# PPE Classification System
## Levels from OSHA and EPA


## A. SCBA, fully encapsulating suit (highest skin and respiratory protection)

| Respiratory Protection | • Positive-pressure, full-face piece self-contained breathing apparatus (SCBA)  
|— OR —| • Positive pressure supplied air respirator (SAR) with SCBA-type auxiliary escape respirator  
| Clothing | • Totally encapsulating chemical- and vapor-protective suit  
| | • Chemical-resistant inner suit (e.g., Tyvek coveralls)  
| | • Long underwear  
| | • Hard hat (worn under suit)  
| Gloves | • Inner and outer chemical-resistant gloves  
| Boots | • Chemical-resistant boots, with steel toe and shank  
| Advantages | • Maximum available skin, respiratory, eye protection  
| Disadvantages | • Shortest length of time in a protective garment due to heat, other physical and psychological stressors, limited air supply  
| | • Restricted mobility  
| | • May exceed protection level necessary for healthcare workers working in healthcare facilities  
| | • Requires highest level of:  
| | - Ongoing training  
| | - Suit acclimatization  
| | - Medical monitoring  

1Optional. To be worn as indicated following an assessment of environmental hazards and responder need.

## B. SCBA, hooded clothing (high respiratory, less skin protection)

| Respiratory Protection | • Positive-pressure, full-face piece self-contained breathing apparatus (SCBA)  
|— OR —| • Positive pressure supplied air respirator (SAR) with SCBA-type auxiliary escape respirator  
| Clothing | • Hooded chemical-resistant clothing  
| | - Overalls and long-sleeved jacket  
| | - Coveralls  
| | - One or two-piece chemical splash suit  
| | - Disposable chemical-resistant overalls  
| | • Chemical-resistant inner suit (e.g., Tyvek coveralls)  
| | • Face shield  
| | • Hard hat (worn under suit)  
| Gloves | • Inner and outer chemical-resistant gloves  
| Boots | • Chemical-resistant boots, with steel toe and shank  
| | — OR —  
| | • Disposable, chemical-resistant outer boot covers  
| Advantages | • Maximum available skin, respiratory, eye protection  
| Disadvantages | Compared to Level A PPE  
| | • Requires same degree of user training and medical monitoring  
| | • Equipment has same sustainability issues  

1Optional. To be worn as indicated following an assessment of environmental hazards and responder need.
| Respiratory Protection | • Full-face or half-mask, negative pressure air purifying respirator (APR)  
|                        | • Escape Mask¹  |
| Clothing                | • Hooded chemical-resistant clothing  
|                        |   - Overalls  
|                        |   - Two-piece chemical splash suit  
|                        |   - Disposable chemical-resistant overalls  
|                        | • Chemical-resistant inner suit (e.g., Tyvek coveralls)¹  
|                        | • Face shield¹  
|                        | • Hard hat¹  |
| Gloves                  | • Inner and outer chemical-resistant gloves¹  |
| Boots                   | • Chemical-resistant boots, with steel toe and shank  
|                        |   — OR —  
|                        | • Disposable, chemical-resistant outer boot covers¹  |
| Advantages              | • Increased mobility as compared to Level A or Level B PPE  
|                        | • Much less physical, psychological stress  
|                        | • Extended operation time without air supply limitations  
|                        | • No fit testing required for hooded respirators  |
| Disadvantages (Operational impact and requirements) | • CANNOT be used:  
|                        |   - When airborne hazard concentrations are immediately dangerous to life and health  
|                        |   - In low oxygen environments  
|                        | • Requirements:  
|                        |   - User enrollment in medical monitoring program  
|                        |   - Potential fit testing of respirators before they are issued and worn  
|                        |   - Ongoing competency-based training and exercise  
|                        |   - Equipment procurement  
|                        |   - Ongoing equipment maintenance  
|                        |   - Presence of a safety officer during wearing of PPE  |

¹Optional. To be worn as indicated following an assessment of environmental hazards and responder need.

**NOTES on Level C PPE**

- Level C PPE is the ensemble of choice for first responders and first receivers caring for victims highly suspected to be contaminated with radiological material
- Level C PPE Respiratory Protection  
  - Hooded NIOSH-certified CBRN powered air-purifying respirators (PAPRs) (“all-hazards PPE”) with Assigned Protection Factor (APF) of ≥1000 including  
    > Appropriate breathing filters based on hazard vulnerability analysis  
    > Combination organic vapor/acid gas/High Efficiency Particulate Air (HEPA) filter (aka “WMD” cartridges) OR  
    > Filters appropriate to identified agents such as radioactive particles or chemicals not filtered by “WMD” cartridges  
- A non-powered air-purifying respirator (APR) may be worn when  
  - Hazardous substance(s) has/have been identified and quantified and  
  - Data confirm that a negative pressure respirator will adequately protect users from identified inhalation hazards  
- For extended or sustained operations, a hooded, powered air-purifying respirator (PAPR) is more comfortable and easier to use.
### Face shield and goggles (nuisance contamination)

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<tr>
<th>Respiratory Protection</th>
<th>• Escape Mask¹</th>
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| Clothing               | • Water-repellent surgical gowns or coveralls¹  
|                        | • Scrub suits  
|                        | • Safety glasses, face shield or goggles  
|                        | (for personnel who may get wet with potentially contaminated liquids)  
|                        | • Hard hat¹  |
| Gloves                 | • Surgical gloves  
|                        | - Double gloving with frequent changes of outer pair to reduce spread of contamination to other providers, other parts of the patient  
|                        | - Tape inner pair of gloves to surgical gown arm cuff; outer pair is then more easily replaced while minimizing risk of self-contamination  |
| Boots                  | • Chemical-resistant boots, with steel toe and shank¹  
|                        | - OR —  
|                        | • Disposable, chemical-resistant outer boot covers¹  
|                        | - OR —  
|                        | • Waterproof shoe covers (for personnel who may get wet with potentially contaminated liquids)  |
| Advantages             | • Provides sufficient level of protection when work operations preclude splashes, immersion, or potential for unexpected inhalation or contact with hazardous levels of chemicals  
|                        | • Equivalent to everyday uniforms worn by first receivers  
|                        | • Providers caring for patients admitted to hospital wards and floor beds should tailor PPE to anticipated level of patient interaction  |
| Disadvantages          | • Offers the minimum protection against infectious agents or contaminants  
|                        | • Requires  
|                        | - Regular surveillance for radiation contamination  
|                        | - Staff members to conduct frequent self-surveys or to be surveyed by co-workers to identify possible contamination  
|                        | - Surveys to be conducted at completion of tour of duty or before exiting radiation controlled areas for clean areas  
|                        | - Consultation with hospital radiation safety officer for guidance  |

¹Optional. To be worn as indicated following an assessment of environmental hazards and responder need.