

iEvac®

FIRE ESCAPE HOOD



Certified Model ANSI / ISEA 110-2003

The new cost-effective American-certified protection for fire-related hazards!

The iEvac® Protects against:

- **Toxic Gases:** carbon monoxide, 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**

ELMRIDGE
PROTECTION PRODUCTS

www.elmridgeprotection.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 | > 80,000 |
| Protection factor inside the hood but outside the nose cup | Test subjects performing standard NIOSH exercises inside the fit test chamber at Edgewood | 150 | > 1,300 |

Tested and Certified to ANSI 110: Physical Properties

| Challenge | Test Condition | Duration | Result |
|------------------------|---|------------------|--------|
| Vibration | 19 mm at 100 rpm | 10,000 cycles | pass |
| Puncture and tear | 100 g striker dropped from 100 mm | Ready to use | pass |
| Pressure variation | Ambient to 300 mbar below | 1,000 cycles | pass |
| Temperature variation | 0°C (32°F) followed by 70°C (158°F) | 24 hours each | pass |
| Flammability | 250 mm (9.8 ins) away from a burner flame of 802°C (1476°F) | One rotation | pass |
| Molten drip | Molten polypropylene rod drip | Each location | pass |
| Radiant heat | Within 240 mm (9.5 ins) of heating panel between 527 and 927°C (980 and 1700°F) | 15 secs repeated | pass |
| Corrosion | Salt spray at 35°C (95°F) then 22°C (72°F) at 50% RH | 48 hours each | pass |
| Inhalation temperature | CO at 27°C (81°F) 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 70°C (158°F) to depth of 600 mm | 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% | pass |
| Carbon dioxide build-up | Breathing machine | 25 cycles per min | < 2.5% | pass |
| Breathing resistance | Probed headform with breathing machine | 30 cycles | -2.1 +0.58 | pass |
| Soot particulate | Breathing resistance with 200 mg/m ³ soot | 5 mins | <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 | > 30 mins |
| Carbon monoxide | Hazardous combustion by-product | 5,000 | 15 mins | > 30 mins |
| Hydrogen cyanide | Hazardous combustion by-product | 400 | 15 mins | > 30 mins |
| Hydrogen chloride | Acid gas toxic industrial chemical | 1,000 | 15 mins | > 30 mins |
| Sulfur dioxide | Acid gas toxic industrial chemical | 100 | 15 mins | > 30 mins |
| Cyclohexane | Organic vapor toxic industrial chemical | 500 | 15 mins | 24 mins |
| Acrolein | Organic vapor toxic industrial chemical | 100 | 15 mins | 26 mins |
| Diethyl phthalate | Particulate aerosol 0.185 micron | 200 mg/m ³ | >95% | pass |

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 ³ | >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 |
| Tear Gas (CN) | Irritant toxic chemical | 16 | 15 mins | >500 mins |
| Tear Gas (CS) | Irritant toxic chemical | 3 | 15 mins | >500 mins |
| Hydrogen sulfide | Acid gas toxic industrial chemical | 1,000 | 15 mins | >600 mins |

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**Certified to ANSI / ISEA 110-2003 American National Standard
for Air-Purifying Respiratory Protective Smoke Escape Devices
Manufactured to ISO 9001-2000 Standard**

iEvac®

FIRE ESCAPE HOOD



Certified Model ANSI / ISEA 110-2003



- Twin cartridges for easy breathing
- Maintenance-free
- 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
- Unobstructed field of view
- Can be used with eyeglasses, beards, and long hair
- Packaged in puncture-and- water-proof laminate barrier

| | |
|---|---|
| Shelf life: | 5 1/2 years from date of manufacture |
| 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) |
| User Information and Instruction Manual in 4 Languages: | English, Spanish, French, and Portuguese |



iEvac® vacuum-sealed in foil bag

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

- Ordering info:**
- iEvac® Fire Escape Hood item # EBP-180
 - iEvac® Training Hood item # EBP-200
 - iEvac® Nylon Carry-pouch item # EBP-250
 - iEvac® Wall-mounting Unit item # EBP-300



ANSI/ISEA 110-2003 is listed on the HSSD
<http://www.hssd.us/search/DetailResults.aspx?docid=351775>



The web-based product information center for the National Institute of Justice, Office of Justice Programs, US Dept. of Justice
<http://www.techproductnetwork.com/TPN/PRODUCT/VIEW.ASPX?ID=100352>



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