



## 3M™ 6004 - Ammonia Methylamine Cartridge



### Details

Ammonia and methylamine cartridge

Swept-back design for enhanced field of view and balance

Bayonet compatibility allows use with many 3M™ half and full facepieces and certain 3M™ Scott™ full facepieces

1 case contains 30 pairs of cartridges (60 each)

NIOSH approved against ammonia and methylamine. Use with 3M™ Half and Full Facepieces 6000, 7000 and FF-400 Series with a bayonet-style filter/cartridge connection or 3M™ Scott™ AV-3000 HT and AV-3000 SureSeal facepieces with 3M™ Scott™ AV-632 Bayonet Adapter.

Use in a variety of applications including agriculture, chemical manufacturing, laboratories and the food industry. When properly fitted, helps provide respiratory protection from ammonia and methylamine at concentrations up to 10 times the Permissible Exposure Limit (PEL) with half facepieces or 50 times PEL with full facepieces. Full facepieces must be quantitatively fit tested to claim assigned protection factor above 10 in negative pressure mode. Not for use in environments that are immediately dangerous to life or health (IDLH).

## Specifications

Accessories	Yes
Brand	3M™
Cartridge or Filter Type	Combination
Case Quantity	60/carton
Clip-on Welding Shield	Yes

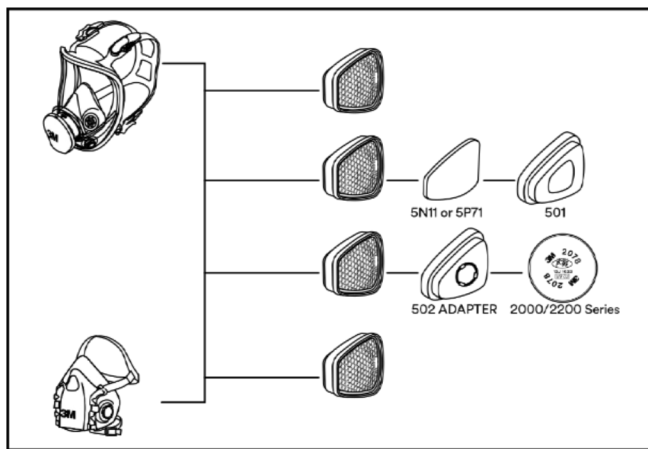
3M™ Full Facepieces 6000, 3M™ Full Facepieces 7800 Series, 3M™ Full Facepieces FF-400, 3M™ Half Facepiece Reusable Respirators 6000 Series, 3M™ Half Facepiece Reusable Respirators 6500 Series, 3M™ Half Facepiece Reusable Respirators 7500 Series, 3M™ Scott™ AV-3000 HT Facepieces, 3M™ Scott™ AV-3000 SureSeal Facepieces	
Compatible Respirator	
Compatible with 3M™ PAPR Systems	Yes
Compatible with 3M™ Supplied Air System	Yes
Compatible with Welding Shield	Yes
Connection Type	Bayonet
Cool Flow™ Exhalation Valve	Yes
Drop-down Feature	Yes
Enhanced Comfort	Yes
Enhanced Durability	Yes
Eye Protection	Yes
For Use With	Reusable Respirators
Gas & Vapor Protection Type	Ammonia and Methylamine
Hazard Type	Organic Vapor
Maintenance Free	No
Market	Defense, Homeland Security
National Stock Number	4240013422860
Nuisance Odor Relief (< OSHA PEL)	N/A
Overall Height (Imperial)	3.4 in
Overall Height (Metric)	8.63 cm
Overall Length (Imperial)	4.2 in
Overall Length (Metric)	10.67 cm
Particulate Protection	Ammonia, Methylamine
Product Type	Cartridge



Protection Focus	Ammonia, Methylamine
Protection Type	Ammonia, Methylamine
Purpose	Cartridges & Filters
Recommended Application	Batch-Charging, Charging of Refrigeration Systems, Chemical Dispensing, Chemical Transfer, Cleaning, Laboratories, Maintenance, Parts Cleaning, Soil Preparation
Recommended Industry	Construction, Facility Sanitation, Food Processing, Food Safety, General Manufacturing, Heavy Industrial, Marine, Mining, Oil & Gas, Pharmaceutical, Transportation
Segment	Personal Safety
Silicone Face Seal	Yes
Six-point Head Harness	Yes
Spare Parts	Yes
Speaking Diaphragm	Yes
Specifications Met	Ammonia, Methylamine



3M™ Multi Gas/Vapor Cartridges shown with 3M™ Full Facepiece 6000 Series and 3M™ Organic Vapor Monitor 3510.



