

Respirator Fit Testing Guidelines for North Carolina Pesticide Applicators

The US Environmental Protection Agency requires that all individuals working with pesticides labeled for respiratory protection complete the following **prior to** respirator use:

1. Medical Clearance - A medical clearance will determine if you are physically fit to wear a respirator and must be completed by an employee before the fit test (step 2). It is designed to identify general medical conditions that could result in serious medical consequences with the use of a respirator, so honest answers are critical. Each item listed below must be known in order to complete the medical clearance:

- type and weight of respirator
- length of time and frequency of respirator use
- level of effort that will be involved while wearing the respirator
- other protective clothing or equipment to be worn during respirator use
- temperature and humidity extremes at work

The following options are available to complete the required medical clearance:

- a. The employer must identify and pay for a physician or licensed health care professional (PLHCP) to perform a medical evaluation using the Occupational Safety and Health Administration (OSHA) medical questionnaire or equivalent method. A list of providers in North Carolina is available at <https://goo.gl/vcFdwT>. The employer must allow the employee to complete this evaluation during normal working hours, or at a time and place that is convenient for the employee. The PLHCP must provide the employee with a statement of medical clearance to return to the employer. Although the medical clearance is technically good for as long as the PLHCP indicates, most providers grant one year unless a major change in health occurs.
- b. The employee may fill out a printed copy of the medical questionnaire (available for download at <https://goo.gl/OAGlw0> [English version] and <https://goo.gl/ao35Rl> [Spanish version]). The employer must ensure that a follow-up medical examination is provided for the employee to discuss the questionnaire or examination results. The employer or supervisor must not look at or review the employee answers, and he/she must tell the employee how to deliver or send this questionnaire to the health care professional for review.
- c. Online options are available at <https://www.respexam.com/Default.asp>, <https://www.resptest.com/>, or <https://www.respclearance.com/>. These options could grant medical clearance immediately, or may require a visit to a PLHCP for an in-person evaluation. If a referral is required, the employer is responsible for providing a PLHCP for the appointment.

2. Fit Test - A respirator fit test must be conducted in compliance with Appendix A of the OSHA Standard 1910.134, found at <https://www.osha.gov/>. The fit test determines if the respirator forms a complete seal with the person's face. The fit test must be performed with the same make, model, style, and size of the respirator that will be used when handling pesticides. The employer must ensure that the person conducting the fit test has completed the respiratory protection training outlined in step 3 below. Additionally, for qualitative fit tests, the employer shall ensure that those administering the test are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order. OSHA does not offer a training or issue a physical card or certificate indicating a person is qualified to conduct this type of test. Although they are not required by OSHA, there are a number of training opportunities to obtain a fit testing certificate. Contact the NC Agromedicine Institute, whose contact information is listed below, for more information on training opportunities. Find a full explanation of OSHA approved fit testing options at <https://goo.gl/Q5SKBl>.

There are two types of tests, qualitative and quantitative:

- a. The qualitative test is pass/fail and relies on the employee's sense of taste and smell to detect a substance introduced into an enclosure (video example found here: <https://goo.gl/gI4bmi>). This type is designed primarily for half-face respirators.

b. The quantitative test uses a machine to measure the actual amount of leakage and does not rely on your senses to detect a leak. This type is designed for any type of tight-fitting respirator, and is usually conducted at occupational clinics.

Fit tests must be conducted **annually** and for each type of respirator you plan to wear, including particulate-filtering face masks (formerly known as dust/mist masks). If any drastic changes in physical appearance occur within the year that cause the seal to become compromised, an additional fit test must be done. Loose fitting respirators (e.g., helmets, hoods) do not require fit testing but do require medical clearance.

Records must be kept for two years. An example of an individual fit test record can be found at <https://goo.gl/IOsOEz>. An example of group record can be found at <https://goo.gl/KpwiDL>.

3. Respirator Training - Employers must provide training, as explained in OSHA Standard 1910.134(k), found at <https://www.osha.gov/>, to ensure a pesticide handler knows how to use a respirator properly. This training must include:

- how to use the respirator effectively in emergency situations;
- why the respirator is necessary and how improper fit, use, or maintenance can compromise the protective effect of the respirator;
- the limits and capabilities of the respirator;
- how to inspect, put on/remove, and check the seals of the respirator;
- how to maintain and store the respirator correctly; and
- how to recognize medical signs and symptoms that may limit or prevent effective use of the respirator.

Training must be provided prior to initial use, unless acceptable training was provided by another employer within the past 12 months. Re-training is required annually and when workplace conditions change, a new type of respirator is used, or when inadequacies in the employee's use or knowledge indicates need. You can find an example of record keeping for this training at <https://goo.gl/QnlmRf>.

Respirator Change Schedules

When particulate filtering respirators are used, the filters, cartridges, or the filtering face piece itself must be replaced before further respirator use when one of the following conditions is met:

- When breathing resistance becomes excessive
 - When the filter element has physical damage or tears
 - According to manufacturer's recommendations or pesticide product labeling, whichever is more frequent
 - In the absence of any other instructions or indications of service life, at the end of eight hours of cumulative use
- For more information visit https://www.osha.gov/SLTC/etools/respiratory/change_schedule.html

Additional Use and Maintenance Guidelines for Respirators:

- Disposable respirators are intended to be used by one person only
- Any respirator shared with a co-worker must be cleaned and disinfected before the co-worker uses the respirator
- A respirator must be inspected for damage before it is used and when it is cleaned
- All parts must be in good working order and defective respirators must be discarded or repaired
- Respirators must be stored in a clean, dry place protected from sunlight and extreme temperatures. Face pieces and valves should be placed with care so they are not deformed
- Canisters, cartridges, and filters must be stored in plastic bags separate from the clean respirator

Helpful Documents and Contact Information:

Respirator Types by Classification Number and Filter type by Color: <https://goo.gl/IPhQTC>

Respirator Compliance Checklist: <https://goo.gl/GPmiSQ>

How to Wear it Right (half face) English: <https://goo.gl/6RBTJH> Spanish: <https://goo.gl/ITK6WG>

How to Wear it Right (particulate filtering face piece) English: <https://goo.gl/tUPk6L>

NC Agromedicine Institute. 252-744-1008. <http://www.ecu.edu/cs-dhs/agromedicine/>

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