

# iEvac®

SMOKE/FIRE HOOD

## The new cost-effective American-certified protection!

### The iEvac® Protects against:

- **Carbon Monoxide**
- **Additional Toxic Gases:** smoke, hydrogen cyanide, chlorine, ammonia, sulfur dioxide, hydrogen chloride, hydrogen sulfide, and more
- **Harmful Particulates:** soot, fumes, aerosols, and others
  - Contains a HEPA filter that removes more than 99.996% of sub-micron particles such as anthrax, smallpox, and radioactive particles
- **Life-Threatening Physical Hazards:** flammability and radiant heat



Designated as a **Qualified Anti-Terrorism Technology** by the U.S. Department of Homeland Security, Office of the Safety Act

The first hood **Certified to the American National Standard for Smoke Escape Devices**



Certified Model ANSI/ISEA 110-2009

EVAC+CHAIR North America, LLC  
3000 Marcus Avenue, Suite 3E6  
Lake Success, NY 11042  
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www.evac-chair.com



TESTED BY



US Army Research, Development & Engineering Command  
Edgewood Chemical Biological Center

## Performance and Protection Capability Tests beyond the Requirements of ANSI 110

Tested by US Army Research, Development and Engineering Command,  
Edgewood Chemical Biological Center

Function	Test Condition	Requirement	Result
Overall protection factor	Test subjects performing standard NIOSH exercises inside the fit test chamber at Edgewood	2,000	> 90,000
Protection factor inside the hood but outside the nose cup	Test subjects performing standard NIOSH exercises inside the fit test chamber at Edgewood	150	> 8,000

## Tested and Certified to ANSI 110: Physical Properties

Challenge	Test Condition	Duration	Result
Vibration	0.75 inches (19 mm) at 100 rpm	10,000 cycles	pass
Puncture and tear	3.5 oz (100 grams) striker dropped from 4 inches (100 mm)	Ready to use	pass
Pressure variation	Ambient to 4.4 psi (300 mbar) below	1,000 cycles	pass
Temperature variation	32°F (0°C) followed by 158°F (70°C)	24 hours each	pass
Flammability	9.8 ins (250 mm) away from a burner flame of 1475°F (800°C)	One rotation	pass
Molten drip	Molten polypropylene rod drip	Each location	pass
Radiant heat	Within 9.5 ins (240 mm) of heating panel between 980 and 1700°F (527 and 927°C)	15 secs repeated	pass
Corrosion	Salt spray at 95°F (35°C) then 72°F (22°C ) at 50% RH	48 hours each	pass
Inhalation temperature	CO at 77°F (25°C) and 87%RH	15 mins	pass
Light transmission	Haze of vision area	left and right	pass
Field of vision	Apertometer headform	viewing	pass
Water leakage	Immerse in water at 160°F (70°C) to depth of 24 inches	5 mins	pass
Fogging	Read eye chart from 20 feet (6.1 meters) at the 20/100 line	5 mins	pass

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## Tested and Certified to ANSI 110: Hood Performance Tests

Function	Test Condition	Duration	Requirement	Result
Speed of donning	Remove from pack and wear properly	Less than 30 secs	< 30 secs	pass
Total inward leakage	Test subjects performing standard exercises	2.5 mins	< 2%	<0.01%
Ocular leakage	Test subjects performing standard exercises	2.5 mins	< 20%	<0.1%
Carbon dioxide build-up	Breathing machine	25 cycles per min	< 2.5%	< 1.7%
Breathing resistance	Probed headform with breathing machine	30 cycles	-3.2 in (-81.5 mm) +1.2 in (+30.6 mm)	pass
Soot particulate	Inhalation breathing resistance with 200 mg/m <sup>3</sup> soot	5 mins	< 8 in (< 204 mm)	pass
Soot particulate	Exhalation breathing resistance with 200 mg/m <sup>3</sup> soot	5 mins	< 6 in (< 153 mm)	pass

