**Respirator Selection Checklist**

**In order to select an appropriate respirator, you must:**

* Conduct an exposure assessment to determine the type and amount of hazardous exposure
* Consider the factors that can influence respirator selection such as jobsite and worker characteristics
* Understand the assigned protection factors
* Know the various kinds of respirators and their relevant characteristics

**For full details and tables, go to** [**NIOSH Respirator Decision Logic**](http://niosh.dnacih.com/nioshdbs/respprot/www.osha-slc.gov/SLTC/respiratory_advisor/oshafiles/appendixe.html)

After all criteria have been identified and evaluated and after the requirements and restrictions of the respiratory protection program have been met, the following sequence of questions can be used to identify the class of respirators that should provide adequate respiratory protection:

1. Is the respirator intended for use during firefighting?
   1. If yes, only a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure demand or other positive pressure mode is recommended.
   2. If no, proceed to Step 2.
2. Is the respirator intended for use in an oxygen-deficient atmosphere, i.e., less than 19.5% oxygen at sea level? (Refer to Subparagraph 1, page 21, for a discussion of oxygen deficiency.)
   1. If yes, any type of SCBA or supplied-air respirator (SAR) with an auxiliary SCBA is recommended. Auxiliary SCBA must be of sufficient duration to permit escape to safety if the air supply is interrupted. If additional contaminants are present, proceed to Step 3.
   2. If no, proceed to Step 3.
3. Is the respirator intended for use during emergency situations?
   1. If yes, two types of respirators are recommended: a SCBA with a full facepiece operated in pressure demand or other positive pressure mode or an SAR with a full facepiece operated in pressure demand or other positive pressure mode in combination with an auxiliary SCBA operated in pressure demand or other positive pressure mode. Auxiliary SCBA must be of sufficient duration to permit escape to safety if the air supply is interrupted.
   2. If no, proceed to Step 4.
4. Is the contaminant regulated by the Department of Labor as a potential occupational carcinogen or identified by NIOSH as a potential human carcinogen in the workplace, and is the contaminant detectable in the atmosphere?
   1. If yes, two types of respirators are recommended: a SCBA with a full facepiece operated in pressure demand or other positive pressure mode or an SAR with a full facepiece operated in pressure demand or other positive pressure mode in combination with an auxiliary SCBA operated in pressure demand or other positive pressure mode. Auxiliary SCBA must be of sufficient duration to permit escape to safety if the air supply is interrupted.
   2. If no, proceed to Step 5.
5. Is the exposure concentration of the contaminant, as determined by acceptable industrial hygiene methods, less than the NIOSH REL or other applicable exposure limit? (Whenever a worker is given a respirator to use on a voluntary basis when ambient levels are below applicable limits, OSHA requires the implementation of a complete respiratory protection program, which includes medical evaluation, training, fit testing, periodic environmental monitoring, and all other requirements in 29 CFR 1910.134.)
   1. If yes, a respirator would not be required except for an escape situation. Proceed to Step 7.
   2. If no, proceed to Step 6.
6. Are conditions such that a worker who is required to wear a respirator can escape from the work area and not suffer loss of life or immediate or delayed irreversible health effects if the respirator fails, i.e., are the conditions not immediately dangerous to life or health (IDLH)? (Refer to Subparagraph 3, page 22, for additional information on IDLHs.)
   1. If yes, conditions are not considered to be IDLH. Proceed to Step 7.
   2. If no, conditions are considered to be IDLH. Two types of respirators are recommended: a SCBA with a full facepiece operated in pressure demand or other positive pressure mode or an SAR with a full facepiece operated in pressure demand or other positive pressure mode in combination with an auxiliary SCBA operated in pressure demand or other positive pressure mode. The auxiliary SCBA must be of sufficient duration to permit escape to safety if the air supply is interrupted.
7. Is the contaminant an eye irritant, or can the contaminant cause eye damage at the exposure concentration? (Refer to Subparagraph 4, page 23, for a discussion of eye irritation and damage.)
   1. If yes, a respirator equipped with a full facepiece, helmet, or hood is recommended. Proceed to Step 8.
   2. If no, an orinasal respirator may still be an option, depending on the exposure concentration. Proceed to Step 8.
8. Divide the 8-hour time-weighted average (TWA) exposure concentration for the contaminant (or maximum exposure concentration for a contaminant with a ceiling limit) determined in Step 5 by the NIOSH REL or other applicable exposure limit to determine the minimum protection factor required. For escape respirators, determine the potential for generation of a hazardous condition caused by an accident or equipment failure. If a potentially hazardous condition could occur or a minimum protection factor has been calculated, proceed to Step 9.
9. If the physical state of the contaminant is a particulate (solid or liquid) during periods of respirator use, proceed to Step 10; if it is a gas or vapor, proceed to Step 11; if it is a combination of gas or vapor and particulate, proceed to Step 12.
10. Particulate Respirators

10.1. Is the particulate respirator intended only for escape purposes?

* 1. If yes, refer to Subparagraph 5, page 24, for a discussion and selection of "escape only" respirators.
  2. If no, the particulate respirator is intended for use during normal work activities. Proceed to Step 10.2.

