



NORTH

Safety Products

Prepare for the Unthinkable

North Safety Products Escape Respirator was designed for respiratory protection during evacuation from Nuclear, Biological and Chemical (NBC) warfare agents as well as Toxic Industrial Materials (TIMs). North's Escape Respirator exceeds the permeation and cartridge service life of the U.S Army Soldier Biological and Chemical Command (SBCCOM).

ER1000 Escape Respirator



Features and Benefits

North's Escape Respirator is a hood style respirator that provides respiratory protection from Nuclear, Biological and Chemical (NBC) warfare agents as well as Toxic Industrial Materials (TIM's). It's easy to use, comfortable and can be easily donned and functional within seconds.

- Polyurethane hood, polycarbonate lens and butyl neck dam are all highly chemical resistant materials.
- Translucent hood allows face recognition and reduces claustrophobia.
- Proven half mask design reduces fogging, allows easy communication and improves user comfort by limiting re-breathing of exhaled air.
- New Defender Plus cartridges contain impregnated ASZM-TEDA carbon, as specified for U.S. Military canisters, for protection from chemical war agents. A HEPA filter is sealed to the cartridge for particulate protection.
- Large, anti-fog and scratch resistant lens provides a wide field of vision and excellent visibility.
- Highly reflective head strap harness ensures user visibility and a comfortable and secure fit.
- Re-sealable foil package allows user to practice donning prior to emergency use.
- Available in one size to comfortably fit the majority of the adult population.



Technical Data

The technical data was formatted from the National Institute of Justice "Guide for the Selection of Personal Protective Equipment for Emergency Responders." The National Institute of Justice is the focal point for providing support to State and local law enforcement agencies in the development of counter terrorism and standards, including technology needs for chemical and biological defense.

General

Technology	Defender plus gas, vapor and particulate cartridges are attached to the halfmask and hood, which remove contaminants in the ambient air to provide respiratory protection.
Stock Number	ER1000
Protection Type	Designed to provide respiratory, eye and face protection for a single escape from solid, liquid and gaseous chemicals. It is not designed for escape from fire or radiation. Does not provide impact protection.
Current Users	Call for a list of end users with North's Disaster Preparedness (DP) Products. North Safety has been a global leader in personal protective equipment for over 40years, and has a full line of DP products to meet your needs.
Certification	At the present time there is no NIOSH certification available for emergency escape respirators for protection against non-industrial chemical or biological agents.

Operational Parameters

Chemical Warfare Agents Protected Against	Hood material permeation testing with Sarin (GB) and Mustard (HD). For cartridge service life, see the test results on the next page.
Biological Warfare Agents	A HEPA particulate filter will protect against all known biological agents.
Toxic Industrial Materials	For full list and test results see table on the next page.
Duration of Protection	Depends on exposure time and challenge of concentration. See test results on the next page.

Physical Parameters

Sizes Available	One size fits the majority of the adult population. Tested and met performance requirements for neck sizes from 12" - 22" in circumference.
Weight	18Ounces (1.2lbs.)
Package Size	Packaged in a reusable sealed foil package. Shipped in 11.5"L x 8.5"W x 6.5"H cardboard container. Individually packaged.
Material Type	Polyurethane hood, polycarbonate lens and butyl neck dam are all highly chemical resistant. Elastomer half mask is non-allergenic.
Construction Type	Hermetically sealed seams.

Special Requirements

Training Requirements	Pictorial training instructions on package. Average training time is less than five minutes. Moisture and light resistant re-sealable package allows user to practice and become familiar with the respirator prior to emergency use. Escape respirator should be stored in its original sealed package.
Testing Information	See permeation and cartridge test results on the next page.
Communications	The user can speak normally through the front mounted exhalation valve.

