





Minimum Recommended Guidance on Protection and Decontamination for First Responders Involved in COVID-19 Cases – Quick Reaction Guide

By Christina M. Baxter (Emergency Response TIPS) and Jeffrey O. Stull (International Personnel Protection)

Minimum PPE Recommendations

- The principal exposure to emergency responders occurs by inhaling aerosolized droplets from an infected person's sneezes, coughs, or talking and by hand to nose, mouth, and/or eye contact (autoinoculation).
- Select appropriate PPE including respirators, eye protection, gloves, and body protection to prevent exposure or limit contamination transfer per recommendations below; obtain PPE that meets industry standards wherever possible.
- Follow manufacturer, CDC, or WHO instructions for properly putting on, wearing, and removing PPE items; undertake extreme care and follow the appropriate sequence for doffing PPE that is contaminated.
- Carefully dispose of single-use PPE items and clean/sanitize/disinfect any multiple-use PPE as appropriate to the PPE item.

Type of Protection	Preferred or Ideal	Minimum	Other Factors
Respiratory	NIOSH approved P100 filtering facepiece respirator; or Reusable elastomeric facepiece with P100 filters; or	NIOSH approved N95 filtering facepiece	If surgical/procedure mask used (should meet ASTM F2100) Level 2 or 3. Europe equivalents: FFP2 ≈ N95
	PAPR with HE filters		FFP3 ≈ P100
Ocular	ANSI Z87.1 N3 or N5 rated goggles; or Full facepiece respirator	ANSI Z87.1 compliant Disposable or reusable faceshield; or Safety glasses	Attached shields on surgical or procedure masks are not effective by themselves (wear with safety glasses)
Dermal – Hand	Examination gloves meeting ASTM D6319 (nitrile), ASTM D6977, or NFPA 1999; Double gloving offers additional physical protection	Examination gloves meeting ASTM D3578 (latex); or cleaning elastomeric or coated work gloves	Avoid glove liners or cloth- based gloves. Always thoroughly clean hands with soap and water or hand sanitizer after use
Dermal – Body	Isolation gowns that meet Level 4 criteria in AAMI PB70 and ASTM F3352; or Single use garments or ensemblescertified to NFPA 1999	Any protective garments offering passing viral penetration resistance per ASTM F1671 with adequate integrity, strength, and durability for intended use	Lesser barrier clothing may result in contamination of underlying uniform or work clothing but may be suitable for light exposures. European equivalent: ISO 16604 at 3.5 kPa per EN 14126 ≈ ASTM F1671 and NFPA 1999

Minimum Decontamination Recommendations

- Utilize an EPA-registered disinfectant suitable for COVID-19 (minimum) and appropriate for PPE item
- Apply using an electrostatic sprayer for maximum coverage and minimal runoff (if safe for disinfectant)
- Proper protective equipment should be worn when applying disinfection and/or decontamination solutions