

Fentanyl and PPE for First Responders

Fentanyl is a member of the class of drugs that alleviate pain without causing a loss of consciousness. It depresses the central nervous system and respiratory functions. Exposure to the drug can be fatal as it is 80 times as potent as morphine and hundreds of times more potent than heroine.

Routes of Exposure

Fentanyl can be absorbed into the body via inhalation, oral exposure or ingestion, or via skin contact. It can be administered intravenously, intramuscularly, or as a skin patch.

Personal Protective Equipment (PPE) for First Responders

Note: Safe use of protective clothing and equipment requires specific skills developed through training and experience.

First Responders should use NIOSH-certified Chemical, Biological, Radiological, Nuclear (CBRN) Self Contained Breathing Apparatus (SCBA) with Level A protective suit when entering an area with either an unknown contaminant or an unknown level of contaminant. This protection should be used until monitoring results are able to identify contaminant and level of concentration. Protective suit levels include:

• **Level A (Red Zone):** To be used when the greatest level of skin, respiratory, and eye protection is required. This is the maximum protection for workers in danger of exposure to unknown chemical hazards or levels above the IDLH or greater than AEGL-2 (see *Acute Exposure Guidelines on page 2*).

- NIOSH-certified CBRN full-face-piece SCBA operated in a pressure-demand mode or pressure-demand supplied air hose respirator with an auxiliary escape bottle.
- A Totally-Encapsulating Chemical Protective (TECP) suit that provides protection against CBRN agents.
- Chemical-resistant gloves (outer and inner).
- Chemical-resistant boots with steel toe and shank.

**Optional items: Coveralls, long underwear, and a hard hat worn under TECP suit.*

• **Level B (Red Zone):** To be used when the highest level of respiratory protection is necessary, but a lesser level of skin protection is required. This is the minimum protection for workers in danger of exposure to unknown chemical hazards or levels above the IDLH or AEGL-2.

- Differs from Level A in that it includes a non-encapsulating, splash-protective, chemical-resistant splash suit that provides Level A protection against liquids but is not airtight.
- NIOSH-certified CBRN full-face-piece SCBA operated in a pressure-demand mode or pressure-demand supplied air hose respirator with an auxiliary escape bottle.
- A hooded chemical-resistant suit that provides protection against CBRN agents.
- Chemical-resistant gloves (outer and inner).
- Chemical-resistant boots with steel toe and shank.

**Optional items: Coveralls, long underwear, and a hard hat worn under chemical-resistant suit, and chemical-resistant disposable boot-covers worn over the chemical-resistant suit.*

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• **Level C (Yellow Zone):** To be used when the contaminant and concentration of contaminant are known and the respiratory protection criteria factors for using Air Purifying Respirators (APR) or Powered Air Purifying Respirators (PAPR) are met. This level is appropriate when decontaminating patients.

- NIOSH-certified CBRN tight-fitting APR with a canister-type gas mask or CBRN PAPR for air levels greater than AEGL-2.
- NIOSH-certified CBRN PAPR with a loose-fitting face-piece, hood, or helmet and a filter or combination organic vapor, acid gas, and particulate cartridge/filter combination or a continuous flow respirator for air levels greater than AEGL-1.
- A hooded chemical-resistant suit that provides protection against CBRN agents.
- Chemical-resistant gloves (outer and inner).
- Chemical-resistant boots with steel toe and shank.

**Optional items: Escape mask, face shield, coveralls, long underwear, a hard hat worn under the chemical-resistant suit, and chemical-resistant disposable boot-covers worn over the chemical-resistant suit.*

• **Level D (Green Zone):** To be used when the contaminant and concentration of contaminant are known and the concentration is below the appropriate occupational exposure limit or less than AEGL-1 for the stated duration times.

- Limited to coveralls or other work clothes, boots, and gloves.

Who to Contact in an Emergency

In the event of a poison emergency, call the poison center immediately at: 1-800-222-1222. If the person who is poisoned cannot wake up, has a hard time breathing, or has convulsions, call 911 emergency services.

Acute Exposure Guidelines

AEGL 1 - discomfort, non-disabling - mg/m³

AEGL 2 - irreversible or other serious, long-lasting effects or impaired ability to escape - mg/m³

AEGL 3 - life-threatening effects or death - mg/m³

References.

1. "FENTANYL : Incapacitating Agent." Centers for Disease Control and Prevention. Centers for Disease Control and Prevention, 28 Nov. 2016. Web.