

**3M** Science.  
Applied to Life.™

# 3M™ Service Life Indicator technology to help increase confidence in protection.

Introducing 3M™ Organic Vapor Service Life Indicator Cartridges 6000i Series. These innovative cartridges have a unique to 3M end-of-service-life indicator (ESLI) to help users determine when to change their cartridges in appropriate environments.\*

\*Please see the 6001i and 60921i User Instructions or the 3M™ Select and Service Life Software (3M.com/ServiceLifeSoftware) to determine if these cartridges are appropriate for your work environment.

# When safety is on the line, change is critical

3M™ Organic Vapor Service Life Indicator Cartridges incorporate a revolutionary end-of-service-life indicator (ESLI) technology to help answer the question that every respirator user must answer — “when should I change my cartridges?”

In appropriate environments,\* the 3M™ Service Life Indicator can:

## Provide confidence in protection

- The 3M Service Life Indicator can help provide added peace of mind as a complement to your current change-out schedule, and in some cases replace your current practices.
- This technology can help increase compliance with your company’s respiratory policy and industry requirements.
- These cartridges are NIOSH approved as 6001i and 60921i organic vapor cartridges against certain organic gases and vapors, **plus** they have all of the features you would find in standard 3M Organic Vapor cartridges.

## Optimize cartridge use

It’s designed to indicate service life based on individual exposure and respiratory use patterns.

## Engage your workforce in safety

This simple, visual tool can help users determine when to change cartridges.

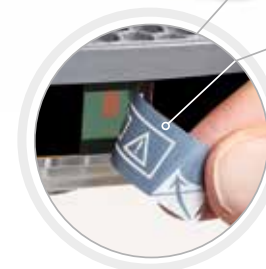


## How the 3M™ Service Life Indicator works

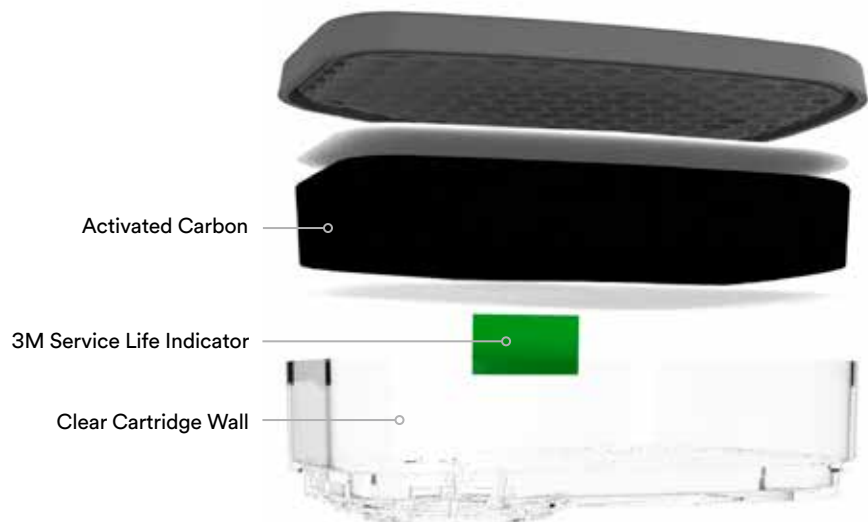
3M™ Organic Vapor Cartridges 6001i and 60921i contain the 3M Service Life Indicator, a visual ESLI for certain organic vapors and exposure levels. The ESLI is located inside the cartridge, next to the activated carbon. As organic vapors travel through the cartridge, they are also adsorbed into the ESLI. The clear cartridge wall allows you to monitor the developing indicator bar. When the cartridge is exposed to specific vapor concentrations, you will notice a change in the indicator.

When used properly in appropriate environments, an indicator bar will develop to help determine the remaining cartridge service life.

### Simple indicator bar



**Removable label**  
The peel-back label helps to protect the indicator from overspray and debris



\*See “Using the indicator” on the next page.



## Using the indicator

The 3M Service Life Indicator can be used to complement your current cartridge change schedule. You must change your cartridge at the normally scheduled interval or when the ESLI indicates, whichever occurs first.

In some cases you can use the ESLI as a primary method to determine cartridge change, replacing your current change schedule method.

To find out if the 3M Service Life Indicator may be used as the primary method for determining your cartridge change-out schedule:

- 1) Perform exposure monitoring to quantify the organic vapor exposure levels in your workplace. Visit [3M.com/PPESafety](http://3M.com/PPESafety) for information on 3M™ Organic Vapor Monitors.
- 2) Enter the monitoring results in the 3M™ Select and Service Life Software ([3M.com/ServiceLifeSoftware](http://3M.com/ServiceLifeSoftware)). If the ESLI is not applicable as a primary method, it may still be used to complement your current cartridge change schedule.



## Common Organic Vapors and Minimum Indication Level (MIL)

**NOTE:** This is NOT a list of what the 6001i and 60921i may be used for. In order to rely on the 3M™ Service Life Indicator as a primary method for determining when to change cartridges, both of the following conditions must be met: Worker exposure levels  $\geq$  MIL, AND MIL  $\leq$  occupational exposure limit. Please refer to the 3M ESLI software at [3M.com/servicelifesoftware](http://3M.com/servicelifesoftware) to help determine if you can rely on the indicator.