## Tested and Certified to ANSI 110: Gas and Particulate Tests

Challenge	Type	Concentration ppm	Requirement	Result
Carbon monoxide	Hazardous combustion by-product	3,000	15 mins	> 32 mins
Carbon monoxide	Hazardous combustion by-product	5,000	15 mins	> 46 mins
Hydrogen cyanide	Hazardous combustion by-product	400	15 mins	> 90 mins
Hydrogen chloride	Acid gas toxic industrial chemical	1,000	15 mins	> 70 mins
Sulfur dioxide	Acid gas toxic industrial chemical	100	15 mins	> 70 mins
Cyclohexane	Organic vapor toxic industrial chemical	500	15 mins	> 41 mins
Acrolein	Organic vapor toxic industrial chemical	100	15 mins	> 65 mins
Diethyl phthalate	Particulate aerosol 0.185 micron	200 mg/m <sup>3</sup>	>95%	> 99.996%

## Additional Gas and Particulate Tests beyond the Requirements of ANSI 110

Challenge	Type	Concentration ppm	Requirement	Result
Carbon monoxide	Hazardous combustion by-product	10,000	15 mins	> 30 mins
Diethyl phthalate (DOP)	HEPA filtration test for particulates and aerosols	200 mg/m <sup>3</sup>	> 99.97%	> 99.996%
Ammonia	Toxic industrial gas	1,250	15 mins	> 60 mins
Formaldehyde	Toxic industrial gas	250	15 mins	> 60 mins
Phosgene	Toxic industrial gas	125	15 mins	> 60 mins
Phosphine	Toxic industrial gas	150	15 mins	> 60 mins
Chlorine	Toxic industrial gas	200	15 mins	> 60 mins
DMMP	Simulant for sarin nerve gas	1,000	15 mins	> 60 mins
Hydrogen sulfide	Acid gas toxic industrial chemical	1,000	15 mins	> 600 mins
Hydrogen sulfide	Acid gas toxic industrial chemical	5,000	15 mins	> 85 mins
Tear Gas (CN)	Irritant toxic chemical	16	15 mins	> 500 mins
Tear Gas (CS)	Irritant toxic chemical	3	15 mins	>500 mins

Certified to ANSI/ISEA 110-2009 American National Standard  
for Air-Purifying Respiratory Protective Smoke Escape Devices

Manufactured to ISO 9001:2008 Standard

# iEvac®

## SMOKE/FIRE HOOD



Certified Model ANSI/ISEA 110-2009



- Maintenance-free
- Twin cartridges for easier breathing
- Improved field of view than with single cartridge in front
- Hood is a clear material resulting in an unobstructed field of view
- High visibility reflective strips for easy recognition
- For easy access – head harness adjusts outside the hood
- Protects lungs, head, eyes, and face
- One universal size
- Quick and easy donning
- Can be used with eyeglasses, beards, and long hair
- Packaged in puncture- and- water-proof laminate barrier
- Latex-free

Weight of iEvac® in ready-to-use configuration:	1.4 lbs. – 635 grams
Size of iEvac® folded in vacuum-sealed foil bag:	Height – 6 3/4 in (16.8 cm) Length – 6 1/8 in (15.5 cm) Width – 5 1/4 in (13.5cm)
Shelf life:	5 1/2 years from date of manufacture

For one-time use only. Read instructions before using.

Ordering info: iEvac® Smoke/Fire Hood item # EBP-900  
iEvac® Training Hood item # EBP-200  
iEvac® Nylon Carry-pouch item # EBP-250  
iEvac® Wall-mounting Unit item # EBP-300  
iEvac® wall-mounting cabinet with alarm item # EBP-302



iEvac® vacuum-sealed in foil bag



ANSI/ISEA 110 is listed on the HSSD



The web-based product information center for the National Institute of Justice, Office of Justice Programs, US Dept. of Justice

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