10.2. A filter medium that will provide protection against exposure to the particulate in question is recommended. (Refer to Subparagraph 9, page 29, for a discussion on limitations of approvals for filter media.) Proceed to Step 10.3.

10.3. Respirators that have not been previously eliminated from Table 1 and that have APFs equal to or greater than the minimum protection factor determined in Step 8 are recommended. (Refer to Subparagraph 8, page 28, and Appendix D, page 50, for a discussion of protection factors, and to Subparagraph 9, page 29, for a discussion on limitations of filter approvals.) Maximum airborne concentrations for each level of respiratory protection can be calculated by multiplying the NIOSH REL or other applicable exposure limit by the APF for that class of respirators. Workers wearing respirators should meet the medical guidelines discussed in Subparagraph 10, page 30.

1. Gas/Vapor Respirators

11.1. Is the gas/vapor respirator intended for "escape only" purposes?

* 1. If yes, refer to Subparagraph 5, page 24, for a discussion on selection of "escape only" respirators.
  2. If no, the gas/vapor respirator is intended for use during normal work activities. Proceed to Step 11.2.

11.2. Are the warning properties for the gas/vapor contaminant adequate at or below the NIOSH REL or other applicable exposure limit? (Refer to Subparagraph 6, page 26, and Appendix C, page 48, for additional information on requirements for adequate warning properties.)

* 1. If yes, proceed to Step 11.3.
  2. If no, an air-purifying respirator equipped with an effective end-of-service-life indicator (ESLI), a supplied-air respirator, or a self-contained breathing apparatus is recommended. (Refer to Appendix A, page 43, for additional information on approval of air-purifying respirators with ESLIs.) Proceed to Step 11.4.

11.3. An air-purifying chemical cartridge/canister respirator is recommended that has a sorbent suitable for the chemical properties of the anticipated gas/vapor contaminant(s) and for the anticipated exposure levels. (Refer to Subparagraph 7, page 27, for the recommended maximum use concentrations of air-purifying chemical cartridge/canister respirators.) Proceed to Step 11.4.

11.4. Respirators that have not been previously eliminated from Table 2 and that have APFs equal to or greater than the minimum protection factor determined in Step 8 are recommended. (Refer to Subparagraph 8, page 28, and Appendix D, page 50, for a discussion of protection factors.) Maximum airborne concentrations for each class of respiratory protection can be calculated by multiplying the NIOSH REL or other applicable exposure limit by the APF for that class of respirators. The calculated maximum use concentration limits should not exceed the limitations noted in Subparagraph 7, page 27. Workers wearing respirators should meet the medical guidelines discussed in Subparagraph 10, page 30.

1. Combination Particulate and Gas/Vapor Respirators

12.1. Is the combination respirator intended for "escape only" purposes?

1. If yes, refer to Subparagraph 5, page 24, for a discussion and selection of "escape only" respirators.
2. If no, the combination respirator is intended for use during normal work activities. Proceed to Step 12.2.

12.2. Does the gas/vapor contaminant have adequate warning properties at or below the NIOSH REL or other applicable exposure limit? (Refer to Subparagraph 6, page 26, and Appendix C, page 48, for additional information on requirements for adequate warning properties.)

1. If yes, proceed to Step 12.3.
2. If no, either an air-purifying respirator equipped with an effective ESLI (Appendix A, page 43), a supplied-air respirator, or a self-contained respirator is recommended. Proceed to Step 12.4.

12.3. An air-purifying chemical cartridge/canister is recommended that has a particulate prefiIter suitable for the specific type(s) of gas/vapor and particulate contaminant(s) and for the exposure concentrations. (Refer to Subparagraphs 7, page 27, and Subparagraph 9, page 29, for recommended maximum use concentrations and filter limitations.) Proceed to Step 12.4.

12.4. Respirators that have not been previously eliminated from Table 3 and that have APFs equal to or greater than the minimum protection factor determined in Step 8 are recommended. (Refer to Subparagraph 8, page 28, and Appendix D, page 50, for a discussion of protection factors and Subparagraph 9, page 29, for a discussion on limitations of filter approvals.) Maximum airborne concentrations for each level of respiratory protection can be calculated by multiplying the NIOSH REL or other applicable exposure limit by the APF for that class of respirators. The calculated maximum use concentration limits should not exceed limitations noted in Subparagraph 7, page 27. Workers wearing respirators should meet the medical guidelines discussed in Subparagraph 10, page 30.