Compound	CAS #	MIL in parts per million (ppm)
Ethylbenzene	100-41-4	2
Styrene	100-42-5	1
Propyl bromide	106-94-5	147
1,2-Dichloroethane	107-06-2	145
Methyl propyl ketone	107-87-9	23
Propyleneglycol methylether	107-98-2	24
Methyl isobutyl ketone	108-10-1	5
Isopropyl acetate	108-21-4	30
Methoxypropyl acetate (propylene glycol monomethyl ether acetate)	108-65-6	3
Diisobutyl ketone	108-83-8	10
Toluene	108-88-3	8
4-methyl pyridine	108-89-4	2
Chlorobenzene	108-90-7	4
Cyclohexanone	108-94-1	11
3-methyl pyridine	108-99-6	2
n-Propyl acetate	109-60-4	25
2-Methoxyethanol	109-86-4	59
Tetrahydrofuran	109-99-9	280
Isobutyl acetate	110-19-0	5
Methyl amyl ketone	110-43-0	3
n-Hexane	110-54-3	93
2-Ethoxyethanol	110-80-5	20
Ethoxyethyl acetate	111-15-9	2
n-Octane	111-65-9	2
2-Butoxyethanol	111-76-2	1
n-Nonane	111-84-2	1
Isoamyl alcohol	123-51-3	5
n-Butyl acetate	123-86-4	2
1,4-Dioxane	123-91-1	60
Isoamyl acetate	123-92-2	2
Tetrachloroethylene	127-18-4	20
Xylenes	1330-20-7	2
Limonene (d-)	138-86-3	2
Ethyl acetate	141-78-6	161
n-Heptane	142-82-5	12
Trimethylbenzene (mixture)	25551-13-7	2
3-methyl 2-butanone	563-80-4	46
Propionic acid n-butyl ester	590-01-2	3
2-Hexanone	591-78-6	3
1-Hexene	592-41-6	92
n-Pentyl acetate	628-63-7	3
Isopropanol	67-63-0	650
1-Propanol	71-23-8	300
n-Butyl alcohol	71-36-3	34
Benzene	71-43-2	65
Isobutanol	78-83-1	64
sec-Butyl alcohol	78-92-2	83
Methyl ethyl ketone	78-93-3	175
Trichloroethylene	79-01-6	66
Methyl acetate	79-20-9	950
Stoddard solvent	8052-41-3	1
Methyl methacrylate	80-62-6	16
Diethyl ketone	96-22-0	26
Methyl acrylate	96-33-3	104
Chlorobenzotrifluoride (4-)	98-56-6	5
Isopropyl benzene (cumene)	98-82-8	3



# Nanotechnology. Applied to taking the guesswork out of cartridge change.

When the safety of your workforce is on the line, add a layer of reassurance with 3M™ Organic Vapor Service Life Indicator Cartridges. In appropriate environments,\* the 3M™ Service Life Indicator can provide greater confidence in protection with a simple tool to help determine when to change cartridges.

At 3M, we constantly develop products and technologies to improve safety in an ever-changing workplace. For more information, visit [3M.com/PPESafety](http://3M.com/PPESafety).

PRODUCT NO.	DESCRIPTION	UPC NO.	CLASSIFICATION	QTY
6001i	3M™ Organic Vapor Service Life Indicator Cartridge	00051141562070	Organic Vapor (OV)	60/case
60921i	3M™ Organic Vapor/P100 Service Life Indicator Cartridge	00051141562087	Organic Vapor/P100 (OV/P100)	60/case

Note: These cartridges are only NIOSH approved for respiratory protection against certain airborne contaminants when used with the 3M™ 6000, 6500, 7000 and FF-400 Series Facepieces. See User Instructions for approval label.

**For more information**  
**In U.S.**  
 Technical Service: 1-800-243-4630  
 Customer Service: 1-800-328-1667  
[3M.com/PPESafety](http://3M.com/PPESafety)


**In Canada**  
 Technical Assistance: 1-800-267-4414  
 Customer Care: 1-800-364-3577  
[3M.ca/PPESafety](http://3M.ca/PPESafety)

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 70-0716-7148-4

\*Please see the 6001i and 60921i User Instructions or the 3M™ Select and Service Life Software ([3M.com/ServiceLifeSoftware](http://3M.com/ServiceLifeSoftware)) to determine if these cartridges are appropriate for your work environment. It is important to change your gas and vapor cartridges at the right time; using the cartridge for longer can lead to breakthrough of the hazard into the facepiece. Service life is the term used to describe how long a set of cartridges can be used before they need to be changed.



**Personal Safety Division**  
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 **WARNING**

This respirator helps reduce exposures to certain airborne contaminants. Before use, the wearer must read and understand the User Instructions provided as a part of the product packaging. Follow all local regulations. In the U.S., 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 standard 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 package instructions, supervisor, or call 3M PSD Technical Service in USA at 1-800-243-4630 and in Canada at 1-800-267-4414.