Before You Choose…

RESPIRATORY PROTECTION

Before you choose a respirator you must first accept that it is not a “stand alone “ piece of safety equipment and that it is only one element of a proper “Respiratory Protection Program”. Such a program would include administration, policies, procedures, fit testing , training and correct selection.

According to CSA Z94.4-93, **Selection, Use, and Care of Respirators**, which covers the above issues, a respiratory protection program shall consist of the following components:

A **Program Administration**

B **Hazard Identification**

C **Selection of the appropriate respirator**

D **Respirator facial-fit**

E **Training**

F **Use, inspection, and monitoring of respirators**

G **Cleaning, inspection, maintenance, and storage of respirators**

H **Health surveillance of respirator wearers**

I **Program evaluation**

There are many questions that you must answer before you can select the appropriate respiratory protection for your situation. The following examples will assist you in making the right choice.

- name of material you want protection from?
- if it is a mixture then the name of each ingredient?
- the form of the contaminant (liquid, solid, gas or vapour)?
- does the material have good warning properties?
- what effect does it have on the body (i.e. Eye irritant)?
- how is it used (sprayed, poured, brushed, sanded etc.)?
- has air sampling been done , how does it compare to OEL’s ?
- determine the hazard ratio (Concentration divided by OEL = APF needed)
- is this an IDLH situation or a confined space?
- type of work and conditions of work (inside, outside, hot, cold) ?
- number of workers needing protection?
- what is currently used?
- is there respirator maintenance facilities available?
- do specific “Local Regulatory Authority” requirements apply?
- does an oil aerosol exist in the area of use?

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There are further issues to consider when choosing a non-powered air purifying particulate respirator (these are based on the new NIOSH 42 CFR Part 84 criteria):

- determine the particulate contaminant you want protection from
- does your "Local Regulatory Authority" require the use of a High Efficiency type filter (HEPA) if so a 100 class filter should be selected.
- what is the airborne concentration of the contaminant
- determine the hazard ratio (Concentration divided by OEL = APF needed)
- is this an IDLH situation?
- does an oil aerosol exist in the area of use?

N SERIES	R SERIES	P SERIES
"Not for use in oil environments" For Solids *Aerosol-use limitations*	**"Oil Resistant"** For Solids/Liquids *Time-use limitations*	**"Oil Proof"** For Solids/Liquids *Use determined by MFG when oil only aerosol is present.*
N95	R95	P95
N99	R99	P99
N100	R100	P100

The following is a table which summarizes the NIOSH "User Guide" as it relates to substitution of respirators from the old NIOSH 30 CFR Part 11 certification criteria to the present NIOSH 42 CFR Part 84 certified product (Note this table may lead to the selection of better filters than are minimally required):

Using DM or DMF Filters ?

- IF work is free of oil aerosols = N 95 minimum
- IF work contains oil aerosols = R 95 or P 95 minimum

Using HEPA Filters ?

- IF work is free of oil aerosols = N 100 minimum
- IF work contains oil aerosols = R 100 or P 100 minimum

Using Paint-Lacquer-Enamel Prefilters ?

- IF work is free of oil aerosols = N 95 prefilter minimum
- IF work contains oil aerosols = R 95 or P 95 prefilter minimum

Using Pesticide Prefilters ?

- R 95 or P 95 prefilter minimum (since most pesticides contain oil)
  OR N 95 prefilter (for non-oil aerosols)

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