

PPE CASE Notes

Personal Protective Equipment Conformity Assessment Studies and Evaluations Notes

Fraudulent Cartridges and Filters Fail to Meet NIOSH Performance Requirements: Combination Cartridges

The National Institute for Occupational Safety and Health (NIOSH) continues to identify fraudulent cartridges and filters on the market. These products falsely indicate that they have been tested and approved by NIOSH, giving purchasers a false sense of confidence in the level of protection they provide. Additionally, NIOSH has identified several instances of 3M respirators' part numbers being used on fraudulent cartridges and filters.

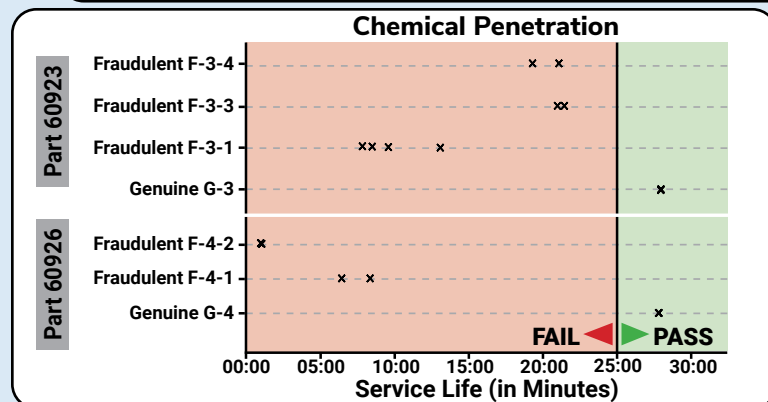
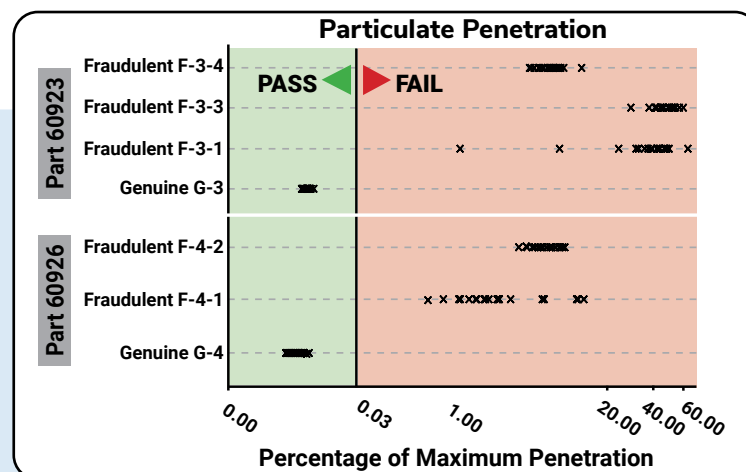
NIOSH conducted a pilot study to evaluate the performance of fraudulent P100® filters, organic vapor chemical cartridges, and combination (chemical/particulate) cartridges compared to genuine ones that are part of a NIOSH Approved® respirator configuration. This PPE Case Notes shares the results of fraudulent combination cartridge testing. **All 124 fraudulent combination cartridges tested failed to meet NIOSH's performance requirements.**

More detailed information on the testing procedure and results can be found in NIOSH's [PPE Case Report](#).

ISSUES IDENTIFIED

- Failure to meet NIOSH performance requirements
 - NIOSH tested the particulate protection provided by combination cartridges using [Standard Testing Procedure 0051](#). **All 100 fraudulent cartridges tested failed to meet the passing filtration level of 99.97%**
 - NIOSH tested the breakthrough time of combination cartridges using [Standard Testing Procedure 0046A](#).¹ **All 12 pairs of fraudulent cartridges tested had chemical breakthrough before 25 minutes**
 - During testing of fraudulent product (F-3-3), one cartridge fell apart after preconditioning²
- Use of misleading labeling on cartridges not part of a NIOSH Approved respirator configuration
 - "P100" printed on fraudulent cartridges, misusing a [NIOSH registered certification mark](#)
 - "NIOSH" printed on fraudulent cartridges
 - Fraudulent cartridges copied part numbers from approved respirators

Fraudulent cartridges and filters continue to inundate the market. Employers and respirator users should use NIOSH's [Certified Equipment List](#) to make sure their respirator is approved.



ACTIONS TO TAKE TO MAKE SURE YOUR RESPIRATOR IS APPROVED BY NIOSH

- Use the [Certified Equipment List](#) to confirm that your respirator is approved.
- Only use the components listed on the NIOSH approval label to replace parts. If you mix and match components or add parts not on the label, your respirator is no longer approved. Therefore, you cannot use it in U.S. workplace settings that require NIOSH Approved respirators.
- Contact the approval holder with specific questions or concerns about fraudulent filters or cartridges. Contact information can be found on the approval label and Certified Equipment List.
- Visit NIOSH's [Counterfeit/Misrepresented Respirators web page](#) to see examples of fraudulent filters and cartridges and learn how to report them.

Mention of any company or product does not constitute endorsement by the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention.

P100 is a certification mark of the U.S. Department of Health and Human Services (HHS) registered in the United States. NIOSH Approved is a certification mark of the U.S. Department of Health and Human Services (HHS) registered in the United States and several international jurisdictions.

¹ NIOSH used a modified version of Standard Testing Procedure 0046A, only testing samples at 85% preconditioned.

² The cartridge was put back together (i.e., the P100 filter cover was placed back on), and testing resumed.

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