Logistical Parameters

Ease of Use	Easily donned and functioning within seconds. No assistance required. Allows full mobility, flexibility and a wide range of vision. Compatible with glasses, facial and long hair.
Consumables	None. The respirator is a single use disposable product. Not to be reused.
Maintenance Requirements	No service or maintenance is required. No replacement parts.
Shelf Life / Storage	Shelf life is five years from date of manufacture. The date of manufacture is on the shipping container and foil package. Store respirator in a clean dry area in its original sealed foil package. Do not store below -20° F or above 160° F (-30° C to 70° C) or where relative humidity is above 90%.
Suggested Retail Price	\$175.00
Warranty	North Safety Products warrants that our products will conform to our published specifications if properly used and maintained and will be free of defects in materials and workmanship. The warranty period is two years from the date of purchase by the initial end user.
Accessories	North carry bags with belt loops can be purchased separately.

Permeation and Service Life Test Results

Hood Permeation Test Results

Challenge Agent	Results
Mustard (HD)	>65 Minutes
Sarin (GB)	Waiting for results

Tested by: Edgewood Arsenal per EA-DTL-2239

Cartridge Service Life Test Results

Challenge Agent	Challenge Concentration	Breakthrough Concentration	Test Humidity	Service Time Until Break (Minutes)
Cyanogen Chloride (CK)	500mg/m ³	2.5mg/m ³	50%	>50
Mustard Vapor (HD)	200mg/m ³	42mg/m ³	50%	>65
Sarin (GB)	1,000mg/m ³	.008mg/m ³	50%	>65

Tested by: Edgewood Arsenal per EA-DTL-2239. Flow rate (breathing): 50lpm (35 cycles per minute). All testing performed at 25+/- 3° C.

Ammonia (NH ₃)	2,500ppm	12.5 ppm	25%	>15
Cyclohexane (C ₆ H ₁₂)	1,000ppm	10ppm	80%	>50
Formaldehyde (FM)	500ppm	1 ppm	80%	>20
Hydrogen Cyanide (AC)	940ppm	4.7 ppm	25%	>100
Hydrogen Sulfide (HS ₂)	1,000ppm	10ppm	50%	>90
Nitrogen Dioxide (NO ₂)	200ppm	1 ppm	80%	>120
Phosgene (CG)	250ppm	1.25 ppm	80%	>120
Phosphine (PH ₃)	300ppm	.3ppm	25%	>120
Sulfur Dioxide (SO ₂)	500ppm	5ppm	25%	>75
Tear Gas Irritant (CS)	3ppm	.05ppm	80%	>480
Tear Gas Irritant (CN)	16ppm	.05ppm	80%	>480

Tested by Miller Nelson Research, per CBRN Escape Hood Standard (Draft). Flow rate 64lpm. All testing performed at 25+/- 3° C.

Other Cartridge Service Life Testing

Meets NIOSH Cartridge Service Life conditions for Organic Vapor, Chlorine and other Acid Gasses, Formaldehyde, Ammonia and Methylamine.

Additional testing such as high and low temperature, humidity vibration, rough handling and 100% leak testing ensure that the Escape Respirator will provide adequate protection after being subjected to normal transportation, storage and handling by the user.

Competitive Comparison

Feature	North ER1000	MSA Response	Survivair Quick 2000	Survivair Quick 2000
Hood Material	Polyurethane	Laminate	Zytron 300™	Tyvek Type F
Hood Color	Translucent	Translucent	Tan	Gray
Lens Material	Polycarbonate	PVC	Mylar	Acetate
Neck Dam Material	Butyl	Elastomeric	Elastomeric	Rubber
Protection Type	Half Mask/Hood	Quarter Mask/Hood	Mouthpiece/Hood	Half Mask/Hood
Shelf Life	5years	4years	4years	5years
Packaging	Ziplock foil bag	Single use foil bag	Single use foil bag	Aluminum Can
Training	Practice donning and return hood to original package	First time use during emergency	Training device sold separately	First time use during emergency

Ordering Information

Description	Part Number	UOM	Unit Packaging	Weight
Emergency Escape Respirator	ER1000	Ea.	11.5'L x 8.5' W x 6.5'H	1.2Lbs.

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fax: (858) 488-6320 tel: (858)488-3300 sales@NBCsafety.com www.NBCsafety.com