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# How an Organic Vapor Respirator Cartridge Works

3M makes organic vapor respirator cartridges to help reduce user exposure to many different organic vapors.

To achieve this objective, respirator cartridges are filled with a material called activated carbon. Activated carbon is typically made from coal or renewable resources like wood or coconut shells.

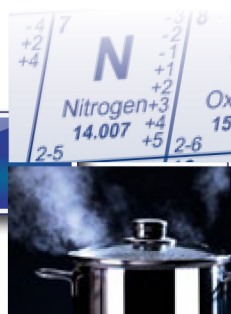
It is "activated" by heating the material in nitrogen or steam at approximate temperatures of 800 – 900 °C. The resulting material has a significant number of micropores that help adsorb various organic vapors. These micropores can be measured and optimized for specific product needs and performance.



Coal or renewable resources, such as coconut shells



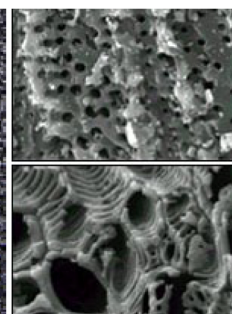
Coal or renewable resources are heated without oxygen



High-temperature steam or nitrogen activation



High-grade activated carbon



Electron micrographs of activated carbon pores

When organic vapors are drawn through an organic vapor cartridge, the air is filtered as vapors condense into the carbon pores. Vapors move through the cartridge from one pore to the next. This occurs more quickly for small volatile vapors with lower boiling points (e.g., acetone). Some migration of organic vapors can even occur during storage, so care must be taken before reusing the cartridge. The effective service life is the time until vapors begin to exit the cartridge.

Unlike particle filters, service life is not indicated by change in breathing resistance. Instead, cartridges must be changed according to local regulations; end-of-service-life indicator; taste, smell, or irritation from the contaminant; or according to 3M™ Service Life Software calculation, whichever comes first.

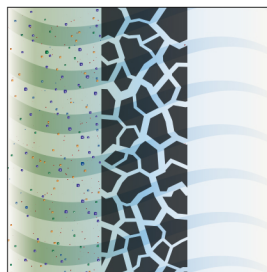
Activated carbon by itself cannot adsorb other types of gases or vapors such as acid gases, ammonia, formaldehyde, etc. In some cases, additional metals and salts are added to the carbon to selectively remove these compounds. For this reason, 3M offers a variety of cartridges and facepieces to help protect workers in different environments and satisfy personal preferences.

3M is committed to develop quality safety products to help protect workers. For more information about 3M organic vapor cartridges, please read Technical Data Bulletin #142 "Reuse of Organic Vapor Chemical Cartridges" at [www.3M.com/PPESafetySolutions](http://www.3M.com/PPESafetySolutions).

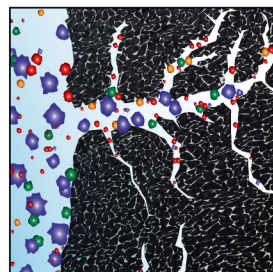
To establish a cartridge change schedule, visit [www.3M.com/SLSWeb/index.html](http://www.3M.com/SLSWeb/index.html).

## Factors that influence service life:

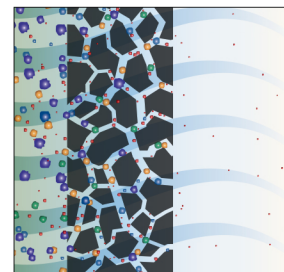
- Exposure concentration
- Temperature
- Humidity (water vapor takes up space in carbon pores)
- Breathing rate



Unfiltered organic vapors are drawn into the cartridge.



Activated carbon adsorbs organic vapors on molecular level.



Service life continues until vapors begin to escape the cartridge.



### WARNING

These respirators help protect against certain airborne contaminants. Before use, the wearer must read and understand the User Instructions provided as a part of the product packaging. A written respiratory protection program must be implemented meeting all the requirements of OSHA 1910.134 including training, fit testing and medical evaluation. In Canada, CSA standards Z94.4 requirements must be met and/or requirements of the applicable jurisdiction, as appropriate. **Misuse may result in sickness or death.** For proper use, see packaging instructions, supervisor, or call 3M OH&ESD Technical Service in USA at 1-800-243-4630 and in Canada at 1-800-267-4414.



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