

Cleanroom Safety Infographic



ANATOMY OF A CLEANROOM SUIT

Hood

- ▶ Hoods are required for cleanrooms where full-body apparel is needed.
 - ▶ A well-designed and properly secured hood prevents particles generated by bodily movement from entering the cleanroom.
- ▶ Hoods are often mandated in ISO Class 3, 4, 5, 6 and 7 cleanrooms.

Face Mask

- ▶ Masks minimize the concentration of respiratory particles that the wearer expels into the immediate environment.
- ▶ This is especially important in cleanrooms specializing in extremely sensitive products, such as:
 - ▶ Pharmaceutical drugs (including vaccines)
 - ▶ Microprocessors and other tiny electronic devices

Goggles

- ▶ They primarily serve to prevent eyebrow hairs, skin cells and other contaminants from falling into product or onto sensitive surfaces.
- ▶ These are also intended to protect the wearer's eyes from chemicals and other hazards.
- ▶ Goggles specially made for cleanroom use typically come with a number of features to accommodate these environments:
 - ▶ Anti-fog lenses
 - ▶ Anti-linting straps
- ▶ Reusable goggles are designed to withstand repeated sterilization cycles without degradation of functionality.
- ▶ Goggles are often required in ISO Class 3, 4, 5 and 6 cleanrooms.

Gloves

- ▶ Cleanroom gloves must protect against a number of threats:
 - ▶ Contamination caused by the use of bare hands
 - ▶ Contamination caused by particles generated by the glove itself
 - ▶ Injury to the user's hands caused by corrosive chemicals
- ▶ Many cleanrooms mandate the use of latex gloves.
 - ▶ Nitrile gloves offer a viable alternative for workers with latex allergies.

Frock or Coverall

- ▶ Forming the largest component of the standard cleanroom uniform, frocks and coveralls cover the torso and lower body.
 - ▶ Frocks are generally used in less restrictive cleanrooms.
 - ▶ Coveralls, which have less air permeability, are generally for more restrictive cleanrooms.
- ▶ These are also intended to protect the wearer's eyes from chemicals and other hazards.
- ▶ This apparel should include cleanroom-friendly features such as:
 - ▶ Electrostatic discharge (ESD) protection
 - ▶ Anti-linting fabric
 - ▶ Flame and arc flash resistance
 - ▶ Comfort—to reduce perspiration that can enter the atmosphere

Boots

- ▶ In addition to providing comfort, cleanroom boots provide several important benefits.
 - ▶ Properly fitted boots prevent particulate matter from escaping into the immediate environment.
 - ▶ Ankle straps ensure a tight fit.
- ▶ Several sole options are available, including:
 - ▶ Molded soles - These are flat and comfortable to wear.
 - ▶ Hypalon soles - These are made from chemical-resistant non-skid material with a polyester substrate and anti-static coating.
- ▶ Alternatively, some cleanrooms use shoe covers that can be worn over normal footwear.
 - ▶ Shoe covers can sharply reduce the risk of cross-contamination.



