinder cover	Backplate, harness, LGDV, FFM, cylinder, cylinder cover
Tools	In (ventilated) room	maximum of 45°C (± 5°C)



The usage cycle : Flushing and Drying

Final Steps

- ✓ Special attention must be taken on pressure reducer and make sure it is dried with air gun (compressed air with breathing air quality according to EN 12021) to avoid potential risk of icing
- ✓ Confirm that the **LGDV** is dry to avoid potential risk of icing



Testing and visual inspection



- ✓ Independent from the product, the devices should be regularly checked and serviced by trained specialists
- ✓ Observe the maintenance intervals in the instruction and maintenance manuals
- ✓ Ensure that each of the listed function tests in the respective manual must be performed according to the “Maintenance Intervals” or after disassembly and assembly of parts and/or component groups



5 Key Takeaways

1. Advise customers to **strictly follow** MSA cleaning guidelines
2. Always clean **pressurized** SCBA/components
3. Use MSA **tested** detergents, disinfectants and drying processes
4. **Drying** step is essential to avoid potential risk of icing and functional damage
5. MSA products fit to a **variety** of cleaning processes and washing machines that are available today in the market