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GSA Federal Supply Schedule for Authorized Buyers
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Technical Data Manual

for the

Last Chance™
RESCUE FILTER
SCBA BACKUP FILTER

General Information:

Intended Use: The Last Chance Rescue Filter's intended to be used as an escape only filter in an out of air emergency while using a Self Contained Breathing Apparatus (SCBA). The Last Chance Rescue Filter is a single use device to be used in smoke and fire environments where there is sufficient oxygen to survive, most structural fires contain sufficient oxygen to sustain life.

All fire situations are unique, so it is impossible to predict exactly what toxic fumes will be given off. The Last Chance Rescue Filter has been designed in consideration of testing done by recognized international regulatory agencies that have studied fires. Contaminates that the Last Chance Rescue Filter will remove, are based on these international studies. However, it is not possible to guarantee that the Last Chance Rescue Filter will remove all of contaminates from any particular fire.

Duration of Use: The Last Chance Rescue Filter provides up to 15 minutes of protection against exposure to toxic gases. Longer time durations can be achieved against less severe environments. (Reference the Challenge Atmosphere Section of this Technical Data Manual)

Size: The size of the Last Chance Rescue Filter is 3.25" diameter and 4.5"- 5.5" tall, depending on the adapter ordered. The product is 4.5" diameter and sits about 6.5" tall in its packaged configuration.

Weight: The Last Chance Rescue Filter weighs less than 1 pound (450 grams).

Packaging: The Last Chance Rescue Filter's packaging is as key of a component to the product as the filter itself. The packaging consists of an inner moisture resistant foil barrier pouch and an outer protective Nomex® carrying pouch (see picture on cover).

Shelf Life: The Last Chance Rescue Filter offers a 5-Year, 6-Month shelf life from the date of manufacture. Units are vacuum packed into foil barrier pouches. As long as the vacuum seal is maintained the shelf life is still good. If the unit loses its vacuum seal or is removed from the barrier pouch it may no longer offer protection. Regular inspection of the unit's vacuum seal is an important process when owning a Last Chance Rescue Filter.

Donning: The Last Chance Rescue Filter is to be inserted in place of the users SCBA secondary regulator. Instructions are as follows:

1. Remove Unit from Nomex Pouch.
2. Grab the two indicating balls located in the corner of the barrier pouch and pull apart.
3. Remove Last Chance Rescue Filter from the barrier pouch.
4. Take a deep breath, hold it and remove secondary regulator.

5. While holding breath, install the Last Chance Rescue Filter in the same manner as the secondary regulator would be installed. For more information view the product specific instructions in the Instructions for Use – Owner's Manual.
6. Breathe out forcefully to force any contaminant out which may have been trapped during change over.
7. Escape

Oxygen: The Last Chance Rescue Filter does not provide oxygen. The contaminated air is drawn through the filter, cleaned and delivered to the user. **Do not use the Last Chance Rescue Filter in an oxygen deficient atmosphere.**

SCBA Adapters (when ordering): It is important that customers specify the SCBA mask (model name) the Last Chance is being purchased to connect to. Currently the Last Chance is compatible with Scott, MSA, Survivair and Draeger SCBA masks, and we have hopes that in the future every firefighter will have access to a backup filter to fit their SCBA masks.

Training Unit: Training units are offered by the manufacturer and should be practiced with often to make the user comfortable with change over and use of a filtered type device. The training unit is the identical size, shape and fit as the actual unit, offers simulated breathing resistance and weight of the actual unit and is reusable and cleanable.

Inspection Method: The Last Chance Rescue Filter should be inspected prior to any incident that may encounter an out of air emergency. To inspect view the unit in its barrier pouch configuration and inspect for loss of vacuum, punctures, tears or any other items, which may inhibit the use of the unit. Additionally, units should be reweighed on a regular basis to verify that the unit has not gained any weight.

Performance Specifications:

Breathing Resistance: Breathing Resistance through the filtered unit is less than 85 mm of water when tested on a fixture with continuous flow of 85 liters per minute for the inhalation resistance, while the exhalation resistance will be determine by the exhalation valves contained in the SCBA mask. For masks that do not contain exhalation valves the exhaled resistance is less than 30 mm of water when tested on a fixture with continuous flow of 85 liters per minute.

Particulate Removal: The Last Chance Rescue Filter contains fibrous filters for particulate air filter efficiency (42 CFR 84, Subpart K, N95).

Flammability: The Last Chance Rescue Filter has been tested to the flammability test per European Standard EN 403. At a distance of 250 mm above the flame tip, the filter was rotated through the flame of 800° C at a rate of 6 cm/sec.

Temperature of Inhaled Air: Though the air filtered through the filter will be warmer due to the temperature of the air in the environment and the chemical reaction due to the oxidation of the CO. The Last Chance Rescue Filter when tested in an atmosphere with 5,000 ppm of CO, the inhaled temperature was less than 90° C dry bulb.

Challenge Atmospheres: Test data in the table below represents laboratory testing of the Last Chance Rescue Filter conducted at AT Labs (a division of Assay Technologies), Pleasanton, CA. and AJE Testing and Research, Boalsburg, PA.

Last Chance Rescue Filter Assembly has been tested against the following toxic gases:				
Challenge Gas	**Concentration**	**Allowable Breakthrough**	**IDLH Levels**	**Actual Breakthrough**
Carbon Monoxide*	2,500 ppm	200 ppm**	1,200 ppm	< 200 ppm** (24 minutes)
Carbon Monoxide*	10,000 ppm	200 ppm**	1,200 ppm	< 200 ppm** (24 minutes)
Hydrogen Cyanide	400 ppm	10 ppm	50 ppm	< 10 ppm (60 minutes)
Hydrogen Chloride	1000 ppm	5 ppm	50 ppm	< 5 ppm (170 minutes)
Hydrogen Sulfide	1000 ppm	10 ppm	100 ppm	< 10 ppm (390 minutes)
Sulfur Dioxide	100 ppm	3 ppm	100 ppm	< 3 ppm (180 minutes)
Acrolein (Propenal)	100 ppm	.5 ppm	5 ppm	< 0.5 ppm (30 minutes)

Gas Conditions: Air Flow: 30lpm Constant Flow/ Temperature: 20° C/ Relative Humidity: 70%

* Gas Conditions: Air Flow: 30lpm Constant Flow/ Temperature: 25° C/ Relative Humidity: 90%

** Time Weighted Average